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THE SECOND WORLD WAR

1939-1945

ROYAL AIR FORCE

NARRATIVE

THE R.A.F. IN MARITIME WAR

VOL. VII

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MEDITERRANEAN

RE-CONQUEST AND THE SUBMARINE WAR

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PREFACE

The present volume is the first of two parts of Volume VII of the series of R.A.F. narratives on maritime war dealing exclusively with military operations in the Mediterranean. Its chapters - 1 to 7 inclusive - open with the situation at the close of the Tunisian campaign in May 1943 (where Volume VI ended) and they end as regards the Western Basin in May 1944, when the U-boat threat was broken and the Allies stood before Rome and, as regards the Eastern Basin, at the close of 1943.

It will be seen that while the Central Mediterranean area was successfully re-entered, the Aegean was lost to a swift German counter-offensive and a long period of stalemate ensued. The Adriatic assumed the status of a sub-theatre in its own right, and the often unconventional forms of warfare in which the maritime air forces co-operated there are treated as a separate theme and the record thereof carried up to May 1944, with the Germans back on the defensive.

Events following on the re-opening of the through sea route, the gradual passing of the initiative to the Allies wherever air superiority was established, air covers for the amphibious landings in Italy and the islands, protection of Allied shipping, the offensive against the enemy's lifeline and the continuous anti-submarine warfare are all dealt with and set in the context of the contending strategies.

The tactical skill of the Germans in the evacuation of Sicily and the Allied failure to prevent it have been approached from all angles and it is possible here, probably for the first time, to examine this controversial subject accurately and objectively. Here is another case where a view in depth would have been out of the question without the German naval records, of which extensive extracts have been appended.

A subject of perennial interest in the field of air/naval co-operation was the series of 'Swamp' submarine hunts, unique to the Mediterranean. The theme has been thoroughly explored, the procedure explained and the text amplified by the fruits of research into the German U-boat records.

As the account develops, the progressively decisive role of the Air Forces in the attainment of supremacy over the waters of the Inland Sea become evident. It was through air power that the Axis had for so long dominated the sea lanes and by air power that the Allies' maritime strategy was now exercised to their own advantage and the reconquest of the Mediterranean was assured. The initiative regained, exploiting new scientific methods, the Air Forces rendered the amphibious movement of vast forces, their protection and support a practicable reality. They covered the sea routes along which those forces and our Yugoslav allies were supplied and fought the German bombers on their way to our ports and convoys. Air supremacy over the seas and coasts fully justified the early struggles of the Air Forces to maintain their own unity and integrity against the attempts of the other services to make them satellites of their own systems.

Several original situation maps and charts and the ample appendices may be studied with profit and interest. The main text is preceded by a chronology of events and lists of code names and current abbreviations. The index to both Parts I and II will be provided at the end of Volume II. Parts III and IV will be devoted to maritime war in the Indian Ocean and South-east Asia.

The generous facilities afforded by the Admiralty Historical and Foreign Documents Section are gratefully acknowledged. Captain S. W. Roskill, R.N. (Retd.) of the Official Histories Branch has co-operated in a number of ways and incorporated much of the material here presented in his 'War at Sea'.

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ABBREVIATIONSPART I

A.A.	Anti-aircraft
A.A.F.	Army Air Forces (U.S.)
A.A.I.	Allied Armies in Italy
A/C	Aircraft
A.C.M.T.	Air Command Mediterranean Theatre
A.C.V.	Escort Carrier (British)
A.F.H.Q.	Allied Forces Headquarters
A.H.B.	Air Historical Branch (Air Ministry)
A.H.S.	Admiralty Historical Section
A.O.C.	Air Officer Commanding
Appx.	Appendix
A/S/R	Air/Sea Rescue
A.S.V.	Air to surface vessel signals system
A-20	Boston aircraft (U.S.)
A-36	Mustang 'Invader' aircraft (U.S.)
aux.	Sailing vessel with auxiliary engine
<u>A.F.P.</u>	Prefix for German artillery ferry barge
<u>A.L.</u>	Prefix for German artillery landing boat
B-17	Boeing Fortress aircraft (U.S.)
B-24	Liberator aircraft (U.S., and Br. adaptations)
B-25	Mitchell aircraft (U.S.)
B-26	Marauder aircraft (U.S.)
<u>B. d. U.</u>	<u>Befehlshaber der U-Booten</u> (Director of U-Boats)
Br.	British
c.	circa - approximately or about
C.A.S.	Chief of Air Staff
C.C.S.	Combined Chiefs of Staff
C.G.	Commanding General
C.H.L.	Chain Home Low (British radar station)

NOTE: German and Italian terms are underlined

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ABBREVIATIONS (contd.)

C.I.D.	Committee of Imperial Defence
C.-in-C.	Commander-in-Chief
C.M.F.	Central Mediterranean Force
C.O.	Commanding Officer
C.O.L.	Chain Home Low (for overseas use) - C.H.L.
C.O.S.	Chief(s) of Staff
C.P.	Command Post
C.V.	Fleet Carrier (Br.)
(D)	(DAY) - term applied to aircraft operations
D.A.F.	Desert Air Force
D Day	Date fixed for commencement of operation
d.c.	Depth charge
dest.	Destroyer
D/F	Direction finding
Div,	Division
<u>Do.</u>	<u>Dornier</u> - German bomber aircraft type
Du.	Dutch
E-beat	Enemy motor torpedo boat
Encl.	Enclosure
E.T.O.	European Theatre of Operations
<u>F.</u>	Prefix for German word for ferry-barge or for small German naval vessels once French
F.A.A.	Fleet Air Arm
F.A.F.	French Air Force
FAN	Annotation for signals from C.C.S.
F.D.S.	Foreign Documents Section, Admiralty
F.O.	Flag Officer
Fr.	French
<u>F.W.</u>	<u>Focke Wulf</u> - German aircraft type
<u>F.X.</u>	Early type of German radio-controlled bomb

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ABBREVIATIONS (contd.)

G.C.I.	Ground Control Interception (radar)
Ger.	German
Gk.	Greek
G.O.C.	General Officer Commanding
G.R.	General reconnaissance (by maritime aircraft)
G.S.	General Staff
G.T.X.	Intermediate eastbound Allied convoy
H.E.	High explosive
<u>He.</u>	<u>Heinkel</u> - type of German bomber aircraft
H.F.	High frequency
H. Hour	The time fixed for the commencement of an attack
H.Q.	Headquarters
Hr.(s)	Hour(s)
H2S	Radio navigational aid (Allied)
<u>He.293</u>	<u>Henschel 293</u> German glider bomb
I.A.F.	Italian Air Force
Ind.	Indian
Int.	Intelligence
Is. Isl.	Island(s)
It.	Italian
J.P.S.	Joint Planning Staff
J.S.M.	Joint Staff Mission (British representatives with Combined Chiefs of Staff in Washington)
<u>Ju.</u>	<u>Junkers</u> - type of German aircraft
<u>K.G.</u>	<u>Kampf Geschwader</u> - German bomber unit
<u>K.T.</u> (with No. or name)	<u>Kriegstransporter</u> - German war freighter
K.M.S.	Main convoys from U.K.

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ABBREVIATIONS (contd.)

(L) (Lloyds) - an authority relating to shipping

L - Bt. German landing boat

L.C.A. Landing Craft Assault

L.C.F. " " Flak

L.C.G. " " Gun

L.C.I. " " Infantry

L.C.M. " " Mechanised

L.C.N. " " Navigation

L.C.R. " " Rocket

L.C.S. " " Support

L.C.T. " " Tank

L.G. Landing ground

L.G. Lehr Geschwader - G.A.F. experimental unit

L.S.C. Landing Ship Carrier

L.S.I. " " Infantry

L.S.P. " " Personnel

L.S.T. " " Tank

Ma. (MA) Maachi - type of Italian aircraft

M.A.A.F. Mediterranean Allied Air Force

M.A.C. Mediterranean Air Command

Mas. - with No. Italian motor boat

MAL - with No. German artillery lighter

Me. Messerschmidt - type of German aircraft

M.E. Middle East

Med. Mediterranean

M.F.P. - with No. German naval ferry barge

m.l. Motor launch

mm. Millimetres

M.O.R.U. Mobile Operations Room Unit (for G.C.I.)

M/T Motor transport

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ABBREVIATIONS (contd.)

m.t.b.	Motor torpedo boat
Mtg.	Meeting
M.T.O.	Mediterranean Theatre of Operations
(N)	(Night) - term applied to aircraft operations
N.A.A.F.	North-west African Air Force
N.A.C.A.F.	" " " Coastal Air Force
N.A.F.	Annotation for signals from A.F.H.Q.
N.A.S.A.F.	North-west African Strategic Air Force
N.C.W.T.F.	Naval Commander Western Task Force
N.I.D.	Naval Intelligence Division
N.O.I.C.	Naval Officer in Charge
Norw.	Norwegian
<u>N.P.</u>	<u>Navi Perdute</u> (Italian Admiralty publication on shipping losses)
nr.	Near
N.Z.	New Zealand
<u>O.B.S.</u>	C.-in-C. South (German)
<u>O.B.S.W.</u>	" South-west (German)
O.R.B.	Operations Record Book (Form 540) R.A.F.
O.S.S.	Office of Strategic Services (U.S.)
P.I.U.	Photographic Interpretation Unit
Prov.	Provisional
P.R.U.	Photographic Reconnaissance Unit
P.R.W.	" " " Wing
P. (s) W.	Prisoner(s) of War
P-38	Lightning - type of U.S. aircraft
P-39	Airacobra - " " " "
P-40	Warhawk (U.S.) or Kittyhawk (Br.) type of aircraft
P-47	Thunderbolt - type of U.S. aircraft
P-51	Mustang - " " " "

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ABBREVIATIONS (contd.)

R.A.A.F. Royal Australian Air Force
 R.A.F. Royal Air Force
 R-boat German minesweeper
 R.C.A.F. Royal Canadian Air Force
Re. Reggiani - type of Italian aircraft
 R.H.A.F. Royal Hellenic Air Force
 R.N. Royal Navy
 R.P. Rocket projectile
 R/T Radio telephony

 S.A.A.F. South African Air Force
 S.A.F. Strategic Air Force
 S.A.S.O. Senior Air Staff Officer (Br.)
 s.c. Surface craft
 S.C. Service Command
S.F. with No. German Siebel Ferry
 S.N.O. Senior Naval Officer
 Span. Spanish
 Sqn. Squadron
S. with No. German E-boat

T. and TA with No. German torpedo boat
 Tank. Tanker
 Tac/R Tactical reconnaissance
 T.B.F. Tactical Bomber Force
 T.C.C. Troup Carrier Command
 T.F. Task Force
 T.G. Task Group

 U.G.S. Main convoys from U.S.A.
U.J. with No. German submarine chaser
 U.S.A.A.F. United States Army Air Force
 U.S.N. United States Navy
 U.S.S. " " Ship

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ABBREVIATIONS (contd.)

V.H.F.	Very High Frequency
W.I.S.	Weekly Intelligence Summary
W/T	Radio
K.T.G.	Intermediate westbound Allied convoys
Y.M.S.	'Y' Class minesweeper (U.S.N.)
YS.	Jugoslav

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CODE NAMES

ACCOLADE	Proposed operations against Rhodes
<u>ACHSE</u>	German plans for operations in case of an Italian surrender.
AVALANCHE	Seaborne landings at Salerno (9.9.43)
BARCLAY	Cover plan for 'Husky'
BAYTOWN	Seaborne landings in Calabria
BRIMSTONE	Invasion of Sardinia
CORKSCREW	Reduction of Pantelleria Island (May-June 1943)
DIADEM	Allied offensive in Italy (11.5-22.6.44)
<u>EICHE</u>	Rescue of Mussolini
ENDOWMENT VI	Commando landing on Hvar Island (22.3.44)
FERDY	Landings at Pizzo (Calabria)
FIREBRAND	Operations against Corsica
<u>FREISCHUTZ</u>	German plan to re-conquer Vis
HARDIHOOD	Aid to Turkey
HERCULES	Planned Allied operation against Rhodes
HOOKE	Landings at Bagnara
HUSKY	Landings in Sicily (11.7.43)
<u>LEHRGANG</u>	Major evacuation of Sicily (11-17 Aug. 43)
<u>LEOPARD</u>	German assault on Leros (changed to <u>TAIFUN</u>)
LUDLOM	Air attack on Cassino (15.3.44)
NUTCRACKER	Air/naval co-operation in 'Swamp' (14-17 May 44)
PRICELESS	Post-Husky Mediterranean operations
QUADRANT	Quebec conference (August 1943)
RETRIBUTION	Plan to prevent German evacuation from Tunisia
SATURN	Preparations for Turkey's entry into the war
<u>SCHLUSSAKKORD</u>	Last German evacuation lift from Corsica (30.9.43)
<u>SCHWARZ</u>	German plan for seizure by Army of key positions in case of Italian surrender
SEDUCE	Air reconnaissance off S.W. Greece to protect 'Husky' convoys
SEXTANT	Cairo conference (November 1943)
SHINGLE	Anzio landings (22.1.44)

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CODE NAMES (contd.)

SLAPSTICK	Taranto landing (9.9.43)
STRANGLE	Air interdiction of Central Italian railways (March-May 1944)
<u>STUDENT</u>	Measures for restoration of Fascism
SWAMP	Air/naval submarine hunt
SYMBOL	Casablanca conference (January 1943)
<u>TAIFUN</u>	German assault on Leros (previously LEOPARD)
THESIS	Fighter 'rodeo' operation over Crete (23.7.43)
TORCH	Landings in N.W. Africa (November 1942)
TRIDENT	Washington conference (May 1943)

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CHRONOLOGY

PART I

1943

15-23 January	Casablanca 'Symbol' Conference
17 February	Formation of N.A.C.A.F.
13 May	Surrender of Axis forces in Tunisia
12-25 May	Washington 'Trident' Conference
17 May	French naval squadron at Alexandria joined Allies
17-18 May	First convoy for 3 years leaves Gibraltar for Alexandria.
28 May	First U-boat sunk by H.P. aircraft (608 Sqdn.)
May	600 Sqn. converted to R.P.
1 June	Eastern boundary of Mediterranean Command moved
11 June	Capture of Pantellaria Isl. ('Corkscrew')
13 June	Capture of Lampedusa and Linosa Isl.
14 June	Capture of Lampions Isl.
June	1st Gibraltar aircraft operating centimetric radar
5 July	Med. Joint Air Orders introduced
9 July	U-boats ordered to Sicilian waters
10 July	Landings in Sicily ('Husky')
19 July	Rome marshalling yards bombed
23 July	Fighter 'rodeo' operations against Crete ('Thesis')
25 July	Mussolini deposed, Badoglio Prime Minister
26 July	Fascist Party dissolved
July	Equipment of coastal aircraft with centimetric radar continued
3 August	Italian evacuation of Sicily begun
11-17 August	Major German evacuation of Sicily ('Lehrgang')
13 August	Rome marshalling yards bombed again
N.16/17 August	First dropping of 'Window' by Germans (Bizerta)
17 August	Close of Sicilian campaign
	Capitulation of Lipari Isl.
19 August	N.A.C.A.F. Command Post formed to control fighters at Salerno.
	German evacuation of Corsica began
26 August	French committee of Liberation recognised
N.26/27 August	Allied Commando raid on Bova Marina
N.27/28 August	Allied Commando raids on Calabrian coast
3 September	Italian Armistice signed
	Landings in Calabria ('Baytown')
4 September	Landings at Bagnara ('Hooker')
7 September	Last hostile Italian submarine sunk
8 September	Italian surrender announced
	Landings at Pizzo ('Ferdy')
	German Operation 'Achse' launched
8-17 September	German evacuation of Sardinia
9 September	Landings at Salerno ('Avalanche')
	Landings at Taranto ('Slapstick')
	Allies captured Ventotene Isl.
	Italian Fleet sails from Genoa and La Spezia
	Battleship Roma sunk by G.A.F.
	Escape of King and Government of Italy
9 September	German occupation of Piraeus and Greek and Cretan ports.
9-13 September	Other Italian Fleet Units break out
10 September	Italian Fleet main units surrendered at Bizerta
	Rome and N. Italian cities occupied by Germans

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CHRONOLOGY (contd.)

10 September	Allied occupation of Castelrizzo Isl.
11 September	Main Italian Fleet forces arrived at Malta Germans controlled Rhodes Outbreak of fighting in Corsica
12 September	Air rescue of Mussolini ('Eiche')
13 September	French reinforcements landed in Corsica Allied aircraft landed on Kos Isl.
13/14 September	Allied landing on Samos Isl.
14 September	Allied landings in Corsica ('Firebrand') Sardinia ('Brimstone')
15 September	Meeting of Hitler and Mussolini at Wolfschanze First operations by B-25's with 75 mm. cannon Germans go over to the defensive at Salerno
17 September	Elba Isl. occupied by Germans German evacuation of Sardinia completed
24 September	Hitler's decision to stay in the Aegean
28 September	Allied capture of Foggia air base
30 September	Final German evacuation from Corsica ('Schlussakord')
September	U-boats with improved under-water endurance enter Mediterranean Creation of <u>Admiral Commanding Adriatic</u>
1 October	La Marsa Conference on air organisation Allied entry into Naples
2/3 October	Landing at Termoli
3 October	German landing on Kos Isl. German evacuation of Corsica ended N.A.C.A.F. Command Post arrives in Naples
4 October	End of Corsican campaign
5 October	Kos in German hands N.A.C.A.F. Adriatic patrols begin
H.6/7 October	German S.S. <u>Olympus</u> convoy for Kos sunk
N.9/10 October	Allied mission dropped on Rhodes
11 October	Rhodes surrendered to Germans by Italians Symi evacuated by British
13 October	Italy, a co-belligerent, declared war on Germany
mid-October	1st break-out of German ships from Adriatic
15 October	1st 'Swamp' anti-submarine operation 1000 German troops sunk in Allied attack on Leros convoy
16 October	Sir John Cunningham appointed C.-in-C. Med. 1st operations by Italian Air Force co-operating with N.A.A.F.
17 October	Hitler issued directive for Leros operations San Stefano captured by 8th Army
18 October	1st N.A.A.F. attack on Yugoslavia Germans
N.18/19 October	2600 German troops sunk in air attack on S.S. <u>Sinfra</u>
23 October	Creation of N.A.S.A.F.
27 October	Opening of German air attacks on Leros 1st Adriatic operations by Italian Seaplane Wing
October	'Naxos' - equipped U-boats attempt Gibraltar passage
2-11 November	German Leros convoy Piraeus - Kos and Kalymnos
3 November	Italian Cant. Z.501/506's co-operating with C.A.F.
6 November	German air attack on convoy off Philipperville Leros code name for attack changed from 'Leopard' to 'Taifun'
10 November	German air-raids on Naples
N.11/12 November	German glide-bomb attack on convoy W. of Oran
12 November	German landings on Leros
16 November	Leros surrendered to Germans

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CHRONOLOGY (contd.)

18 November	Samos evacuated by British
22 November	German occupation of Samos
22-26 November	Sextant Conference at Cairo
24 November	Successful raid by B.17s on Toulon U-boat base
27 November	Latest German bombers attacked convoy off Bougie
	Santorin captured by Germans
28 November	Allied garrison on Castelrizzo Isl. withdrawn
28 Nov.-1 Dec.	Sureka Conference at Teheran
November	Use of torpedo abandoned by C.A.F.
	Allied Mediterranean convoys now exceed Atlantic.
2 December	S.A.F. raid on Marseilles U-boat pens
H.2/3 December	Successful enemy attack on Bari
4-6 December	Cairo Conference with Turkish President
5 December	1st Thunderbolt operations
10 December	Creation of M.A.A.F., N.A.C.A.F. changed to M.A.C.A.F.
	Levant Naval Command lapsed
18 December	1st Middle East operation by R.P. Beaufighters
24 December	Fortress and Liberator squadrons moved into Italy
28 December	Ortona fell to 8th Army
31 Dec./1 Jan.	Enemy air raids on Catania and Augusta
<u>1944</u>	
1 January	Sir A. Tedder appointed Deputy S.C.A.E.F.
	Gen. D. Eisenhower appointed S.C.A.E.F.
	Gen. Ira Eaker appointed Air C.-in-C., M.T.O.
	Sir H. Maitland Wilson appointed Allied C.-in-C., M.T.O.
7/12 January	Extended 'Swamp' hunt Oran - Spain - Balearics
N.10/11 Jan.	Enemy raid on convoy off Oran
19 January	Successful air raid on enemy reconnaissance base at Perugia
22 January	Allied landings at Anzio ('Shingle')
23 January	German L.R.B's moved back to N. Italy
23/25 Jan.	German air attacks on Anzio shipping
N.1/2 February	1st bombing operations by Venturas based in M.E.
4 February	B.17/B.24 raid on Toulon
	1st R.A.F. unit landed on Vis and began work on strip.
	Cruiser H.M.S. <u>Penelope</u> sunk by <u>U.410</u>
5 February	C.A.F./62nd Fighter-Wing boundary changed
19 February	Anzio bridgehead situation more stable
26-28 February	3rd major German counter-attack at Anzio
29 February	2nd German shipping break-out from Adriatic frustrated.
7 March	B.17 raid on Toulon
N.8/9 March	Successful fighter interception of G.A.F. attack on convoy N. of Algiers.
	Air raid on Toulon
11 March	Enemy air raid on Naples
N.14/15 March	Massive air/artillery attack on Cassino
15 March	Official launching of air Operation 'Strangle'
19 March	R.A.F. attack on Monfalcone shipyards
N.19/20 March	Allied landings on Hvar Isl. ('Endowment VI')
22 March	R.P. Hurricane began operating
29 March	<u>U.223</u> destroyed in 'Swamp' operation
29/30 March	G.A.F. attack on convoy nr. Cherchell
N.31 March/)	
1 April)	

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CHRONOLOGY (contd.)

8 April	1st Wellington day raid (Hiksic, Y.S.)
N.8/9 April	1st minelaying in Danube (by M.A.A.F.)
N.11/12 April	G.A.F. attack on convoy N. of Algiers
N.20/21 April	G.A.F. attacks on convoys
N.24/25 April	G.A.F. attacks on Naples
29 April	Heavy raid on Toulon by B.17/24s.
April	Notable for Allied air attacks on enemy ports.
3-4 May	<u>U.371</u> destroyed in 'Swamp' operation
N.11/12 May	G.A.F. attack on convoy
N.12/13 May	Successful G.A.F. raid on our Corsican airfields
14/17 May	<u>U.616</u> destroyed in 'Swamp' operation (including Operation 'Nutcracker' by U.S. hunting group).
17/19 May	<u>U.960</u> destroyed in 'Swamp' operation
17 May	Cassino monastery and town captured
18 May	Operations against the Hitler Line begun
19 May	Success of 3rd German shipping break-out of Adriatic
19/20 May	<u>U.453</u> destroyed in 'Swamp' operation
20 May	
25 May	Main and Anzio forces linked up
N.30/31 May	G.A.F. attack on convoy
May	Doenitz abandons U-boat reinforcement
4 June	Allies entered Rome

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NOTES ON SOURCES

Allied Publications and Records

The post-war years have marked the publication of several memoirs and military records. Most of them have been studied and references to them occur in the footnotes. As broad surveys reflecting personal viewpoints, they have only occasional value in the study of field operations, but are sometimes revealing on policy decisions and controversial themes. The completed service histories were consulted and found of value on specific issues, although for day-to-day operations there was no possible course but to consolidate the evidence from the air force unit records at all levels, from ship's logs and reports of proceedings.

The official histories consulted include:-

Ehrman	<u>Grand Strategy</u>
Roskill	<u>The War at Sea</u>
U.S.A.F. Historical Division of Research Studies	<u>The Army Air Forces in World War II</u> Vols. II and III. Usually referred to as 'Craven and Tate' (editors).
S.E. Morison	<u>History of U.S. Naval Operations in</u> <u>World War II Vols. II and IX.</u> Sometimes referred to as 'S.E. Morison'.

The Admiralty Battle Summaries consulted are documents of acknowledged repute and valid up to the date of publication, after which later evidence must be taken into account. Among the internally distributed Admiralty records, the following are of especial interest:-

The Defeat of the Enemy Attack on Shipping (1939-1945).
C.-in-C., Mediterranean War Diary.
Monthly U-Boat Summaries.
Log of the Submarine Tracker, O.I.C., C.-in-C., Mediterranean.

Air Ministry Historical Branch productions which have supported this volume include:-

R.A.F. Narratives - 'The Sicilian Campaign', 'The Italian Campaign'
Vol.I and 'Operations in the Dodecanese Islands (September - November 1943)
and the R.A.F. Monograph - 'Radar in Maritime War'.

The Air Ministry's (A.C.A.S.(I)) volume 'The Rise and Fall of the German Air Force' contains some useful material.

Among the Cabinet Historical Archives material consulted, the Land Forces Adriatic Commander's Report was valuable.

General Note on German and Italian Sources

The decision to undertake the fullest exploitation of captured and otherwise acquired material from German and Italian sources, has, although of necessity delaying issue, proved fully justified. Work by the historical teams of the Air Ministry, Admiralty and Cabinet Office and effective liaison between them has led to the interchange of a great volume of translated and original material. Much that was relevant to our theme has been used, either in translation or direct from the native language. Furthermore, the establishment of close co-operation between the Air Historical Branch and the Italian Air Historical Office in Rome on the one hand and the Admiralty and the Italian Naval Historical Office in Rome on the other has been extremely fruitful. Not only have we received current military productions from the other side, but many matters of mutual interest have been jointly examined.

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German Sources

These fall into three groups: the first is of captured and uncovered unit, headquarters and command records; the second is of records of the Fuehrer's proceedings: and the third is of memoirs published since the War.

Among the first group the following were of special importance:-

The war diaries of Director of U-Boats, Captain U-Boats Italy, German Naval Command Italy, German Naval Staff Operations Division and their volume on The German Conduct of the War in the Mediterranean, the war diaries of Admiral Adriatic, the Sea Transport Directors of Messina and Corsica, the Fortress Commandant Messina Strait and, of Vice Adml. K. Assmann (one time Head of the German Naval Historical Division), known as his 'Headline Diary'. Lastly come the records of Adml. Weichold, known as 'Axis Naval Policy and Operations in the Mediterranean'.

The two Fuehrer documents employed were:-

Fuehrer Conferences on Naval Affairs
Fuehrer Directives 1942-1945

Among the memoirs and studies compiled since the War, the following have contributed most to our knowledge of the facts:-

Kesselring	' <u>Memoirs</u> ' Kimber, London, 1953.
Von Bonin	'Considerations of the Italian Campaign', often referred to as 'Considerations'.
Von Rintelen	'Mussolini als Bundesgenossen' (Cabinet Enemy Documents Section).
Siebel	'The German Special Ferry Service in the Mediterranean August - December 1943' (Cabinet Enemy Documents Section).

Italian Sources

As a result of visits by officers of this Branch in 1947 to the Italian Air Historical Office in Rome, a variety of information (mainly statistical) basic to the study of Italian air operations up to September 1943 was acquired. Almost all of it relates to periods antedating the scope of this present volume, but Admiral Barone's 'Report on Sicily' has been used in its Italian form.

Of greater value to this Volume have been the official Italian histories issued by the service ministries in Rome. These are:-

Lodi (Air Historical Office)	'Aeronautica Italiana Nella Guerra Di Liberazione 1939-1945' (in A.H.B.6).
Fiorovanzo (Ministry of Marine Historical Office)	'The Italian Navy's Struggle for the Country's Liberation'.
Ministry of Marine Historical Office.	' <u>La Marina Italiana nella Seconda Guerra Mondiale - Navi Perdute</u> (Shipping Losses) Volumes I, II and III. Usually referred to as 'Navi Perdute' (at Admiralty Historical Section).

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The 'Memoirs 1942-1943' of Benito Mussolini were translated and published in London in 1949 and Marshal Badoglio's book 'Italy in the Second World War' was published in 1948. Adml. Bragadin's 'Che Ha Fatto La Marina?' (usually referred to as 'Bragadin') was of positive value on account of its author's experience and attention to detail, but Adml. Bernotti's 'La Guerra sui Mari nel Conflitto mondiale' was too discursive for our purposes.

CHAPTER 1STRATEGIC DEVELOPMENTS AFTER THE FALL OF TUNISIA AND
THE REOPENING OF THE THROUGH SEA ROUTEThe New OutlookImmediate Allied gains from the victory in Tunisia

The success of the great Allied flanking movement which had led to the surrender of the Axis forces in Tunisia on 13 May 1943 was immediately apparent in the Mediterranean. The through sea route was now open and convoys could proceed, escorted by aircraft and naval craft, but without the necessity of a large fleet operation, for the first time since Italy entered the war three years earlier.

With all enemy bases and rear areas along the whole southern littoral in their hands and the enemy potential gravely impaired, the Allies were in a much stronger position to deploy their growing resources of men and materials for an assault on the Mediterranean shores of Europe, and to defend their maritime communications.(1)

The Allied air forces had proved their superiority, cut off the enemy's supplies, tied up his communications, destroyed his stocks and ships: they and the Navy now dominated the Sicilian Narrows, the point of bisection on which Italian policy had staked so much.(2) Equally important, although not fully realised, were the growing defeatism among Italians, their exhaustion and disillusionment and the Germans' concern with this state of affairs.

Allied strategic problems

Although definite military progress had been made, the immediate future held many problems. Planning for the invasion of Sicily was now straightforward, but it remained vital to deceive the enemy as to the point and hour of the enterprise. The possible weight of German resistance was looked upon with apprehension.(3) What would happen if Spain abandoned her neutrality or if the Germans marched through Spain and seized Gibraltar, thereby sealing off the Allied forces from seaborne supply from their home bases? What were Turkey's intentions? She could hardly resist for long an attack either by Germany or Russia and the Allies were ill-placed to fight a full scale defensive campaign in the Middle East. How long would the Italians continue to fight? If the Germans took over their Navy and employed it with their own offensive spirit, Allied tenure of the convoy routes might be less secure.

Almost the only certainty was that for the time being the Allies held the initiative and that Operation 'Husky'

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- (1) Report of Joint Admiralty/Air Ministry Historical Sub-Committee Sept. 1950. (A.H.B.)
 - (2) Study prepared by German Air Historical Branch (8th Abteilung) 29 July 44 (A.H.B.6 Translation No.VII/72).
 - (3) R.A.F. narrative (1st draft) 'The Sicilian Campaign' (A.H.B.).

was soon to become a reality with reasonable chances of success. The enterprise agreed upon at the Casablanca conference and all the deception involved therein were rapidly developing. The points of impact were agreed upon. Malta, once the heaviest liability, had now become an asset and, if supplies to it could be maintained, promised to prove an effective major base for the assault. An obstacle first to be removed was the Italian-held island of Pantelleria and its satellites in the Pelagie Group.

Epitome of the plan to reduce Pantelleria(1)

The possession of Pantelleria was necessary for the proposed attack on Sicily. It would reduce a serious barrier in the path of aircraft supporting the American landings, provide excellent radar and airfield facilities, eliminate enemy radar and simplify convoy protection. The possession of Lampedusa Island would give the Allies the use of a small airfield and also eliminate enemy radar.

On the assumption of a determined resistance, it was decided to weaken the garrison by prolonged bombing on an increasing scale prior to an assault by land forces. In addition, the beach defences in the assault areas were to be neutralised by air attack and naval bombardment and a blockade of the island was to be maintained. The final assault was then to be made by one British division.

The air offensive opened by 18 May.(2) Its objects were to reduce the morale of the garrison, destroy the defences and blockade the island against reinforcement from Sicily.(3)

Epitome of the plan for the conquest of Sicily(4)

The island of Sicily was to be taken and held as a base for future operations, in five phases. In the first phase, preparatory measures were to be taken to gain air supremacy and neutralise enemy naval effort. The assault, preceded by airborne landings, was to consist of pre-dawn attacks by sea and ground forces, with the objectives of the airfields and the ports of Syracuse and Licata. The third phase was the establishment of a firm base from which to effect the capture of the ports of Augusta and Catania and of the Gerbini complex of airfields. The fourth phase was the capture of those ports and airfields, the fifth the reduction of the island.

Deception and cover plans(5)

The cover-plan - code name 'Barclay' - provided a false D Day and destination. It aimed at persuading the enemy that two major operations were intended, namely, one

- (1) Operation 'Corkscrew'.
- (2) R.A.F. narrative (first draft) 'The Sicilian Campaign' (A.H.B.).
- (3) Outline plan - 'Corkscrew'. A.H.B./ J.1/166/41.
- (4) Operation Instructions No. 1 - 19 May 43 and No. 2 - 21 May 43 Force 141 A.F.H.Q. Operations in Sicily Appendices (A.H.B.).
- (5) Deception and cover plan 'Barclay' for Operation 'Husky' A.H.B. II.J5/86/74.

against the Balkans area (construed in a wide sense) by a mythical British 'Twelfth Army' from the Middle East and one by General Patton's American forces from North Africa against Southern France; and that these attacks, intended for the moonless periods of the month, had already been twice postponed. It was hoped, by 21 June, to have convinced the enemy that several minor preliminary operations were designed, namely that western Crete was to be assaulted on 24 July, the Peloponessus on 26 July, Sardinia and Corsica on 31 July, and then southern France - to synchronize with an attack on western or northern France - on 4 August.

The assault group was to converge in the area south of Malta and suggest a threat towards Crete, while Force 'H' manoeuvred in the Ionian Sea and threatened the coast of Greece, turning north at night and approaching Sicily in darkness. These ruses were intended to retard the reinforcement of Sicily by German troops, reduce the intensity of air and naval attack on Allied shipping from D minus 1 Day, and keep the Taranto squadron of the Italian Fleet east of the Strait of Messina.

Axis Strategic Indecision

The threat of a German march through Spain on Gibraltar

If the Germans marched through Spain, captured Gibraltar and thus sealed off the western gateway to the Mediterranean, many of the advantages of the clearance of North Africa would cease to exist. It seems doubtful whether many in Allied councils dwelt long enough on this possibility, occupied as they were with a cloud of other uncertainties. But it was discussed and might have happened at this very awkward juncture. It was very fortunate for the Allies that General Franco's neutrality took the form it did.

On 22 December 1942, Hitler and Raeder (then C.-in-C. Navy) agreed on the importance of occupying Spain. (1) Hitler said he intended to re-open negotiations with General Franco and to make preparations to occupy the peninsula. Raeder thought an Allied attack on the Spanish mainland a likely proposition. There must be a secret agreement with Spain, with an understanding that if the Allies were seen to be preparing operations in Spain, German troops were to enter it.

Franco had preserved a benevolent neutrality. Beyond sending a division to the Russian front and blinking at a number of trivial contraventions of neutrality, (2) he had never implemented his expressed devotion to Axis interests. He went a step further than this on 10 February 43, when he signed a secret protocol with Germany pledging armed resistance if the Allies entered Spain: (3) but no further.

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- (1) Vice Admiral Assmann's Headline Diary (N.I.D. 24/T 65/45 A.H.B. copy).
 - (2) See infra for transport of rescued U-boat crew through Spain to Germany.
 - (3) Chronology of the Second World War. Royal Institute of International Affairs.

After the defeat in Tunisia, the question of Spain came briefly to the fore. At the series of conferences at Hitler's headquarters held between 12 and 14 May 43, Kesselring openly pleaded for an attack on Spain as the move likely to afford the best relief. Doenitz supported the idea. The seizure of Spain and Gibraltar was the only strategic solution possible, he said.

Hitler's answer was that in 1940, (in the autumn of which year the occupation of Spain had been first outlined) it would have been possible with the co-operation of Spain,⁽¹⁾ but that now, and against the will of the Spaniards, German resources were no longer adequate. They needed first class divisions for the task and there were none to spare. The Spaniards, the only fighting Latin people, would, he feared, start a guerilla war which might spread beyond Spain. He thus let slip the last chance to seal the Mediterranean.

Doenitz suggested air attacks on Gibraltar by the new radio-controlled glider bombs⁽²⁾ when they were available at the end of June, but Hitler vetoed this. Air attacks with them must be carried out only at sea. If one fell intact on dry land, the enemy would soon know all about it.⁽³⁾

The Italian Fleet

Ever since Italy's entry into the war in 1940, the presence of its major naval units had presented a threat to Allied security and operations. Because of over-centralisation at Naval Command headquarters in Rome, and consequent denial of initiative to operational commanders, of technical deficiencies, lack of adequate air protection and increasing fuel shortages, the operations of the Grand Fleet had been unsatisfactory on the whole to the Axis. Rome was increasingly reluctant to sacrifice them. They had no aircraft carriers. After the battle of Matapan on 28-29 March 41, they began to convert the liner Roma into an aircraft carrier, renaming it the Aquila; later they undertook work on the Sparviero to the same ends, but neither was ready in time to take part in the war. Throughout the war, the Italian Navy had to fight without radar. The grave technical inferiorities with which they began the war were never rectified, but on the contrary became more serious owing to the great strides made by the Allies.⁽⁴⁾

On 30 April, Mussolini sent an urgent telegram to Hitler. If the Mediterranean air question was not solved by the immediate despatch of sufficient air strength to cancel the crushing Allied superiority, it would no longer be possible to send to Tunisia a single warship, transport or aircraft. Even the use of destroyers as transports was doomed to

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- (1) Refer to Admiral Weichold's study 'Axis Naval Policy and Operations in the Mediterranean 1939 to May 1943' in the German Naval History Series G.H.S./5 TSD/EDS Admiralty (A.H.B.6 copy) for an account of Hitler-Franco negotiations.
 - (2) Henschel 293 and FX.
 - (3) Fuehrer Conferences on Naval Affairs (A.H.B.IIG. 1/67(B)).
 - (4) The Struggle for the Mediterranean 1939-1945 by Rear Admiral R. de Belot, French Navy (ret.) Princeton University Press 1951.

failure. Tunisia must be held, the troops must be supplied and the convoys protected by aircraft.(1)

On 2 May, Hitler replied that he could do no more. Luftflotte 2 had had, as an increase over its strength of 1,000 aircraft, another 574 in March and 669 in April. He was surprised that the Italians were unable to supply Axis armies over a 90 mile strait, whereas in Norway the German Navy protected a much greater volume of traffic over a route ten times as long. He overlooked the important difference between the two areas, namely the close proximity of Allied air bases on the very edge of the zone of operations around the Sicilian Narrows.(2)

Doenitz's discussions at Supermarina(3)

There were at this time three high-ranking German naval commanders(4) attached to Italian Naval Command headquarters. But they were insufficient to give the Germans anything like absolute control of Italian naval policy, and although the three were reduced to one and his power augmented, and Doenitz himself interviewed the Under Secretary of State for the Navy, Admiral Riccardi, and almost everyone else that mattered, between 12 and 15 May, the Italian Navy retained its autonomy to the end.

On this occasion - 12 May - Doenitz, who with Hitler and others had blamed the Italians for their lack of enterprise and coyness in bringing their battle fleet into play, now threw naval tradition overboard. The Italians saw that a new invasion was imminent and they were seriously considering, they said, using the battle fleet to break up the attempt. Doenitz thought the Italian Navy was now too weak (he knew of their heavy losses in recent months on the supply routes). Its most important task, he said, was to make possible a successful battle on land by safeguarding the sea supply lines. Even small vessels ought to be used for shallow harbours and open bays. Everyone agreed that the islands were short of essentials. Doenitz was prepared to throw in his U-boats as carriers and he told General Ambrosio this, too. The Italians lacked cargo space in merchant ships. They lacked fuel and they lacked aircraft to protect every kind of vessel; but, as has been seen from Hitler's reply to the Duce, their belated offensive policy was not encouraged, as it might well have been by generous gifts of aircraft and fuel.(5) Like Hitler, Doenitz felt contempt for the Italian conduct in war and his inability to conceal it from them provoked sharp reactions or frigid receptions. An abler diplomat might have secured closer co-operation.

So the situation remained, open and unsatisfactory. The islands were supplied, aircraft were rested, repaired and moved, the Italian Navy waited for air cover. Hitler began considering schemes for handling

(1) Ibid and Fuehrer Conferences ((A.H.B.II G.1/67(B))).

(2) Ibid.

(3) Italian Naval High Command in Rome.

(4) Vice-Admiral Ruge, Rear-Admiral Meendsen-Bohlken and Rear-Admiral Loewisch.

(5) Refer to Appendix 1 for a full account of Admiral Doenitz's conversations in Italy and his report to Hitler.

the Italians and hinted darkly about the poor state of Italian leadership and the need for German inspiration. The predominant tone of Axis strategy in the period between the fall of Tunisia and the invasion of Sicily is thus seen to have been one of uncertainty. Neither of the two partners in the Axis has grasped the full implications of naval and air war in the Mediterranean, nor ever exploited its possibilities for long enough to force a favourable decision. There had always been, and still was, a note of awkwardness in their joint handling of naval affairs. In the continental land warfare, for which Hitler had planned, they were more at ease. The Germans, moreover, felt themselves saddled with the Italians as a liability they could not possibly shake off.(1)

German Air Force re-organization(2)

The three most important problems now facing the Luftwaffe were, firstly, the restoration of strength and serviceability of its exhausted units, secondly the re-inforcement of the Mediterranean theatre as a whole, and, thirdly, the strategic redistribution of forces to meet the multiple threats. The operational commands were forthwith re-organized and strengthened.

First, the theatre, hitherto centralised under Luftflotte 2, commanded by Kesselring, was divided into two commands, each of Luftflotte status. Luftflotte 2 covered Italy and the Central Mediterranean: Luftwaffe Command South-East covered S.E. Europe including Greece, Crete and the Balkans. The Luftwaffe headquarters staff in the Mediterranean, now in disfavour, was strengthened by the transfer of energetic, experienced officers from Russia.(3)

The ultimate invasion of Europe from the South by way of the islands was accepted as inevitable and these moves and the reinforcement moves about to be related prove that the Germans realised that the Allied effort was to be a major one demanding full preparedness.

Luftwaffe moves indicating successful Allied deception

The Central and Eastern Mediterranean were reinforced at the expense of the West and Russia. In one and one-half months, a more than 50 per cent increase, amounting to

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- (1) Hitler stated his belief at his meeting with Doenitz on 14 May that without the Italian army, the Germans could not defend the entire Italian peninsula and would be forced to withdraw to a relatively short line. Fuehrer Conference on Naval Affairs (A.H.B.IIG.1/67/(B)).
 - (2) The Rise and Fall of the German Air Force (1933 to 1945) Air Ministry A.C.A.S.(1) 1948.
 - (3) Field Marshal von Richthofen became commander of Luftflotte 2. Under him in command of Fliegerkorps II was General Buelowius, formerly in Command of an army co-operation corps in Russia. General-Lieutenant Mahncke, who drove the Russians back beyond Kharkov in March 1943 with his Fliegerdivision Donetz, was given the tactical command in Sicily. Generalmajor Harlinghausen was replaced as O.C. Bombers by Oberst Pelz, a coming officer with experience in charge of operations over England in early 1943. General Galland, Inspector of Fighters and Ground Attack Aircraft came down on a tour of inspection to restore morale and efficiency.

440 aircraft, was achieved, as well as a corresponding rise in serviceability. The total of aircraft in the Central and Eastern Mediterranean rose, between 14 May and 3 July, from 695 and 125 to 975 and 305 respectively. (1) The irony of it, unknown to the Germans, was that so much of it was being sent to the wrong quarter. Allied bombing helped in the process and the noticeable drift into Sardinia, Italy, Greece and Crete away from Sicily, the real point of impact, indicates how events were surpassing Allied hopes. Strength in Sardinia and S.E. Europe was more than doubled between 14 May and 10 July, whereas strength in Italy was reduced by 57.83 per cent. (2) Furthermore, much effort was diverted to building up a ground and operational force in southern France, also believed to be threatened. In the last week before Operation 'Husky' - 3 to 10 July - German apprehensions regarding Sardinia were fanned by air attacks on that island. The very slight fluctuation in the air strength in Sicily is accepted as a proof of the success of Allied deception. While a threat to it was allowed for, it came low down on the list for air defence. (3)

The Reopening of the Through Sea Route

Renewal of through convoys

It was a great occasion when on the night of 17/18 May, the fast Convoy K.M.S.14X(4) from the United Kingdom left Gibraltar bound for Alexandria. For three years, through convoys had been compelled to pass round the Cape of Good Hope. Now, with the whole of the southern littoral open for the development of air bases, and with a more favourable

(1)

	14 May 43			3 July 43		
	Central Med.	Eastern Med.	Total	Central Med.	Eastern Med.	Total
L.R. bomber	260	40	300	260	40	300
Dive bomber	-	-	-	-	65	65
Ground attack	70	-	70	150	-	150
S.E. Fighter	180	10	190	380	70	450
T.E. Fighter	120	5	125	100	10	110
L.R. Recce	45	30	75	60	45	105
Tac. Recce	20	-	20	25	25	50
Coastal	-	40	40	-	50	50
	695	125	820	975	305	1,280

(2) German Air Force dispositions:

	14.5.43	1.6.43	14.6.43	3.7.43	10.7.43
Sardinia	89	89	115	175	115
Sicily	415	275	315	290	175
Central and S. Italy	200	360	290	345	460
S. France and M.W. Italy	-	80	80	165	135
Greece and Crete	125	185	220	305	265
	820	980	1,020	1,280	1,150

Source: The Rise and Fall of the German Air Force. Air Ministry.

(3) Refer to the enemy documents given at Appendix 1.

(4) 4 ships detached from Convoy OS.47.

situation in the Sicilian Narrows, it was decided to accept the risk of threat from enemy aircraft and submarines. Escorted by aircraft and preceded by minesweepers and destroyers in the Cape Bon area, the convoy passed through unscathed to reach Alexandria on 26 May. K.M.S.14 was followed by a slow convoy which passed Bizerta on the morning of 22 May and reached Malta on 23 May.

A new series of intermediate convoys was planned to sail every 15 days; they were interspersed with the main convoys K.M.S. (from the U.K.) and U.G.S. (from the U.S.), which were combined and extended eastward.(1) The code letters adopted for the intermediate convoys were G.T.X. for those eastbound and X.T.G. for those westbound.

The first intermediate convoy - G.T.X.1 - left Gibraltar on 24 May and reached Alexandria on 4 June. It included fifteen L.S.T's awaiting passage to the Levant, plus three loaded with stores for Malta. The programme for June included four through convoys.(2) These should be kept in mind, for they were destined to figure in a new enemy air offensive against the strengthened Allied supply lines.(3)

In the reverse direction - East-West - not only were convoys passed through from the Levant, but arrangements were made(4) to route suitable ships loading in India to connect with these westbound convoys, the minimum speed fixed being 8 knots. On 28 May, the C.-in-C. Eastern Fleet ordered that henceforth all suitable British controlled ships loading in India for the U.K. were to be routed to Aden for onward routing to Suez and subsequent inclusion in X.T. convoys. X.T.G.1(5) left Alexandria on 3 June and arrived at Gibraltar on 17 June without loss. Through convoys were suspended during July owing to the operations for the invasion of Sicily.

The saving of shipping(6)

For three years, store ships from Liverpool for the supply of the Armies had had to travel a minimum distance of about 12,400 miles. By the new through route this distance was reduced to about 3,400 miles. Thus a ship which, allowing for various minor delays, averaged 200 miles a day, saved about 45 days in getting supplies to Egypt and another 45 days in returning for her next cargo.

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- (1) Retaining their original code letters.
 - (2) K.M.S.15 and U.G.S.8A leaving Gibraltar on 1 June, G.T.X.2 on 8 June, K.M.S.16 and U.G.S.9 on ? June and G.T.X.3 on 23 June.
 - (3) Source for convoys' dates, composition etc. in this section - The War at Sea, Vol. IV Preliminary Admiralty narrative (Admlty/A.H.S.).
 - (4) With the C.-in-C. Eastern Fleet.
 - (5) Including 11 ships for Tripoli and Malta and 5 for Benghazi.
 - (6) The War at Sea, Vol. IV. Preliminary Admiralty Narrative.

The War's largest convoy to date⁽¹⁾

An indication of the acceleration of convoy tonnage brought about by the opening of the through route, the growing Allied air superiority, the build-up for the invasion of Sicily and the replenishment of theatre stocks was the size of some of the convoys pressed through in the month of June.

What was believed to have been the largest convoy of the war to that date proceeded unmolested into Mediterranean waters from west to east during the first week of June. Ships joined it and were detached from it en route and the balance remaining arrived at Tripoli on 8 June, no losses or damage having been suffered during the whole passage. With the record of successes against submarines scored by aircraft and ships detailed a few pages later in mind, it will be realised how fortunate these were at this particular juncture. It must have been a very tantalising situation from the German viewpoint. The war diary of Captain U-Boats Italy makes it quite plain that they were well aware of the formation, sailing composition and progress of the convoy through the areas usually patrolled by their U-boats. But there was not a single U-boat in the operational area. The Italian Submarine Command did not co-operate. German reconnaissance aircraft reported frequent sightings, but no attacks were delivered before the convoy was off Tunis. One reported breaking away because of the convoy fighter defences.⁽²⁾

Early confidence in Coastal Air Force

Air Staff of the Coastal Air Force commented at the time that it would be difficult to over-estimate the moral effect of the safe passage through of the first two May convoys. The confidence which the air cover thus engendered affected the whole of future programme planning.⁽³⁾ June, in consequence, saw big concentrations of shipping reporting at Gibraltar and leaving and entering the ports of the southern littoral.⁽⁴⁾ Nevertheless, the element of risk was to be proved a high one. The German Air Force prepared for a major effort in the interim between the end of 'Toroh' and the completion of the 'Husky' build-up. After making a few light and ineffectual passes at some early June convoys, they acted on the intelligence reports of the departure and progress of convoy 'Tedworth', eastbound from Gibraltar on 22 June 1943, and, choosing their time, put forth the greatest anti-shipping effort recorded by them in the theatre to that date.

Air cover for Convoy 'Tedworth' from 22 to 25 June 1943⁽⁵⁾

The convoy 'Tedworth', consisting of twenty-six merchant vessels and with eleven surface craft, and

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- (1) Anti-Submarine Report Dec. 43 p.10 (Admiralty) and Captain U-Boats Italy war diary. (F.D.S. Admlty.).
 - (2) 4 June, 2350 hours.
 - (3) N.A.C.A.F. Air Staff O.R.B.
 - (4) The War at Sea (A.H.S.)
 - (5) N.A.C.A.F., No. 242 Group, Nos. 323 and 328 Wings O.R.B.s.

twenty aircraft from Gibraltar(1) air base, escorting it, left Gibraltar at 6001 hours on 22 June. It reached a point off Isabella Island at 1800 hours, and was then approaching Oran air fighter sector. Four Bisleys made a daylight U-boat search of Melilla (Spanish Morocco) and six Hudsons made a night search in that area. Ahead of the convoy, six more Hudsons searched for U-boats.

Escorted by twenty-six fighters from Oran sector, 'Tedworth', (increased now to twenty-nine ships), proceeded under their day and night cover to Cape Tenez. During the twenty-four hours ending at 1800 hours on 23 June, fourteen Hudsons and four Bisleys flew anti-submarine patrols. The convoy was unmolested for the first two days, but was sighted by enemy aircraft at 1015 hours on 23 June and the information was passed to U-boats.(2)

On 24 June, now increased to thirty-four ships, 'Tedworth' spent the third day making for Cape Sigli. Twenty-four aircraft prevented any submarines surfacing. Five fighter patrols were flown from Algiers and six aircraft gave day and night escort. Enemy radio intercept reports were vague, mentioning only general convoy traffic. No sightings were made by U-boats that day and the convoy was again unmolested.(3)

By the time 'Tedworth' reached Philippeville on the fourth day - 25 June - and Bone by evening, its numbers had swollen to fifty merchant vessels. Twenty-two aircraft gave day and night cover. There were seventeen scrambles off the Djidjelli - Philippeville stretch of coast and one Savoia Macchi 79 was shot down. There was no interference by submarines.(4)

Enemy air reconnaissance of Convoy 'Tedworth' (5)

Enemy reconnaissance aircraft, held in considerable respect in Allied air circles, reported the convoy at 0835 hours of 26 June to be 25 miles N.W. of Bizerta. They counted eighty-four vessels in all, and sighted it several times. Their last report at 1750 hours placed it 12 miles E.S.E. of Cape Bon. All U-boats were advised. The long range reconnaissance unit 1 Fern/122, based at Ottana in Sardinia, was ordered to reconnoitre from Algiers eastward to Cape Bougaron. Six Ju.88s of Group I of K.G.76 were ordered to Decimomannu (Sardinia) for early reconnaissance of Allied naval forces (seen manoeuvring near Gibraltar) or any big convoys along the meridians 3 and 4 East, indicating the readiness of the main bomber forces for a strike.

Enemy transfers of reconnaissance forces (6)

At the height of the critical period, viz. on 24 June, a planned transfer came to a head. The two main long range reconnaissance units prepared to move. I/F/122 was ordered

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- (1) No. 48 Squadron.
 - (2) Captain of U-Boats Italy war diary (Admly. - F.D.S.)
 - (3) Captain of U-Boats Italy war diary (F.O.S./Admly).
 - (4) N.A.C.A.F. Operations O.R.Bs.
 - (5) Information supplied by A.H.B.6.
 - (6) Ibid.

to Montpellier (S. France), to come under the operational control of Luftflotte 3. It was to be replaced by I/F/33 at Ottana, its base till then. But contact with the Allied convoy was maintained.

Enemy air attacks on the 'Tedworth' convoy(1)

From Bizerta to Tunis there were forty-one vessels and twelve escorts in the convoy. Another vessel joined it on the last leg to Sousse, its destination. During this last day and night, ten aircraft from Tunis sector maintained constant patrol and there were eight other aircraft constantly over the convoy, all from Tunis.(2)

26 June, the day the convoy passed through the Narrows, proved the need for the utmost vigilance by No. 242 Group, who had, in addition, five minor convoys to protect. Maintaining a continuous watch on the convoy, the German Air Force, on the alert for any sign of invasion shipping in that particular area, put in several vicious attacks by fighter bombers during the day, following them up after dark by bomber attacks on the convoy as it approached Sousse. To meet the threat, Tunis Air Sector flew two hundred and fourteen sorties, evidence of the cost of security.(3)

In all, ninety enemy fighter bombers were plotted in waves of twenty to thirty by No. 323 Wing and another hundred by the 52nd Fighter Group (U.S.). As they approached the convoy, they were either broken up or so harassed by Allied fighters that they were forced to break off the engagements. To reinforce our standing patrols, fifty-nine fighters were scrambled during the day. Casualties to the enemy were only one F.W.190 destroyed and nil among the Allied fighters.

At dusk, a twenty plus torpedo attack by Ju.88s developed, south of Cape Bon, but was broken up by six Hurricanes of R.A.F. No. 73 Squadron(4) on night patrol and lost a bomber to them. During the night, twenty or more aircraft, including Cant Z.1007s and He.111s, were picked up by Beaufighters scrambled to meet them. They did not reach the convoy.(5) No U-boats had risked approaching the ships, although their Command was well informed as to their position.

During the five days' voyage, not a single ship was damaged, a result due principally, although not entirely, to the pattern of air protection provided.

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- (1) No. 242 Group, 323 and 328 Wings O.R.Bs and N.A.C.A.F. Operations O.R.B. Appendix - A.H.B./ITM/A.45/1F.
 - (2) H.Q. Bizerta.
 - (3) By 52nd U.S. Fighter Group (Spitfires) and No. 323 Wing R.A.F.
 - (4) Based at La Sebala in the Tunis Fighter Sector - No. 73 Squadron O.R.Bs.
 - (5) Unfortunately there is a gap in the German records for 26 June and the sorties plotted cannot be confirmed from enemy sources.

Air superiority essential to the seizure of local maritime initiative

It would be erroneous to conclude that anything like Allied sea and air control of the Mediterranean as a whole had been established in June 1943. Since June 1940, the three main active areas of the Mediterranean, namely the Western, Central and Eastern basins had been continuously in fluctuating states of dispute. The advent of the Luftwaffe to Sicily in early 1941 had led to a period of predominating, but not absolute, Axis control of the Central basin, in particular of the strategically pivotal Sicilian Narrows. One measure of the disadvantage this implied to the Allies may be found in the losses of British warships. These rose from 1 cruiser, 3 destroyers and 9 submarines in 1940 to 8 cruisers, 16 destroyers and 8 submarines in 1941, and to 5 cruisers, 27 destroyers and 15 submarines in 1942.(1)

After the Allied conquest of the land from Algeria to Egypt, the concentration of their Air Forces towards the Tunis-Tripoli sector led progressively to the ruin of the Axis supply system to Africa and the withdrawal of the latter's air forces, first to Sicily and then to the mainland. Although strictly speaking the Sicilian Narrows and the circumambient air were still in dispute, the advantage in weight, range and control now lay with the Allies; and as has just been proved, Allied sea communications now began to enjoy an unprecedented flexibility of action.

It was not the weight, concentration and employment of air forces alone that had led to this encouraging consummation, for other factors had contributed to it. But it is fair to say that events up to this point had clearly proved that in the Central Mediterranean, at any rate, local air superiority was an essential ingredient in the seizure of strategical and tactical initiative in maritime operations.

Admiral Doenitz was explicit on this point at the time. On 8 June, he wrote:-(2)

"Experience gained until now has clearly shown that the Air Force is destined to play an important part in sea warfare. While in the open sea, sea supremacy is no longer possible without simultaneous air supremacy, in coastal waters the Air Force has become a weapon of decisive importance. We have experienced this ourselves during operations in the Mediterranean, favourably in Crete and unfavourably in Tunisia."

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- (1) Analyses of major British warships and Allied (other than U.S.) warships under British operational control lost through enemy action in the Second World War. (Admiralty Historical Section).
 - (2) Memorandum dated 8 June 1943 on the effects of Allied air supremacy on German submarine warfare (A.H.B.6 translation No. VII/42). Given in full at Appendix 3.

CHAPTER 2

THE SUBMARINE WAR

(14 MAY TO 8 SEPTEMBER 1943)

A. WESTERN AND CENTRAL BASINSGerman U-Boat PolicyThe situation in the Mediterranean

When Grand Admiral Doenitz - a former Captain of U-Boats - took over the post of C.-in-C. Navy in January 1943, it was inevitable that submarine operations should take on a new lease of life. B. d U., (1) the submarine command, controlled U-boats in all areas, thus differing from the single area control of other naval commands. The Captain U-Boats Italy controlled, at the period under review, the 29th U-Boat Flotilla (with headquarters at La Spezia) and the 23rd U-Boat Flotilla (with headquarters at Salamis in Greece): he reported directly to B. d U., a post held by Grand Admiral Doenitz in addition to that of C.-in-C. Navy. The policy of maintaining about twenty U-boats in the Mediterranean still stood.

U-boat operations held the highest priority in German naval strategy at this time. Their operations in the mid-Atlantic had been successfully checked: the Allies were satisfied that the situation in that area had been mastered. (2) Notwithstanding this and the loss of 30 per cent of the U-boats at sea in May, the German belief in the efficacy of this arm to turn the fortune of war again in their favour impelled them to step up the monthly building rate from 30 to 40 per month. (3) The situation in the Mediterranean, in spite of special geographical difficulties and the temporary confusion, could, they thought, be restored. Whereas before the loss of the North African littoral, Allied shipping was solely engaged in carrying military supplies, the re-opening of the through route to the East which must almost immediately follow was bound to increase the target potential for both German (4) and Italian submarines. (5)

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- (1) Befehlshaber der U-Booten
 (2) Naval Staff History: The Defeat of the Enemy Attack on Shipping 1939-1945 Vol. I (Historical Branch Admiralty - A.H.B. Copy).
 (3) Vice Adml. Assmann's Headline Diary (N.I.D. 24/T 65/45-A.H.B. Copy). Admiral Doenitz's memorandum of 8 June 43. Given in Appendix 1.
 (4) All the German U-boats that operated in the Mediterranean were of the VII C type, the specifications of which were:-
- | | |
|------------------------------|-----------------------|
| surface tonnage | 769 tons |
| surface speed | 17.7 knots |
| maximum surface range | 9,700 miles |
| maximum submerged speed | 7 $\frac{1}{2}$ knots |
| maximum submerged range | 130 miles |
| tested diving depth | 309 feet |
| 4 bow tubes and 1 stern tube | |
| torpedo-carrying capacity | 14 torpedoes |
| (F.D.S. Admiralty). | |
- (5) There was great variety in the construction of the Italian submarines used in the Mediterranean, ranging from the midget type of 36 tons to the ocean-going Remo and Romolo of 2,220 tons. (Navi Perdute - Vol. I).

They knew precisely where to find these convoys, for aircraft range determined air cover, which, with the threat from Axis air bases, constrained the convoys to run along the coastal sea lanes.

If any proof were needed of the Allied anxieties on the score of the submarine menace, one has only to consider the reorganization and expansion of Coastal Air Force, (1) the notable strengthening of its anti-submarine forces which shortly followed, the speed with which new instruments were developed and exploited and a superior method of hunting U-boats to exhaustion in collaboration with the Navy was designed at the Area Combined Headquarters at Algiers.(2)

The struggle must be viewed as one of measure and countermeasure.(3) It was usually the surprise use of new methods by one side that removed the enemy advantage and led to a new stalemate. This comes out clearly if one reviews the question of how, in spite of Allied air and naval superiority, U-boats continued to pass the Strait of Gibraltar and maintain their operational strength in the Mediterranean.

U-Boat reinforcements from late 1941 to May 1943 (4)

Although the number of U-boats in the Mediterranean rarely exceeded 20, they inflicted severe losses on warships and merchant shipping, (5) involving the Allies in a considerable air, surface craft and submarine effort from the autumn of 1941 to the autumn of 1944. Summarising the full evidence given in Appendix 25, of 95 boats detailed by the U-boat Command to enter the Mediterranean, 92 sailed. Three of these were cancelled in September 1943, 8 cancelled through illness or defects, 1 was damaged and 2 were sunk on their way to the Strait of Gibraltar. The remaining 81 attempted the passage, but 3 were sunk by Strait air patrols while still a considerable distance away. Of 78 which reached the Strait, no less than 62 made the passage. Of the remaining 16, 6 were sunk and 6 damaged by the Strait defences, 2 were deterred and 2 ordered back because of them. All the 28 Italian submarines sent into the Atlantic between June 1940 and the end of 1941 and the 10 returned to the Mediterranean made the passage without incident. There were only four periods during which the movement of enemy submarines in and out of the Mediterranean was seriously impeded by the Strait defences. These facts led the Joint Air Ministry Historical Sub-Committee to report, in its historical survey of the maritime defence of the Mediterranean, that an outstanding factor in the problem of the U-boat was the degree of control that could be exercised by Naval and Air Forces suitably equipped for day and night operations in the Strait of Gibraltar area. (6)

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- (1) Infra.
 - (2) N.A.C.A.F. Air Staff O.R.Bs and appendices May to Nov. 43.
 - (3) The best general purpose anti-submarine weapon was the depth charge adopted for aircraft operations, but this alone was insufficient to master the submarine problem.
 - (4) 'The Defeat of the Enemy Attack on Shipping' (Historical Branch, Admiralty. A.H.B. copy).
 - (5) Refer Appendix 2 for statistics of ships sunk by U-boats in the Mediterranean, also to the Admiralty Hist. Sec. Nominal List.
 - (6) Maritime defence historical survey in the Mediterranean during the Second World War: Introduction 1950. (Joint Admiralty/Air Ministry Historical Sub-Committee. A.H.B. copy).

Air control of the Strait of Gibraltar (1)

The four periods of successful control referred to were those, firstly, between 27 November 41 and 26 January 42, secondly, September 1943, thirdly October 1943, and fourthly, mid-February to mid-May 1944.

Between 27 November 41 and 26 January 42, aircraft fitted with A.S.V. Mark II on night patrols were able to detect the submarine, illuminate it and attack it with a depth charge. These methods rendered the passage so hazardous that the Germans were forced to change their plan of basing U-boats operating in the Mediterranean on Biscay ports and to set up a new base at La Spezia. Before the institution of these night patrols, 43 Italian and 14 German submarines had passed through unscathed, but while they operated, 7 of the 14 German U-boats which attempted the passage in were either sunk, damaged or forced to abandon the task. No U-boats were sent to the Mediterranean between February and September 1942. Between October 1942 and January 1943, 15 German and 1 Italian boats all made the passage in without incident.

After the end of 1942, Gibraltar aircraft on patrol were fitted with Leigh Light, A.S.V. Mark II and lethal depth charges; but the U-boats were equipped with a search receiver which detected Allied metric aircraft radar transmissions and they took the necessary evasive action, although they had to surface and the gear was cumbersome. The next move was made by Northwest African Coastal Air Force, who in mid-1943 completely reshuffled and augmented their radar lay-out and equipment. Gibraltar aircraft were fitted with centimetric radar. (2) The U-boats were unable to detect these new transmissions and still did not accept the idea that they were being used to locate them. During September 1943, four more U-boats attempted to break through; only one succeeded. (3)

U-Boat policy in the last phase of the Tunisian Campaign (4)

The special conditions and limitations under which U-boats operated were explained verbally by Captain U-Boats Italy in mid-March to Grand Admiral Doenitz, the C.-in-C. Navy, who summarised their conclusions on 17 March in the following terms:

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- (1) Ibid and The R.A.F. in Maritime War, Vol. VI (A.H.B.).
 - (2) The British 10 cm. set known as A.S.V. Mark III. For a detailed account of the joint Anglo-American development of centimetric radar refer to Vol. III and the R.A.F. Monograph on Radar in Maritime War.
 - (3) Vice Admiral Assman's 'Headline Diary' (N.I.D. 24/T 65/45 - Admiralty).
 - (4) War Diary of Captain U-Boats Italy (Foreign Documents Section, Admiralty TR/AU/19).

SECRET

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"(1) The use of U-boats to attack enemy supplies bound for North Africa in the Western and Eastern Mediterranean - concentrating on the Western Mediterranean - as well as attacks on enemy naval forces cannot, as experience has shown, either prevent large-scale landings or strike a decisive blow at enemy supply traffic. U-boat operations can however, inflict considerable damage on enemy naval forces and supplies, thereby forcing the enemy to make considerable allowances for the danger from U-boats. Forces are thus tied up which would otherwise be free to attack Axis supply traffic in the Strait of Messina or operate for anti-submarine defence in other sea areas.

(2) The figure of merchant shipping sunk to date is relatively small at about 550,000 G.R.T.; (1)* the number and importance of the warship units, however, - 1 battleship, 2 aircraft carriers, 8 cruisers, 16 destroyers and 14 escort vessels - adds considerably to its value. This has already furnished a decisive contribution towards the attainment of naval mastery in the Central Mediterranean. While enemy naval forces are concentrated in the Mediterranean, the U-boat has opportunities to damage the British Fleet to an extent which can scarcely be expected in any other theatre of war.

(3) The U-boat is the only instrument of war which is in a position to inflict damage on the enemy west of Algiers and consequently before he reaches his main bases in North Africa.

(4) In order to attain the aim mentioned in (1) it is necessary for U-boats to be present in the operational areas of the Western and Eastern Mediterranean in such strength that their influence constitutes a serious threat to the enemy. According to the considerations mentioned by Captain U-Boats, it is therefore necessary to maintain seven or eight boats in the Western Mediterranean and three boats in the Eastern Mediterranean. Experience has shown that a pool of 30 boats in all is required in the Mediterranean in order to attain the figures named at the enemy's expense, as the boats in the operational area become exhausted in a relatively short space of time. At present only 18 boats are available.

(5) The break through the Straits of Gibraltar was carried out successfully without any hitch or loss by the 15 boats which attempted this between October and January. No experience can be drawn on for the summer months. It therefore seems expedient to utilize the April new moon period for the transfer of boats."

The average daily number of boats in the Western Mediterranean operational area during March was 3.6, in April 4.6, in May 2.8. Losses (2)* in March were two boats, in April one, in May three. In March, the two boats were

(1)* Gross registered tons.

(2)* Refer to list of U-boats sunk or shared by aircraft at Appendix 7.

sunk by aircraft; in April, the boat was sunk by naval craft; in May, two were sunk by aircraft and one by an Allied submarine.(1)

First reactions to the Tunisian collapse (2)

Having failed to intervene in the collapse and having done no more than sink a few ships, run in a small quantity of supplies and fuel and evacuate four soldiers, the German Captain U-Boats, Italy was asked by Naval Command Italy for a survey of the situation and his plans for operations. He gave in reply the distribution of his forces, weighed the operational possibilities in the Sicilian Channel, the Western and Eastern Mediterranean and stated his intention to assume the offensive where Allied traffic was strongest.

Distribution of U-Boat forces and operational areas in May 1943(3)

There were in the Mediterranean area 20 German U-boats in various degrees of readiness, whose duty it was to attack Allied naval forces and merchant shipping traffic. They came under the 29th U-Boat Flotilla, with headquarters at La Spezia.(4) There was only 1 U-boat actually operating in the Western Mediterranean and 3 outward bound from base to that area. 1 was returning to La Spezia with ammunition it had failed to deliver to Tunisia. There were 15 in the bases at Toulon, Spezia and Pola. 11 of them were under repair and would be ready for operations between 16 May and 26 June. 3 others, it was hoped, would be ready in the first half of June. 2 U-boats were about to attempt to break through the Strait of Gibraltar and should be ready for combat assignments at the end of May. A further allocation of U-boats for the Mediterranean had been granted, but these were not expected before the end of June.

The U-boats' operational area, which still seemed the most favourable, was the sea between 3° W. and 4° 30' E., where Italian submarine grounds began. 3° W. ran near the longitude of Alboran Island and 4° 30' E. near that of Cape Corbelin in Algeria. The U-boats usually operated in north-south lanes of equal width,(5) and individually, not in packs.

Captain U-Boats Italy assumed, correctly, a partial diversion of Allied supply routes and unloading ports. Preparation for operations against Sicily, Sardinia, Corsica and, perhaps the Aegean, would cause a marked increase in traffic in the Sicilian Channel - Malta area. He could not yet foresee the precise points where U-boats could intensify their operations. The extent of minefields laid by both sides in the Sicilian Channel rendered it unsuitable for

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- (1) Although he did not emphasize the threat presented by Allied aircraft, he was to comment bitterly on their precision at the end of May.
 - (2) War Diary of Captain U-Boats Italy 1 Jan. - 30 June 43 (F.D.S. Admiralty).
 - (3) Ibid.
 - (4) Heavily damaged in the air attack of 18/19 April.
 - (5) e.g. Between the meridians of 3 and 4 E. Two U-boats sometime operated between the same meridians, one north and one south of a given latitude.

U-boats. Shallow water had great disadvantages: it was still doubtful if it would be worthwhile working on the coast of Tunisia, south of Cape Bon and west of the longitude of Tripoli, or on the supply routes to the ports of Susa and Sfax. There might be heavy traffic in the deep waters between Pantelleria and Malta.

In the western Mediterranean, he favoured retention of the actual operational area (between 3°W. and 4° 30'E.), although it might have to be shifted eastwards if Bougie, Djijelli, Philippeville, Bone and Bizerta became the jumping-off points for assaults on the islands. In the eastern Mediterranean, the actual operational area would still be the Cyrenaica area, where they had already successfully operated, but at present there were no U-boats to spare for those waters.

Low strength enabled operations to be carried out in only one area at a time at first, namely the western area, through which the main traffic had to pass. Later, with the arrival of reinforcements, he would operate in the eastern area and, if Sardinia were about to be attacked, south of the island.

U-Boat policy in July (1)

The doubts ruling in German naval quarters were ended by the decision of 9 July to send a few U-boats through the Straits of Messina to operate off Sicily. Even then, the first U-boat did not reach the landing zone until 11 July and only six of the seventeen available U-boats were at sea on that date. Valuable time had already, therefore, been wasted at a date when the most profitable targets were offering.

At the best, the chances were heavily against the U-boats. Allied aircraft patrols were continuous and almost omnipresent. Surface craft were combing the triangle Sardinia - Sicily - Northern Tunisia for submarines and covering all the sea flanks of the operation. The direct sea passage for the Allies from the Tunisian ports or from Malta to Sicily was of only short duration. Minefields laid by the Axis off Sicily and Malta and in the Sicilian Straits, as well as others laid by the Allies, rendered navigation very hazardous.

There were technical difficulties, too. Land-based air warning devices were not functioning as they should, and were often confused in their readings of too numerous targets thrown up by the massive Allied shipping movements. The waters in the Sicilian area were often shallow, offering fewer chances of deep submersion.

The two submarines in the Eastern Basin were ordered to the Central Mediterranean and operated there without conspicuous success. When the heavy traffic into Sicily fell off and it was apparent that Sardinia was not an immediate target, the Captain of U-boats began to think of all the laden convoys moving from Egypt to Malta, between Benghazi and Derna, from Cyrenaica to Malta, and, as his superiors still considered a landing in the Peloponnese likely, all the traffic between Palestine, Syria and Cyprus.

(1) Captain U-boats Italy war diary (F.D.S./Admlty.).

On 21 July, the idea of concentration off Sicily gave way to a system of individual U-boat attacks at selected points along the Allied convoy line, beginning at the area just east of Gibraltar, with special attention to the Bone-Philippeville area. This latter zone was the one most frequently covered by German air reconnaissance. Information was, accordingly, fuller and more accurate.

By the end of July, the Axis forces in Sicily were being hard driven. Speculation on what would follow its loss circulated and Calabria was considered a likely point of landing. In the meantime, the U-boats were run to the limit of their endurance. More damage and more accidents meant more time in dock.(1) The utmost was being done, but without startling results.

U-Boat policy in August (2)

Dispositions to deal with Allied supplies and reinforcements for Sicily were planned in the first third of August, but attempts to act on the plan were handicapped by three factors. The first was the small number of U-boats available. Three had been detached on the orders of the Naval War Staff 1st Division to stand by to assist in the rescue of Mussolini from the Villa Weber at La Maddalena in Sardinia.(3) The second was that operationally ready U-boats were unable to put out because of the installation of new radar location gear. U.371 was delayed three days and U.617

(1) The average U-boat dispositions for July 1943 were:-

Period	W. Med.	E. Med.	Outward and homeward bound	In port
1-10	4.5	1.1	2.8	8.6
11-20	2.7	2.9	1.4	9.2
21-31	0.7	1.7	1.7	11.1

The daily averages for July were:-

W. Med.	E. Med.	Outward and homeward bound	In port
2.6 = 16.2%	1.9 11.9%	2.0 12.5%	10 62.5%

Average U-boat dispositions for August were:-

Period	W. Med.	E. Med.	Outward bound	Homeward bound	In port
1-10	3.0	1.1	1.3	0.8	8.0
11-20	3.5	0.6	2.1	0.8	7.0
21-31	4.2	2.7	0.4	0.5	6.2

The daily averages for August were:-

W. Med.	E. Med.	Outward bound	Homeward bound	In port
3.6 = 25.7%	1.3 10.7%	1.2 8.6%	6.7 5%	7.0 50%

- (2) Captain U-Boats Italy war diary. (F.D.S./Admity.).
 (3) Operation 'Eiche' ('Oak').

five days while this 'Magic Eye' (or Hagenuk) gear was being installed and tested. The third, arising from the second, was that the rest of the U-boats at sea were operating with the obsolete Metox location gear and had to be sent to areas where the Allied air patrols were lightest, in other words, out of the most critical zones of operation. Even the area west of Malta now became too dangerous owing to the close air watch, and on 17 August, U.458 was forbidden this area.

As the month proceeded, and the effects of these handicaps were being fully experienced, new Intelligence forecasts pointing to landings in Calabria led to new disposition plans. In spite of the known difficulties, two U-boats (U.596 and U.407) were to be stationed in the Eastern Basin, based on Salamis. This was shortly reversed. U.458 was sunk by H.M.S. Easton and H.M.S. Pindos off Pantelleria on 22 August outward bound from Pola for the eastern basin. Operations were planned off the south and south-east coasts of Calabria, and in the sea areas between Sardinia and Sicily. The U-boats lying in the Western Mediterranean were to be left there: one was to operate between Cape Bougaron and La Galite Island. But with the rescue of Mussolini receiving first priority and the U-boat command recoiling under the threat of Allied air radar detection measures, the plans were thrown into confusion and it was admitted that if a landing took place within the next few days in Calabria there could only be one U-boat in the combat zone.

The pressure of Allied air radar detection methods on German U-Boat policy in August 1943

Although only a few Allied aircraft in the Coastal Air Force were now fitted with centimetric radar detection apparatus, the knowledge that some unknown location weapon was being used against them in other areas had forced the Germans on to very intensive research to find a counter-weapon. Admittedly, the latest product of their laboratories was not the ultimate answer to the new threat, but it was an improvement on the obsolescent and cumbersome Metox apparatus, inasmuch as it did not emit radiation. The Germans still believed that the Allied weapon picked up radiation.(1)

U-boats had been surprised twice during one night. It was true that one commander, by skilfully adapting himself to circumstances had operated for a time with successful results. But the use of Metox gear was now forbidden and the Hagenuk calibrator was to be gradually introduced. Unfortunately, the delivery rate was poor: there were manufacturing delays: the best that could be done was to withdraw two operational boats to Toulon for fitting with Hagenuk. The rest must postpone their sailing dates. This latest setback, coming on the eve of major events, was very strongly felt.(2)

These admissions made at the time by the German U-boat commander are positive proof of the decisive part air reconnaissance and the air forces' lead in the employment of radar were playing in

(1) Refer to infra, sub-section (iii).

(2) Captain U-Boats Italy war diary. (F.D.S./Admly.)

depriving the submarine arm of their freedom of tactical deployment. It will be demonstrated in the following sections how the correct exploitation of the still considerable Allied air superiority over the Central Mediterranean struck at the very roots of Axis maritime policy, so placing our own Navies in a position of considerable advantage.

The fall and rescue of Mussolini (1)

On 25 July, the Grand Fascist Council deposed Bruno Mussolini and elected the King as Commander-in-Chief of the Armed Forces. Mussolini was detained, arrested and eventually transferred in custody to the Villa Weber, outside the port of La Maddalena in Sicily.

Hitler immediately ordered the preparation of plans for Operation 'Eiche' (Oak), (the rescue of Mussolini), and for Operation 'Student' (embodying broad measures for the restoration of Fascism, including the occupation of Rome).

Pending the successful execution of these two plans, two other plans were made so as to ensure the most advantage if the Badoglio Government and the King surrendered suddenly.(2) At the Fuehrer's Conference of 26-28 July, those two latter were deferred until the outcome of 'Eiche' and 'Student' were clear. In spite of changes in the situation, Hitler held to his principle of loyalty to old comrades and 'Eiche' continued to hold priority. Otto Skorzeny was charged with the rescue of Mussolini from the Villa Weber.

Mussolini was transferred to the Gran Sasso on 27-28 August. Skorzeny, according to his account, arrived at La Maddalena with a landing party some hours too late. He picked up the threads of the problem later and discovered that the Duce was at the Campo Imperatore Hotel at Gran Sasso. After preliminary reconnaissance, a German rescue party landed from Fieseler Storch aircraft at Gran Sasso at about 1330 hours on 12 September, and removed Mussolini by aircraft at 1500 hours. They flew, according to Mussolini, to Pratica di Mare airfield and from thence to Vienna. On 13 September, he records arriving in Munich, and, on 14 September, meeting Hitler at his headquarters at Wolfsschanze.

This rescue tied up three U-boats in the latter half of August, when the Germans needed every available craft for attacking our shipping build-up for Operation 'Husky'. The last of the three was released at the end of the month.

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- (1) Sources: Benito Mussolini: Memoirs 1942-43. London 1949. Geo. Weidenfeld & Nicholson, Ltd.; Fuehrer Conferences on Naval Affairs; Otto Skorzeny. Missions Secretes, a series of articles published in Le Figaro in 1950 (Copyright Le Figaro and Editions Flammarion).
 - (2) Operation 'Achse' (Axe), the capture or destruction of the Italian Fleet, and 'Schwarz' (Black), the seizure by the German Army of key positions in Italy.

Italian submarine policyThe defence of Sicily (1)

On 12 May, Admiral Doenitz had pressed the Italians to use their Fleet for the protection of the sea supply lines when the Allies made their next landing. In early July, he came closer to the Italian Naval High Command's belief in an imminent landing in Sicily and looked for their active support in defeating it.

On 4 July, the German Naval Attaché in Rome reported to Doenitz the gist of his conversation with Admiral Riccardi, the Under-Secretary of State for the Italian Admiralty(2) on the military situation. The unsatisfactory air situation dismayed the Italians. There were not enough German aircraft in the area to present a full picture of Allied preparations and intentions. They had recently failed to prevent the convoy 'Tedworth' from reaching Tunisian ports and now that the Allies were concentrating in the square Bizerta - Sfax - Tripoli - Malta, far more extensive photographic reconnaissance was a necessity. If only sufficient air warning of the Allied approach could be provided, the Allies would lose the advantage of the element of surprise. The Germans grasped this point. Field Marshal Kesselring and General von Richthofen (of the Luftwaffe) flew to Berlin, where they obtained authority to use German fighters on reconnaissance work, a last-minute attempt, too late in the event, to fill in the picture.

On 12 July, after the Allied landings, Doenitz urged that the Italian big ships should be as close as possible to the zone of operations. He had ordered all available German S-boats to proceed to the defence of Sicily. Riccardi sent a signal (3) and a letter (4) in reply. The signal underlined his contention about the Axis air forces - they needed trebling. His naval forces were too weak numerically. The letter developed the decisions made by the Naval High Command on the night of 10 July. They were governed very largely by local Allied air superiority. All they could do, and had done, was to order every available U-boat and S-boat to the zone of operations. In this case, it was the Augusta - Messina naval zone, which figured largely in the Italian defence scheme.

Riccardi wrote that it was impracticable to use the big units round Sicily. They were greatly outnumbered and out-classed by the Allied Navy and were blinded in the air. Allied aircraft controlled the Upper Tyrrhenian Sea, following and reporting the movements of both large and small units day and night. They - the Italians - had lost four freighters, for example, in the last twenty-four hours. Enemy submarine

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- (1) The authority for Axis correspondence and signals quoted in this sub-section is PG.32216 Case GR.266 at the Foreign Documents Section of the Admiralty. The German file reference is I SKL Teil c Deutsche Kriegführung in Mittelmeer May - October 1943.
 (2) 27/43 M.Att Chef No. 342/43 4 July 43. (F.D.S. Admly.).
 (3) 1995/43 13 July (F.D.S./Admly.).
 (4) B. No. 261/S.R.P. 13 July 43. (F.D.S./Admly.).

forces were operating in strength along the sea routes to Sicily. There was no means of preventing Allied aircraft from observing and reporting a Fleet sortie from La Spezia; Augusta would be alerted twenty hours before the Fleet arrived there. Not only did the enemy possess a larger Fleet, but one that was covered by more aircraft and three aircraft carriers. Then, his ports were open to air attack. La Spezia had already suffered two heavy attacks and Naples no less than fifty. Italy lacked any air reconnaissance which could compare with the Allies' extensive cover. To quote his own words, "we know nothing about the enemy, but he knows everything about us!"

The Fleet might suffer heavy or total loss in the Sicilian Channel without inflicting any comparable damage on the enemy. In a narrow sea like the Mediterranean, against Allied air superiority, it would be unreasonable to risk his inferior forces.

The move of sending the submarines to an almost certain doom will be seen as a desperate gesture designed to save both face and honour. Doenitz accepted the situation and opened negotiations for the building in Italy for Germany two more submarines of the Remo and Romolo type of 2,200 tons for transporting rubber from Japan to Europe.

Italian submarine forces on the eve of Operation 'Husky'

On 3 December 1942, according to Italian documents,(1) Italian submarines were operating under the Submarine Command in Rome, in five operational groups,(2) with one training group.(3) The front line strength available for anti-shipping operations was 52 submarines of various types,(4) 1 further submarine was detailed for special underwater weapon operations(5) with two others(6) and 5 First World War types(7) in non-operational reserve. There were 7 submarines on the strength of the school group.(8) The whole totalled to 67 craft. There were also 11 midget submarines completed.(9) An ambitious building programme was proceeding, including some very large ocean-going craft of over 2,000 tons displacement. There was a number of submarines engaged in transport duties only.

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- (1) P1/2459. (A.H.S./F.D.S.)
 - (2) 1st based on La Spezia, 2nd based on Naples, 4th based at Taranto, 5th based on Leros and 7th based on Cagliari (later La Maddalena).
 - (3) 12th at Fiume.
 - (4) 2nd Group. Tritone, Gorgo, Uarsciek, Topazio, Malachito, Axum, Aradam, Alagi, Turchase, Diaspro, Galatea, Ascianghi. 4th Group. Atropo, Bragadino, Micca, Corridoni, Toti, Zoea, Otaria, Settimo, Settembrini, Narvalo, Santarosa, Delfino, Menotti, Speri, Da Procida. 5th Group. Ametista, Nereide, Onice, Sirena, Beilil. 7th Group. Brin, Dandolo, Mocenigo, Argo, Nichelio, Porfido, Volframio, Avorio, Argento, Velella, Bronzo, Giada, Platino, Acciaio, Asteria. Ungrouped. Flutto, Remo, Romolo and Pietro, all new.
 - (5) Ambra, 1st Group based on La Spezia.
 - (6) Baiamonte and Rismondo.
 - (7) H.1, H.2, H.4, H.6 and H.8.
 - (8) Bandiera, Jalea, Manara, Serpente, Pisani, Squalo and Mameli.
 - (9) C.B.7 to 16 and C.M.1.

Between 6 December 1942 and 30 June 1943, 12 front-line submarines(1) and 1 reserve(2) had been sunk and 1 demolished.(3). This left a potential on 1 July 1943 of 46 first-line craft,(4) 7 reserve Italian built submarines and 11 midgets.

In arriving at the available forces for the defence of Sicily, it must not be overlooked that the Axis had appropriated 9 French submarines at Bizerta and that 1 of these(5) had been intercepted and sunk by aircraft while transporting supplies to Lampedusa, and that 2 others had been scuttled at Bizerta.(6) Italy also had a few non-operational second-line submarines. Some of these were used by the Germans after the Armistice.(7) Others sailed for Allied ports in September 1943.

Against the above figures, the Admiralty's estimate made in planning for Operation 'Husky' of 48 effective Italian submarines(8) was fairly close to the mark. But it was admitted that the operational strength available for combat was unknown. At the end of 1942, of 67 submarines operational, approximately 4 out of every 7 were ready for sea and 3 out of 7 under repair or refitting etc. Bearing in mind the heavy losses and damage during the strenuous Desert and Tunisian campaigns, it is reasonable to assume that at least 75 per cent of the 46 front-line submarines were not in a state of operational readiness. No specific confirmation of the exact figures is as yet available.

Commander M. A. Bragadin, (Head of Section 5 (Plans) of the Naval High Command in 1943) stated that there were only 12 Italian submarines ready for operations in the defence of Sicily.(9) Admiral of the Fleet R. Bernotti, stated (10) that the normal ratio of serviceability to strength was 1 in 3, but that in the defence of Sicily 16 submarines were operating at sea out of a total of 23 effective; and he also stated, as proof of their effort, that in some 20 days, 4 of the 16 were sunk and 6 damaged. In all, 9 were sunk during July and August.(11) Joining the pieces of evidence, it seems evident that the Italians considered that the number of submarines likely to stand any chance at all of survival in Sicilian waters was very limited. But those few fought without stint and paid the highest price.

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- (1) Porfido, Corallo, Uarsciek, Narvalo, Tritone, Santarosa, Avorio, Malachite, Asteria, Delfino, Mocenigo, Gorgo. (1 by aircraft, 1 shared aircraft/ships and 10 by the Navy).
 - (2) H.8.
 - (3) Toti - 1 May 1943.
 - (4) Including the school group 7.
 - (5) FR.III (ex Phoque).
 - (6) FR.116 (ex Tourquoise) and FR.117 (ex Circe).
 - (7) Infra under post - September 1943 operations.
 - (8) Battle Summary No. 35 Section 2. (A.H.B.IIK/18/27).
 - (9) 'Che la fatto La Marina'?
 - (10) 'La Guerra sui Mari 1943-1945'.
 - (11) Infra,

It must, of course, be taken into account that there were others actually seaworthy, although perhaps not battleworthy, for 33 Italian submarines(1) sailed on 8 September to Allied ports from their distant bases.

German U-Boat Operations and Allied Counter-Operations
(1 May to 8 September 1943)

Plans for operations against Force H(2)

On 29 April, German signals intelligence reported that H.M.S. Rodney, H.M.S. Nelson, H.M.S. aircraft carrier Formidable, two destroyers and five escort vessels were continuing east after firing practice east of Gibraltar. Before this period, major naval units were seldom seen, located or intercepted by radio in passage outside Gibraltar. These manoeuvres suggested to the German Naval War Staff(3) attached to the Italian Naval Command in Rome that a U-boat with an experienced commander might find worthwhile targets in their exercise area. On 1 May, the Captain of U-Boats Italy thought the idea a good one, but could not act on it, as his only submarine in the area was returning with bomb damage, as the heavy ships were then reported between Oran and Majorca and as the only other commander with sufficient experience was at the end of a strenuous operation. After the heavy units were back in Gibraltar, he would organize a short operation with a fresh boat. Two U-boats were about to enter the Mediterranean and were almost certain to create a state of submarine alert. They would have to wait until this alert subsided.

During the morning of 26 May, a battleship, believed to be H.M.S. Nelson, three destroyers, one submarine and two vessels were reported escorting a convoy of twelve large vessels into the Mediterranean. There were three battleships and two aircraft carriers in Gibraltar, likely to come out for exercise. The time was ripe for attack. He directed U.458 to the area(4) in the early hours of the morning; U.458 signalled that he had had his periscope hit by an aircraft gunner(5) and was returning.

There were still five U-boats in the Western Mediterranean and he could have trusted at least one of them to replace U.458. However, events moved against him and the big ships escaped again, thanks to the intervention of Allied destroyers and aircraft; for on 26 May, U.432 was damaged by a destroyer and U.755 by an aircraft. Both were ordered back to Toulon for repairs. On 28 May U.755 was sunk by an aircraft (6) rocket projectile.

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- (1) Names are given later in the list of surrendered Italian warships, also in the survey of enemy shipping losses in the Mediterranean produced by A.H.B.
 - (2) War Diary of Captain U-boats Italy 1 Jan.-30 June 43 (F.D.S./A.H.S. Admiralty T.R./AU/19).
 - (3) 1st Div. (Operations) 1A 1300/43 (F.D.S. Admlty.)
 - (4) It put out from Toulon at 2130 hours on 25 May.
 - (5) At 0209 hours, almost certainly by an aircraft based in Gibraltar.
 - (6) See infra.

There were still two U-boats in the operational area - U.561 and U.414. The former had been at sea for some time and was near the end of its fighting capacity. The latter, too, was at the end of its tether and its commander lacked the necessary experience. It was sunk some time that day by H.M.S. Vetch west of Cape Tenez. If only U.458 had not been intercepted by an aircraft, it might have won laurels, for ironically enough, on 29 May, German Intelligence located the carrier H.M.S. Formidable on manoeuvres with aircraft due east of Gibraltar, and, on 30 May, H.M.S. King George V and H.M.S. Howe engaged in gunnery exercises in the operational area intended for the U-boat. 'It was a pity' recorded Captain Kreisch, (1) 'that the operations planned could not have been carried out'.

U-Boat forces in the Western Mediterranean in late May 1943 (2)

U-755 left Toulon on 20 May, U.431 on 22 May and U.458 on 25 May; by 26 May, there were six U-boats in the Western Mediterranean operational area. These, all carrying seasoned commanders, constituted a serious menace to the Allied convoys to forward ports for the Sicily build-up and to the big ships of the Gibraltar force. Between 26 and 31 May, however, these U-boat forces were drastically reduced and the position radically altered by the destruction of three U-boats, - U.755, U.458 and U.414 and the crippling of a fourth, U.431.

Double attack on, and destruction of, U.755 (3)

At 0625 hours in the morning of 26 May, the crew of aircraft A.1 of No. 500 Squadron signalled to base that it had sighted a fully surfaced submarine about 13 miles N. by W. of Alboran Island. A few minutes previously, the U-boat - U.755 - signalled to its H.Q. that it had been attacked and damaged by heavy bombs and was unable to submerge. One seaman had been killed by gunfire and two men injured.

Emerging from cloud, the crew saw U.755 directly below them and dropped three depth charges, (only one of which they could see exploding), about 50 yards astern. The U-boat fired her light anti-aircraft and small calibre guns. The Hudson replied with fire from guns and a Browning mounted in its nose. It had no rocket projectiles. At 0629 hours, the aircraft returned to dive bomb the U-boat twice, first from stem to stern, with two bombs (one of which fell only five yards off it) and then again from starboard with one bomb which fell close astern, firing on both occasions with all guns. The submarine took violent evasive action. Return fire fell off in accuracy after the first attack, but they had already hit the aircraft's port engine. Smoke came from it; a marker was dropped and the aircraft made for base. (4) Following patrols were unable to sight the submarine to which they had been directed. It had succeeded in partially submerging.

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- (1) Captain U-Boats Italy (F.D.S. Admlty.)
 - (2) War Diary of Captain U-Boats Italy - Foreign Documents Section, Admiralty A.H.B.6 Copy).
 - (3) Ibid and Nos. 500 and 608 Squadrons and N.A.C.A.F. O.R.Bs.
 - (4) No. 500 Squadron O.R.B.s.

U.755, and, later in the day, U.431 (depth-charged after operating against a convoy), were ordered to return to Toulon for repairs. Formal permission to cross the 42nd parallel was granted and destroyer and aircraft escort arranged for U.431 (against the commander's protest). Night and the following forenoon passed uneventfully. U.755 made her way up off the west coast of Iviza Island, towards the channel between it and Majorca Island.

Hudson E of No. 608 Squadron, (as well as five other aircraft) was out on a long patrol(1) searching for U-boats. At about 1345,(2) a submerged U-boat was sighted, but it was too late for an attack. The signal to base, decoded by the enemy radio intercept service, reported that it had only sighted the periscope. No action developed. U.755 continued past Iviza and to the west of Majorca.

The next day - 28 May - the squadron maintained a keen look-out. At 1330 hours, Hudson Q of No. 608 Squadron sighted U.755 at eight miles from a height of 4,000 feet, bearing 100. It was fully surfaced and painted a light grey with rusty-coloured upper surfaces. The conning tower was stepped back and a gun was mounted forward of it. The air-gunner fired rocket projectiles, scoring two hits and leaving it down by the stern. It began turning slowly, hit in the forward end of the Diesel engine room (which is abaft the conning tower) and sank rapidly. The Hudson dived low over it, machine-gunning the crew, who returned the fire without damaging the aircraft.

The crew, forty-seven of them, including one at least with shell splinters in his back, jumped overboard, and they and the Hudson aircrew saw the submarine sink, nine minutes from being struck. Recording the first success with rocket propulsion armament in the Mediterranean, a signal was sent by the aircrew. 'Am over enemy submarine in position DSCL 5941. Attacked with U.P.(3) Two hits. Sub sunk. Survivors seen'. Hudson Q of No. 500 Squadron picked it up and so did the German radio intercept service.

At 1353 hours, U.755 sent a war distress signal 'Air attack' (omitting its number), which was received by Captain U-Boats at 1400 hours. While U-Boat Command was trying to identify the craft in distress, Flieger-division 2 was asked for aircraft reconnaissance and life-saving apparatus for dropping. C.-in-C. South's (Kesselring's) H.Q. tried, through its Naval Liaison Officer to obtain the aid of Sardinia-based aircraft, but failed, as there were none suitable available. The Naval War Staff, 1st Division (Operations) in Rome appealed to Spain for assistance.

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- (1) 1024 to 1621 hours. No.608 Squadron O.R.B.s and N.A.C.A.F. O.R.B./Appendix A 1943 - 1944.
 - (2) Time not recorded in squadron O.R.B., but Captain U-Boats Italy recorded in his war diary that at that time - 1345 hours - the radio intercept service decoded an Allied aircraft signal to Algiers 'Am over submerged enemy U-boat in CH 5692' (German grid) 'Have only sighted periscope'.
 - (3) Official abbreviation for Unrotating Projectile, the early term for the Rocket Projectile.

There was no reply by 1915 hours to the appeal for aircraft to Fliegerdivision 2: another signal was sent. Communications between Rome and Toulon were bad. The report of the disaster did not reach German U-Boat Command in Berlin until 2255 hours. This message and another sent at 2000 hours were still not in the hands of the O.C. U-Boat Base Toulon at 2315 hours. Meanwhile, the diminishing crew of U.755 clung to their dinghy somewhere between Iviza and Spain. The purport of the appeal for air assistance must have got through, for at 1834 and 1952 hours, a Ju.88 was airborne. The first aircraft returned at 2300 hours, reporting no U-boat found, but a patch of oil 200 metres long and 50 metres broad in the engagement area. The second aircraft observed nothing unusual. The 47 men who left the boat saw one of the Ju.88s flying at very high altitude over the spot, but as they had no watertight pocket lights of Verrey pistols in their life jackets, could not attract its attention. Thirty hours passed. By then, there were only nine men alive and they were all in very bad form. On 29 May, a Ju.88 searched during the forenoon and another from 1055 to 1610 hours, but without success. Italian aircraft had no better luck.

Spanish Air/Sea Rescue

Spanish aid to the shipwrecked Germans was quick and effective. On the first day, destroyers had already put out to assist before 2000 hours and U.755 and U.431 were told so; the Ju.88s were warned to expect them in the area next day: they had found nothing at 1100 hours and were planning to abandon the search after 1500 hours. U.755 might be merely crippled, so craft engaged on anti-submarine sweeps were warned.

At 0145 hours on the third day - 30 May -, the C.-in-C. U-Boats received a report from the German Naval Attaché in Madrid to the effect that the Naval Commander Palma (on Majorca) reported that the Spanish destroyer 'Churruca' had rescued nine men on its return journey after having abandoned the search. They could not be landed in the Balearics, as it was believed there was a strong British Intelligence service in that group and it would be impossible to move them there from Spain unobserved.(1) So the Spanish destroyer 'Velasco' took them to Valencia. On 2 June, the German Naval Attaché at Madrid reported that the Spanish Navy Minister had granted permission for the nine survivors to travel home to Germany via Madrid.(2) They should have been interned.

R.A.F. Gibraltar reported parallel courtesies to Allied aircrews who had crashed in Spanish territory. It is also only fair to record that within twenty-four hours of its inception, i.e. on 16 July 1944, the Spanish Air Sea Rescue Service(3) responded to a call for assistance from

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- (1) A tacit admission that they intended contravening the neutrality laws.
 - (2) War Diary of Captain of U-Boats Italy. (Admlty/F.D.S.)
 - (3) Based at Pollensa Bay in Majorca. For details of the operations refer to quotation from R.A.F. Fortnightly Intelligence Summary 31 July 1944, quoted in 'Mare Nostrum' No. 47 in N.A.C.A.F./Ops. O.R.B. Appendices (A.H.B. IIM/A.48/IF).

the R.A.F. Gibraltar with three searches for an aircraft of No. 210 Group.

The U-boat situation at the end of May 1943

The Captain of U-Boats recorded that May had been 'the blackest month in U-boat warfare in the Mediterranean', as, with the low number of U-boats available, insufficient successes stood out in relief against particularly severe losses. Two U-boats had been lost(1) and a third had failed to report and was presumed lost.(2) The main enemy of the U-boat was still, as it always had been, the aircraft. The Allied air and naval forces had now spread out as far as just outside the submarine bases. The constant air threat, he continued, increased the time taken on outward and homeward passages, so reducing their effectivity and piling up the backlog of repairs. With only 17 U-boats available, and most of them repairing, he could no longer guarantee effective U-boat warfare. The scope was there, the means were not.(3)

It was obvious that the brisk traffic between Gibraltar and Algiers, - he knew of 19 convoys of 230 ships in May sailing through eastwards, - the stoppage of the round-the-Cape traffic and the increase of traffic off Cyrenaica pointed beyond replacement of campaign losses to more ambitious plans. He could still see no definite evidence of the next point of impact. Allied attacks on his own craft, usually bewilderingly accurate, were increasing and he was anxious about the overlong periods U-boats remained under repair. Frequent air attacks and alarms, transport difficulties, inadequate techniques at Toulon, postponement of repairs in favour of the Escort Flotilla and the conversion of three boats to benzine all contributed to this state of affairs.(4)

Kesselring's warning of Allied shipping concentrations

As June wore on, German apprehensions grew and were reflected in U-boat Command Italy. On 23 June, Field Marshal Kesselring, the Commander-in-Chief South, warned that important Allied offensive operations were imminent. Concentrations of battleships and aircraft carriers, air attacks with torpedoes on Axis naval transports, heavy air attacks on harbours and supply lines and increased

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- (1) U.303 and U.755, see infra.
 - (2) U.414, infra.
 - (3) Of 4 U-boats detailed to enter the Mediterranean in May, 1 got through, 2 were sunk en route and 1 sunk in collision.
 - (4) Daily averages for May 43.

<u>In Western Med.</u>	<u>In Eastern Med.</u>	<u>Homeward and outward bound</u>	<u>In Port</u>
2.8 U-boats	0 U-boats	2 U-boats	14.5
i.e. 14.5%	0%	10.4%	U-boats 75.2%
Successes:	2 ships (16000 G.R.T.) sunk. 2 ships (12000 G.R.T.) torpedoed.		
Losses:	<u>U.303</u> , <u>U.755</u> and <u>U.414</u>		

submarine activity with mines and torpedoes all pointed to it. There had never been so great a tonnage of Allied ships in the Mediterranean and seldom such activity. There was enough material and shipping in the Eastern Basin for considering an operation such as one against the Dodecanese as a possibility.

Plans to attack Fleet units

The Naval High Command admitted that their U-boats could never interfere decisively if such operations came to pass, but were well aware of their high nuisance value. Indeed, they might affect the balance of naval support, they thought, and the plan to attack the heavy units of Force H was revived. Captain U-boats Italy had the plan ready on 18 June, five days before Kesselring's situation report. It was put into operation on 22 June, when U.617 and U.565 were sent to westward of their actual operational area (East of Alboran Island) to operate against two battleships reported as having left Gibraltar. Another signal was sent them on 23 June ordering them to push on to due East of Gibraltar and attack cruisers, troopships or large tankers. They had little luck, although U.617 claimed to have sunk one of three eastbound destroyers at 2030 hours on 26 June 20 miles north of Cape Tres Forcas: this was not confirmed from Allied sources.

U-Boat attacks on convoys in late May

Only two Allied merchant ships were sunk, by U-boat during May, viz the Empire Eve(1) and the Fort Anne,(2) both in Convoy K.M.S.14. U.414 sank them at 2100 hours on 18 May about 100 miles West of Algiers. R.A.F. Squadron No. 608 provided air escort. One aircraft escorted the convoy for four and one-half hours without incident. Another met it, but had to break off owing to unserviceability. The convoy was escorted over the following days without incident.(3)

Through convoys were suspended during July.

Allied merchant shipping losses to U-boats in 1943

As a measure of the cost to the Allies in merchant shipping of U-boat operations and of the rise and fall of

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- (1) 5,979 tons.
 - (2) 7,134 tons.
 - (3) Nos. 500 and 608 R.A.F. Squadrons and N.A.C.A.F. O.R.Bs. and The War at Sea Vol. IV, Admiralty draft narrative.

U-boat successes, reference should be made to the footnote(1) wherein the monthly and quarterly totals of ships and tonnage sunk are given. The total of 240,298 tons may be held to have justified the German policy. No less than 38.21 per cent of the total Allied merchant tonnage sunk in 1943 in the Mediterranean fell to the credit of the small U-boat force. The rest were lost principally to mines and aircraft, none to surface raiders or E-boats.

British warship losses to U-boats in 1943(2)

Of the 21 surface warships under British command lost by enemy action in 1943, 6 were lost(3) to enemy submarines. This compared favourably with the number of 14 lost to the same source in 1942.

The number of submarines under British command sunk in 1942 by all enemy causes was 17 and in 1943 fell to 13; but none of them were sunk by enemy submarines.

Anti-submarine effort by General Reconnaissance aircraft

Some measure of the success of Coastal aircraft in their protective role may be formed in an extract from the Monthly Anti-Submarine Report for June 1943.

(1) Allied merchant shipping sunk in 1943 by U-boats in all areas of the Mediterranean

Month	No. of Ships	G.R.T.	Quarterly	Totals
			Ships	G.R.T.
January	3	11,969	17	84,812
February	6	27,621		
March	8	45,222		
April	5	13,934	11	43,558
May	1	5,979		
June	5	23,545		
July	4	25,904	14	78,813
August	5	20,511		
September	5	32,398		
October	3	17,688	6	33,115
November	2	7,418		
December	1	8,009		
Totals	48	240,298	48	240,298

Quarterly Mediterranean totals - all causes - 1943

Quarter ending	No. of Ships	G.R.T.	% of Tonnage sunk by U-Boat
31 March	35	190,639	44.49
30 June	17	70,692	61.62
30 September	30	173,796	45.35
31 December	35	196,365	16.86
Annual Totals	117	631,492	38.21

Sources: Merchant Ship Losses Analysis by Causes and Areas (Restricted) (A.H.S./Admty July 1956) and letter from Commander Rowbotham (A.H.S.) dated 2 Nov. 56 to A.H.B.1.
Refer to Appendix 30 for full Analysis of Causes.

- (2) Analysis of major British warships and Allied (other than U.S.) warships under British operational control lost through enemy action in the Second World War (A.H.S.)
- (3) 3 destroyers, 1 corvette, 1 minesweeper, 1 minelayer, 5 of the total by German U-boat, 1 (the corvette Samphire, by the Italian submarine Platino on 30 Jan. 43.)

'During the months of April, May and June, a total of some 1,074 ships had been passed in convoy along the coast with the loss of 6 vessels. It is estimated that an aggregate of 184 U-boats were within striking distance of these convoys at different times.'

Study of the footnote (1) giving figures for convoy escorts, anti-submarine patrols and U-boat hunts and strikes over the whole period covered by this part of the narrative shows clearly the effort required under the conditions then ruling to achieve thirty-five sightings. The worth of this effort will have to be reviewed later on a long term basis. Progress was slow, but, as will be seen, the U-boat force was slowly worn down and eliminated by the autumn of 1944.

Heavy increase in shipping protection air commitments

Another yardstick of the role of air cover and reconnaissance is a comparison of the number of Allied ships sunk in a series of 4-weekly periods with the ship miles sailed in waters protected by Northwest African Coastal Air Force. The picture presented is one of ultimate improvement from a serious situation by way of several grave setbacks in the summer months.

Taking the last two months of the Tunisian campaign as a criterion, one finds that from 25 March to 22 April, nine ships were sunk by the enemy for a total of 274,000 ship miles(2) sailed; from 22 April to 19 May, two ships were sunk for a total of 350,000 ship miles. During the next four weeks from 20 May to 16 June (a period of confusion and recuperation for the Axis forces) no ships were sunk for a total of 405,000 ship miles. Thereafter, the tonnage leapt for the period ending 14 July to 838,000 ship miles and five ships were sunk. An even greater figure of 847,000 ship miles were run between 15 July and 11 August for the loss of only one ship. The situation worsened between 12 August and 8 September, when six ships were sunk for a total of 843,000 ship miles. The invasion of Italy brought the

(1)

	Sorties		Hours		Sightings		Sorties per sighting	Hours per sightings
	No.	%	No.	%	No.	%		
C/V Day	1,337	31.0	6,439	30.3	5	14.3	267	1,288
C/V Night	746	17.3	3,894	18.3	3	8.6	249	1,298
SUB-TOTAL	2,083	48.3	10,333	48.6	8	22.9	260	1,292
A/S Day	1,560	36.2	7,128	33.6	12	34.3	130	594
A/S Night	668	15.5	3,775	17.8	15	42.8	45	252
SUB-TOTAL	2,228	51.7	10,903	51.4	27	77.1	89	404
TOTAL BOTH	4,311	100.0	21,236	100.0	35	100.0	123	607
TOTAL DAY	2,897	67.2	13,567	63.9	17	48.6	170	798
TOTALS NIGHT	1,414	32.8	7,669	36.1	18	51.4	79	426

(2) The term ship miles indicates the movement of one ship for the distance of one mile. It is determined by multiplying the number of ships in movement during a 4-weekly period by the total miles traversed by all ships.

total of ship miles up to 866,900 for the four weeks following the Salerno landings and four ships were sunk.(1)

Operations by German U-boats in June 1943

The loss of three U-boats at the close of May and the preparations for dispatch of two to the Eastern Mediterranean led to a virtual standstill in the first fortnight of June by boats from Toulon and La Spezia.

On 10 June, U.380 sailed for its usual attack area. On 17 June, U.565 sailed from La Spezia, still partially functioning after the air raid of the night 18/19 April 1943.(2)

Between 10 and 21 June, U.381, U.565, U.431, U.593, (after repairing at Messina 14 to 18 June) and U.617 all operated in their habitual areas hingeing on Alboran Island. They recorded no successes until, on 22 June, U.73 claimed to have sunk a 3,000 ton freighter 30 miles West of Cape Caxine at the approaches to Algiers.(3) On 27 June, U.73 reported sinking a tanker in a westbound convoy.(4)

U.617 and U.565 were detached from their normal duties on 21 and 22 June to operate against two battleships reported as having put out from Gibraltar, but made no contacts.(5) This was typical of a period when the wildest speculations as to Allied intentions ran through every level of German Intelligence and the most insignificant moves of major ships acquired significance. U.431, who had taken over the vacated areas of U.617 and U.615, reported hearing three hits of a fan of four on a probable Frobisher class cruiser at 0437 hours on 21 June; and on 26 June, U.617 reported sinking one of three east-bound destroyers at 2030 hours 20 miles north of Cape Tres Forcas. On 27 June, U.73 reported the sinking of a tanker of some 8,000 tons in a westbound convoy in its area in the western basin. No cruiser or destroyer was actually sunk.(6)

The relative success of the defence against the U-boat was due to the good co-operation of A.S.V. aircraft with the hunting group or surface escort by night.(7) But this comment by the Admiralty should be qualified when operations in the Eastern Basin came to be reviewed, for the sinkings of merchant shipping in that zone brought the total for the month up to six merchant ships totalling 24,000 G.R.T. It would appear that there was something in Doenitz's order to send U-boats east to exploit the natural relaxing of preparedness there.

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- (1) N.A.C.A.F. O.R.B's.
 - (2) Captain U-Boats Italy war diary (F.D.S. Admly).
 - (3) S.S. Blackburn - sunk on 21 June (Log of Submarine tracker O.I.C., C.-in-C. Med.)
 - (4) S.S. Abbeydale was the ship hit, beached, but not sunk.
 - (5) Captain U-Boats Italy war diary, which, curiously, does not report the attacks on 22 June on L.S.T.333 (sunk) and L.S.T. 387 (beached) E. of Algiers. (A.H.S./F.D.S.)
 - (6) War diary of Captain U-Boats Italy (Admly/F.D.S.).
 - (7) Admiralty Monthly Anti-Submarine Report. C.B.04050/43 series. (A.H.S.)

The operations against Pantelleria, Lampedusa, Lamplone and Linosa Islands during June did not affect U-boat dispositions, policy or operations.

Preparations for the Sicilian Campaign (1)

The Germans were very much concerned with the major operation they felt certain was impending. Allied troops and landing equipment had been reported as loading on to ships since 17 June. The 82nd U.S. Airborne Division was at the ready. Aircraft had been transferred in considerable numbers from west to east. Imminent attack on Sicily was spoken of. But Sardinia, the Captain of U-Boats was informed, was also a strong possibility. Friends of theirs on the General Staff of the Spanish Air Force had whispered to the Italian Air Attaché in Madrid that it was Sardinia, and the date was the night of 20/21 June.

The date passed uneventfully, and the tension heightened. On 25 June, serious stock of the situation was taken. No extravagant hopes were recorded that the small force of fourteen U-boats could neutralize a major landing attempt, but they prepared to do their best. Two boats - U.375 and U.409 - were held at immediate readiness in Toulon so as to operate quickly in the event of a landing in Sardinia. U.380 had been out for sixteen days and needed rest and a quick overhaul. U.409 was released for the Western Basin, but was found faulty and returned for repairs. U.371 and U.380 were held in reserve. U.73 was due at Toulon on 1 July.

By the end of June, the idea of Sicily was hardening, with diversionary operations in Greece, the Dodecanese and Turkey as probabilities. Allied supplies were reported as being pushed further East, but this might well be to make more room in Algeria and Tunisia for supplies for the major assault on Sicily.

Conference on Joint Axis submarine operations off Sicily(2)

At 1000 hours on 8 July, a conference was held between Captain Kreisch, (the Captain of U-Boats Italy) and Admiral Sansonetti, the Naval Chief of Staff, to discuss co-operation between Italian and German submarines in case of an enemy landing on one or more of the islands. The Italian Admiral said that in view of the existence of unplotted mine-fields and Allied preponderance in aircraft, it was unwise to attempt the passage of submarines through Messina Straits or operations in the coastal areas of east and southern Sicily before the Allied landing. A safer policy was envisaged whereby Italy would station about ten submarines south-west of Sardinia, which was also threatened. The Germans were asked to co-operate closely in that area.

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- (1) German Naval War Staff 17621 dated 20 June, quoted in War diary of Captain U-Boats Italy 19 June 1943.
(F.D.S. Admly.)
 - (2) Captain U-Boats Italy war diary (Admiralty PG/30932/ N.I.D.). (A.H.S./F.D.S.).

German Decision to operate U-Boats off Sicily(1)

Intelligence indications that the Syracuse - Gela area was a possible Allied landing point were now given serious credence and, on 9 July, submarine dispositions were hastily revised. One of the U-boats operating in the Eastern(2) Basin was redirected from the waters off the Cyrenaican Hump to the waters off Malta, so as to cover the Allied Tripoli-Malta traffic. U.407 was ordered to sail from Toulon to the Syracuse area. The three U-boats in the extreme western end of the Mediterranean(3) were ordered to follow Allied shipping moving eastwards within their sectors. U.371 was ordered to operate to the eastward section of its 'room' off Algeria, as the Italians would, even at this juncture, not agree to altering their submarine zonal border in the Philippeville area.

On the night of 10 July, the day of the Allied landings, events proved the correctness of the Intelligence forecast regarding the Syracuse - Gela area. Two more U-boats - U.375 and U.561 were ordered to sail on 11 July from Toulon to east and south of Sicily. They were due at the northern approach to Messina Straits at 1900 hours on 11 July.

The U-boats made for the Straits of Bonifacio, between Corsica and Sardinia, took a bearing off the Cape Senetosa lighthouse, passed the Straits and made a direct course for the Messina area, before running the gauntlet of the Strait.

July - Early U-Boat successes against invasion convoys of Force V(4)

The only successful attempts by the enemy to interfere with the outwardbound convoys in the Western Basin were made on 4 and 5 July by German U-boats, on convoy KMS.18B.

Force V, part of the Eastern Task Force, was organized in the United Kingdom and embarked in two convoys: K.M.F.18 consisting of 12 personnel ships, and K.M.S.18/18B of 18 M.T. ships. The task of its commander was to make a ship-to-shore assault in the Bark West area, between Punta delle Formiche and Punta Ciriga in Sicily. The force was escorted from south of the latitude of Lisbon and through the Mediterranean by aircraft of the R.A.F. and U.S.A.A.F. operating from North African bases. Fighter protection was given to the convoys:- (a) by aircraft of the Northwest African Coastal Air Force while off the Algerian and Tunisian coasts, (b) by aircraft based on Tripolitania and fighters based on Malta while between Tripoli and Malta and (c) by aircraft based on Malta and Tripoli.

At 2052 hours on 4 July, without any warning, in conditions of darkness, mist and low cloud, in the position 36° 44' N., 1° 25' E. (north-east of Cape Tenex) the City of Venice(5) was hit forward on her starboard side by a torpedo, probably from U.375, caught fire and sank during the night.

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- (1) Ibid.
 - (2) U.453.
 - (3) U.617, 656 and 409.
 - (4) Admiralty Battle Summary No. 35/Br.1736(27)
(A.H.B.11K/18/27).
 - (5) 8,762 G.R.T.

Just under an hour later, a submarine attacked, (believed to be U.409), without warning, and sank the Saint Essylt, (1) which was laden with petrol and explosives. Only eleven lives were lost from the former and one from the latter ship.

A third attack developed at 1541 hours the next day - 5 July - in 37°02'N., 3°52'E. - also in bad weather conditions. The Devis (2) was hit by one or possibly two torpedoes by U.593. Fire and explosions of ammunition followed. She was abandoned without loss of life and sank 20 minutes later. All searches by escort vessels and destroyers sent out from Algiers and by aircraft were unsuccessful. (3)

Force A in the Eastern Task Force sailed from Middle East ports in early July. The British assault convoy M.W.S.36 departed from Port Said on 5 July. At 1110 hours on 6 July, the M.T. ship Shahjehan was torpedoed by a submarine off Derma. (4) Efforts to tow her into Tobruk failed. Her crew were rescued. She sank in the night. Although an enemy reconnaissance aircraft was sighted at 1250 hours on 7 July, no further casualties were sustained by convoys from the Middle East, which were escorted, by aircraft and surface craft, to the assembly area off Malta, except one sailing vessel tanker sunk on 7 July.






12 July - The long-duration hunt of U.409 (5)

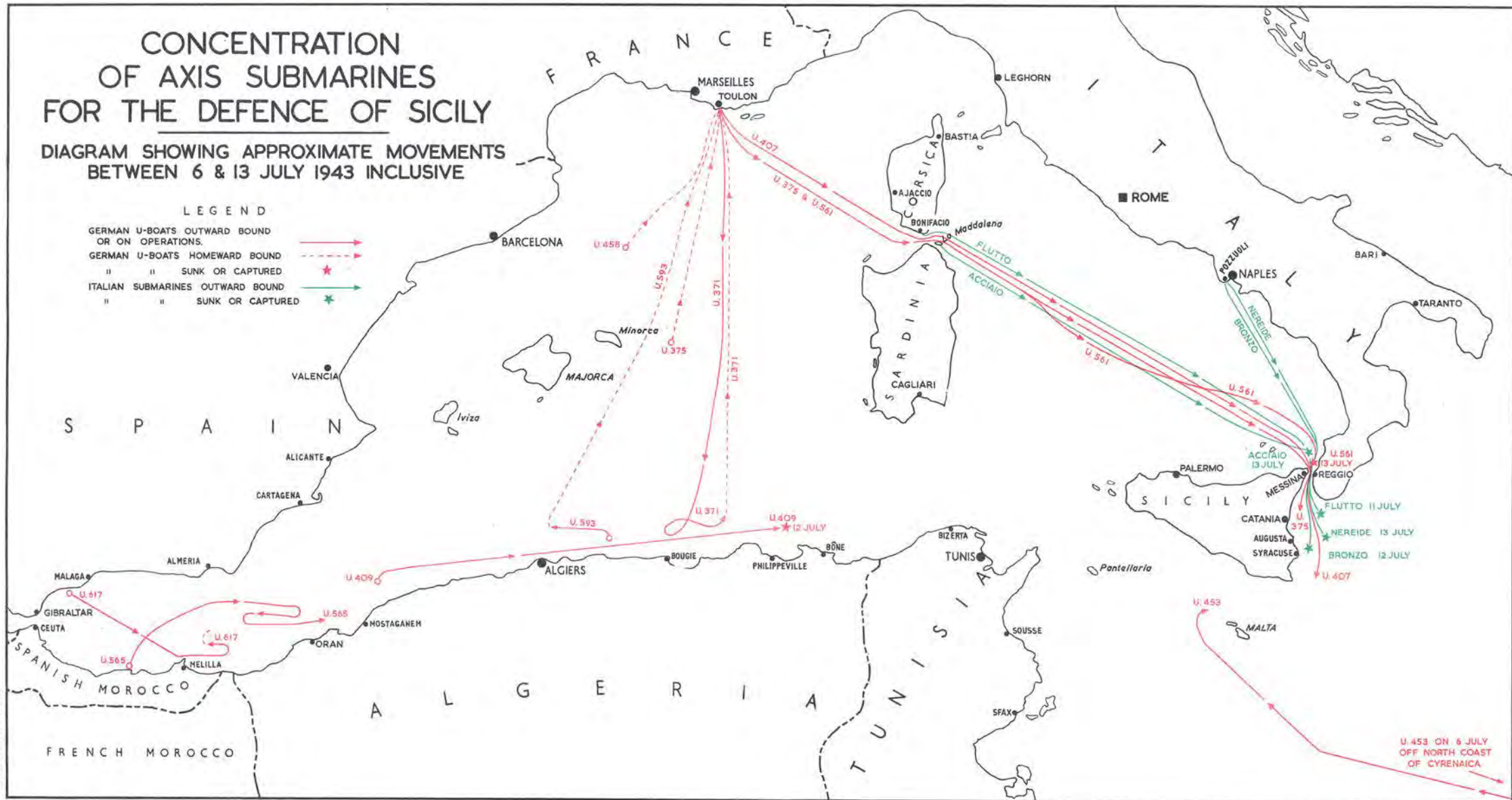
Four ships loaded with stores, ammunition and explosives had been sunk in three days: after the landings, targets would be plentiful. But the turn of the Allied escorts and patrols was soon to come. On 12 July, U.409 was sunk by H.M.S. Inconstant off Dellys in the last of six separate attacks. It is considered important to give some detail of the operation here, for it was on this and parallel evidence that the idea of the 'Swamp' hunt to exhaustion by aircraft and surface craft was founded.

At 0653 hours on 12 July, H.M.S. Inconstant, escorting Convoy M.K.S.19(F), then in the neighbourhood of Algiers, obtained contact at a range of 300 yards. H.M.S. Plym confirmed it. The U-boat - No. 409 - was in a good position for an attack on S.S. Empress of Russia, one of the ships in convoy. Inconstant placed herself between U.409 and the liner. The first charge, dropped at 0710 hours in conditions of confused reading of A/S/V contacts, was unsuccessful. Three successive attacks obtained no results; the U-boat manoeuvred to evade detection. At 0843 hours, after the fifth attack, in which contact had been lost at 800 yards, Inconstant twice ran over the U-boat, using her echo sounder, but on neither occasion did she obtain any result. In the last attack, made at 0947 hours, Inconstant attacked with depth-charges which, it was anticipated, would explode at 700 feet. Three minutes after, the U-boat broke surface. She was shelled, hit and, continuing at 2 knots for 7 or 8 minutes, gradually sank, her crew

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- (1) 5,634 G.R.T.
 - (2) 6,054 G.R.T.
 - (3) Battle Summary No. 35 and The War at Sea, Vol.IV.
 - (4) Position 33°01'N., 21°32'E.
 - (5) Admiralty C.B.04050/43(8) August 43. (A.H.S./Admlty.)

DIAGRAM SHOWING APPROXIMATE MOVEMENTS
BETWEEN 6 & 13 JULY 1943 INCLUSIVE

GERMAN U-BOATS OUTWARD BOUND OR ON OPERATIONS.	
GERMAN U-BOATS HOMEWARD BOUND	
SUNK OR CAPTURED	
ITALIAN SUBMARINES OUTWARD BOUND	
SUNK OR CAPTURED	



remaining on board until they were washed off. The C.-in-C. Mediterranean's staff recorded this as a 'classic kill'.

It had been often proved that there was a danger of a U-boat escaping from one ship, which was very likely to lose contact immediately after an attack. Only the skill and tenacity of the Inconstant led to the kill. The Admiralty comment later was that when the U-boat had been located, it was well worth while detaching most of the escorts and laying on as many aircraft as possible to destroy it, since in the confined waters of the Mediterranean the convoy was safe until it entered the next U-boat patrol area.(1) Mediterranean enemy submarines operated, it will be recalled, singly and not in packs.

Air and naval authorities continued to study the problem of tracking the submarine between individual attacks, maintaining contact and keeping it down until it was exhausted and had to surface.

12/13 July - The sinking of U.561(2)

Three M.T.Bs of the 24th M.T.B. Flotilla, patrolling on the night of 12/13 July south of Messina, sighted a submarine which passed 20 yards ahead of them. While M.T.B's 77, 84 and 81 were manoeuvring, a second submarine was sighted astern of the first,(3) hit, but not apparently sunk. U.561 was engaged with gunfire, shortly afterwards missed by torpedoes while she was diving, but then hit and sunk by two depth charges dropped ahead of the swirl on the first day of her arrival in the area. It was not expected to find these German submarines in the Straits area, where Italian submarines were also observed patrolling.

16 July - H.M.S. Cleopatra torpedoed by U-Boat

While patrolling on 16 July off Eastern Sicily for Force Q, in company with three other warships, H.M.S. anti-aircraft cruiser Cleopatra was hit by a torpedo, apparently from a submarine, at 0617 hours in the position 37°13'N., 16°00'E. abreast 'A' boiler room. At the time, the force was pursuing a zig-zag course. Search for the submarine proved unavailing. Screened by several destroyers, H.M.S. Cleopatra, not in immediate danger, returned to Malta for repairs. Her casualties were 21 officers and men killed or missing and 23 wounded.

23 July - H.M.S. Newfoundland torpedoed by Italian submarine

Between 10 and 13 July, at least six Italian submarines were known to have passed through the Straits of Messina into the area of operation as part of the Italian Navy's policy of throwing in submarines and light surface craft for the defence of Sicily.(4) The Ascianghi left Pozzoli on 16 July to patrol south-east of Augusta. In the afternoon of 23 July,

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- (1) Admiralty C.B.04050/43(8) Aug.43 (A.H.S.)
 - (2) Admiralty Battle Summary No. 35.
 - (3) U.371 (Log of Submarine Tracker, O.I.C., C.-in-C.Med.): Captain U-Boats Italy war diary (A.H.S./F.D.S.).
 - (4) See infra.

she sighted H.M.S. Newfoundland in company with Mauritius, Laforey, Lookout and Loyal en route for Malta from Augusta.(1) While Newfoundland had halted her previous zig-zag course in order to avoid a hospital ship, the Ascianghi fired two torpedoes at her; one of them struck right aft. Radar and asdic in H.M.S. Newfoundland had given no indication of a submarine. With her rudder and steering gear damaged, she reached Malta safely. The Ascianghi was hunted and sunk by surface craft.(2) This was the last effective operation of the enemy submarines during the 'Husky' operations.

30 July - The sinking of U.375

On 30 July, the U.S. P.C.624 sank the U.375 in the Sicilian Channel off Tunisia. Orders had been to attack everything except submarines after it arrived late on 11 July in the Messina area.(3) Dense minefields, progressively laid over three years by both sides, called for most careful navigation and the route was not favoured by submarine commanders.

22 August - The Sinking of U.458

At 2315 hours on 22 August, while escorting convoy M.F.K.22, the destroyers H.M.S. Easton and H.H.M.S. Pindos (Greek), destroyed U.458 in 36°25'N., 12°39'E., south-east of Pantelleria, and took 43 prisoners, including the Commanding Officer. U.458 had sailed from Toulon on 14 August, and was transmitting the Sicilian Channel.

Coastal Air Force anti-submarine operations during Operation 'Avalanche'

Three U-boats operated in Salerno Gulf and Bay during the periods of build-up and consolidation. They sank two ships and returned to Toulon undamaged. U.616 was off Salerno from 13 to 15 September, U.565 from 13 to 26 September, and U.410 from 18 to 23 September. In view of the fact that aircraft and sea patrols were strong numerically at that period in the area, the conditions under which this threat to our shipping could be maintained so long without discovery must be made clear.

No. 242 Group of the Northwest African Coastal Air Force was specifically charged with the responsibility for anti-submarine air operations, although attacks might fall to the lot of land - or carrier-based aircraft in the pattern of cover for the landings. The enemy air force was considered as the greatest threat to the landings and build-up, but a considerable volume of surface craft and a fair number of aircraft were involved in countering the submarine threat to shipping. It was fully appreciated that a mere handful of submarines in the hands of experienced and enterprising

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- (1) Navi Perdute (Navi Militare) Vol.I. Italian Naval Historical Office 1951. (A.H.B.6.)
 - (2) Infra. The Italian communique attributed the attack, incorrectly, to the Dondolo.
 - (3) Captain U-Boats Italy war diary (Admtly/F.D.S.).

German commanders was not to be disregarded under the variable weather conditions expected.

The Coastal Air Force(1) expected the enemy to concentrate his submarines in the southern half of the Tyrrhenian Sea, in order to inflict as much damage as possible on the assault convoys and on shipping lying off the beaches. The assault convoys received close escort until proceeding North of 38°40' North (roughly the latitude of Cape Vaticano). North of that line, anti-submarine escort round the convoys would have been an embarrassment to Allied fighters and the greatest danger thenceforward was from air attack.(2)

In case enemy submarines had been stationed in the general assault approach area, anti-submarine patrols were established therein for four days before the assault. A Liberator anti-submarine squadron, equipped with centimetric search transmission(3) was temporarily located at Protville to assist. It could not be used within 20 miles of enemy territory. Similarly night-flying Beaufighters fitted with Mark VIII A.I. were under no circumstances to be flown over enemy territory. The reason in each case was the same. It was of the utmost importance that the enemy should not find and identify the nature of the new detection apparatus. If a submarine was located, it was to be hunted for at least 72 hours. To meet the concentration of submarines in the assault area following the landings, energetic patrolling was planned. This failed to materialize in the event; the first two U-boats did not reach the Gulf of Salerno until 13 September and few sightings were reported thereafter, largely on account of bad visibility or very bright moonlight at night and fog on some days.

U-Boat operations at Salerno(4)

Although the Germans had accurately forecast the general area of the Allied landings at Salerno on 9 September and their approximate date, they were unable to station a single U-boat in the area on the critical day. But two sailed from Toulon on 8 September. U.616 (which had been fitted with the Hagenuk location gear) reached the Gulf of Salerno at about 2400 hours on 13 September; U.565 reached the Gulf some time late on 13 September. U.410 sailed from Toulon late on 12 September, arriving in Salerno Bay early on 18 September, approaching along a line from the N.W. tip of Sicily to Salerno.

All three found conditions in the Gulf of Salerno hazardous in the extreme. By day, the close patterns of surface craft patrols and fighters overhead made only the most occasional surfacing possible. At night, the bright moonlight was such as to throw them into relief. When the weather changed, the mist and fog made it difficult to identify or get the range of surface craft targets. They spent most of the time submerged, listening to the screws

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- (1) In Operational Order No. 3 of 1943 - Operation 'Avalanche' 3 Sept. 43. (N.A.C.A.F. O.R.B. Appendices).
 - (2) Refer to Figure 1.
 - (3) Mark III A.S.V.
 - (4) Captain U-Boats Italy war diary (F.D.S./Admly).

of destroyers and other vessels threshing close overhead.(1) They occasionally heard and saw aircraft by day, but do not mention the few Coastal aircraft patrolling at night. No aircraft attacks were made on them.

On 21 September, S.S. William Gherhard was sunk at 0900 hours while in convoy, three hours before the convoy arrived off Salerno. On 25 September, U.565 torpedoed and sank the U.S. minesweeper Skill, which was on anti-submarine patrol off the southern anchorage in Salerno Bay. The William Gherhard was set on fire and had to be abandoned. The Skill lost 72 killed, including all her officers. All attempts to locate the submarine failed. By this time the forces were well-established ashore and were closing on Naples. Although there was less shipping, the Allied naval forces had the sea defences well organized. The carriers left, the fighter umbrellas were discontinued, mines were located and swept. The air watch on submarines was concentrated on the usual U-boat hunting grounds along the coasts of Algeria and Tunisia. There was regular patrolling by night fighters, now based on shore, but they were on the lookout for German bombers.

Italian Submarine Operations and Allied Counter-Operations
10 July to 12 September 1943.

11 July - The sinking of the Flutto

The Flutto(2) left Bonifacio (Corsica) at dawn on 10 July, with orders to proceed to the Augusta sea area and oppose the Allied landings. At 1700 hours it was reported passing through the Straits of Messina. No further messages were received from it.(3)

At 2130 hours, in 37°34'N., 15°43'E., the 32nd M.T.B. Division of the Allied Light Coastal Forces reported that M.T.Bs 640, 651 and 670 had sighted and attacked a submarine on the surface. The submarine returned their fire, causing 17 casualties in the M.T.B.s, which claimed to have badly damaged the submarine.(4) It sank during the night.

12 July - The capture of the Bronzo

The Bronzo(5) left Pozzuoli on 10 July for the Syracuse area with similar orders to those given to the Flutto. At 0600 hours on 12 July she was submerged in the combat zone, not realising that Syracuse had already fallen. At 1300, her periscope revealed a formation of surface craft. To avoid collision with these craft, which she assumed were friendly, she submerged. To her surprise she was attacked.(6)

Three Allied minesweepers(7) on anti-submarine patrol off Cape Panagia in 37°06'N., 15°25'E. attacked the Bronzo,

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- (1) Logs of U.616, U.565, and U.410 at A.H.S./F.D.S. Admiralty.
 - (2) 746 tons: later taken into the British service as P.714 following salvage.
 - (3) Navi Perdute Vol.I.
 - (4) Battle Summary No. 35 (Admiralty).
 - (5) 630 tons.
 - (6) Navi Perdute Vol.I
 - (7) Seaham, Boston and Poole

hitting it with several shells and killing its commander and eight others. The submarine was boarded and captured. With the prize in tow the flotilla set course for Syracuse, but had barely started when a periscope was sighted and shots were fired at it. Air bubbles and oil were seen, but no sinking resulted.(1)

13 July - The sinking of the Nereide(2)

The Nereide sailed on 10 July from Pozzuoli for the Augusta-Syracuse naval defence zone, which was vital in the Italian plans against invasion from seawards. Having made what it thought (in error) was a successful attack on a convoy, it met two British destroyers, H.M.S. Echo and Ilex (members of Force Q), at 0430 hours on 13 July, about 40 miles east of Augusta, and was sunk by them.(3)

The Force believed that the submarine was working with aircraft, for two minutes after the destroyers began sweeping, they fired at and drove off an enemy aircraft threatening to attack.

13 and 15 July - The sinking of the Acciaio(4) and Remo by H.M. Submarines

The British submarines United and Unruly were under command of the 10th Submarine Flotilla, operating from Malta. The flotilla disposition up to the close of 17 July was 3 submarines in the Straits of Messina and 5 in the approaches to the Gulf of Taranto. All submarines on offensive patrols were ordered, until 13 July, to restrict their torpedo fire: merchant vessels under 4,000 tons were not to be attacked; a full salvo of torpedoes was to be kept for cruisers or larger warships. Several opportunities of a submarine kill were thus missed.(5)

H.M.S. submarine Unruly sighted three submarines in the Messina Straits before the order was rescinded, but could only attack one. This was on 13 July, just before the order was rescinded with effect from that day.(6)

The Acciaio had sailed on 10 July from La Maddalena, (now the base of the 7th Group) for the north coast of Sicily. No news of her was received after sailing. She was sunk on 13 July in 38°30'N., 15°49'E. by the Unruly, although the Admiralty were unaware of this fact until later.(7)

In the afternoon of 15 July, two of Italy's largest and most modern ocean-going submarines - the Remo and the Romolo - sailed from Taranto for Naples. This move would put them in a sounder tactical position and save them from being out off.(8)

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- (1) Battle Summary No. 35 and Navi Perdute Vol.I
 - (2) 591 tons.
 - (3) Navi Perdute - Vol.I and Battle Summary No. 35.
 - (4) 630 tons.
 - (5) Admiralty Battle Summary No. 35.
 - (6) Ibid.
 - (7) A.H.S. and F.D.S.
 - (8) Navi Perdute, Vol.I

On 15 July, at about 1800 hours, Remo(1) was sighted by H.M. submarine United off Punta Alice in the Gulf of Taranto, was hit by two torpedoes and immediately sank.(2)

18 July - The sinking of the Romolo by aircraft(3)

The night-flying Wellingtons of No. 221 R.A.F. Squadron were very much in demand in July 1943. One detachment was in Egypt under No. 201 Group, a second at Protville (Tunisia) under No. 328 Wing, and a third at Luqa in Malta. Aircraft HZ.116 of this Malta detachment was patrolling about 40 miles east of Augusta, when it sighted an enemy submarine, of what its navigator estimated as 1,000 tons.(4) Its crew attacked it with a stick of five depth charges. They straddled the submarine and one of them exploded under its hull. It was apparently unable to submerge, for it was seen stationary for one-half an hour before steering an erratic course forwards, leaving great quantities of oil in its wake.

In the same period and approximately the same position,(5) aircraft MP.617 of the same squadron sighted and attacked a large Italian submarine - undoubtedly the Romolo - with five depth charges, one of which exploded under its hull, and with gunfire. It was reported again that the submarine remained surfaced, circling lightly as if out of control, with flames and smoke coming from the conning tower.

No report exists of the actual sinking of the Romolo, but the Italian Admiralty draws the only possible conclusion, viz. that an explosion later caused her to sink; for no trace of her was found apart from floating wreckage.

During the whole of July, only one other submarine sighting was recorded by the night-flying squadron detachment, who covered every night of the campaign the area along the east coast of Sicily and that known as the Taranto Block. But the effort was justified by this one kill.

The Romolo and the Remo were commissioned in 1942.(6) They were both of 2,220 tons standard displacement, designed not only for great ocean operations, but for specific journeys to Japan to collect much-needed raw materials. They had cargo holds with a capacity of some 200 tons for this purpose.

During 'Husky' operations, the air forces were restricted from all manoeuvres in the near coastal waters. Their obligations lay in support of the land battle and in remoter waters. The intensive and restricted maritime warfare in the Sicilian area was the exact context for surface force and submarine operations. It is only natural, therefore, that in the actual combat zone waters, naval forces played the major part and that they were responsible for the destruction of 8 of the 9 Italian submarines destroyed.

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- (1) 2,200 tons.
 - (2) Battle Summary No. 35 (Admlty.)
 - (3) No. 221 R.A.F., Squadron O.R.B.s and Navi Perdute, Vol.I
 - (4) There was no logical increase of tonnage with length in the case of ex-enemy submarines (No.201 Group papers).
 - (5) Position 37°20'N., 16°15'E.
 - (6) Che ha fatto la Marina? - Bragadin.

23 July - The sinking of the Ascianghi(1)

The Ascianghi(2) left Pozzuoli on 16 July for its patrol area some 30 miles S.E. of Augusta. In the afternoon of 23 July, after torpedoing H.M.S. Newfoundland, she launched two torpedoes against the pursuing destroyer formation, which she avoided. When the cruiser Newfoundland was torpedoed, the destroyer Laforey and others(3) sweeping in the vicinity were immediately detached to hunt the submarine. In the third of three attacks between 1541 and 1615, the submarine surfaced. The destroyer opened fire on her; the resultant sinking of Ascianghi was credited to the Laforey and the Eclipse.

29 July - The sinking of the Micca(4)

On 24 July, the Micca(5) left Taranto for Naples. An accident forced her to turn round and make towards Taranto for repairs. On the morning of 29 July, she was in the coastal submarine route, some three miles off Santa Maria di Leuca, (at the tip of the Heel of Italy), when she was hit by a torpedo from H.M. submarine Trooper and sank.

The Trooper(6) was one of the five Allied submarines keeping the ring on the outer fringe of the Sicilian battle, preventing or harassing the enemy's efforts to reinforce and supply his troops in Sicily.

3 August - The sinking of the Argento(7)

The Argento sailed from La Maddalena on 21 July, for a patrol off the east coast of Sicily. On 25 July, it was ordered to visit the waters between the south of Sicily and the Gulf of Sirte and return to base with a report. On the night of 3 August, navigating surfaced in Pantelleria waters, it was surprised by U.S.S. Buck, while the latter was escorting 6 supply ships. Hit while submerging, the Argento(8) was put out of action and scuttled while under fire.(9)

7 September - The sinking of the Vellela(10)

The Vellela(11) sailed from Naples in the afternoon of 7 September in company with seven other submarines, with orders to oppose the enemy landing fleets reported as proceeding in the direction of Salerno. No further reports were received from her.

H.M.S. submarine Shakespeare was standing by to carry out beacon duties for the landing on 9 September at Salerno when she sighted a southbound Italian submarine in the position 27°0' Licosa Point 5 miles (40°15'N., 14°50'E.).

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- (1) Battle Summary No.35 and Navi Perdute, Vol.I
 - (2) 620 tons.
 - (3) Under Captain (D) 8th Destroyer Flotilla.
 - (4) Battle Summary No.35 and Navi Perdute.
 - (5) 1371 tons.
 - (6) 8th Submarine Flotilla (Algiers).
 - (7) Battle Summary No.35 and Navi Perdute - Vol.I.
 - (8) 630 tons.
 - (9) Position 36°25'N., 12°08' E.
 - (10) Navi Perdute, Vol.I and The War at Sea, Vol.IV (A.H.S.)
 - (11) 689 tons.

She sank her with four torpedoes. Two others were reported on patrol to the south of this position.

In view of the fact that the Short Armistice Terms for Italy had been signed on 3 September it is clear that these dispositions were part of the camouflage gesture the Italian High Command was forced to carry out to deceive the Germans.

12 September - The sinking of the Topazio by aircraft after the Surrender(1)

The Topazio(2) sailed from La Maddalena at 1012 hours on 7 September for its patrol zone in the Lower Tyrrhenian Sea. During the evening of 8 September news relating to the cessation of hostilities were received, with orders to proceed to Bone and surrender. All through 9 and the morning of 10 September it was grouped with, and in sight of, three other Italian submarines, Diaspro, Turchese and Malea, which reached an Allied port in safety later. Topazio lost contact during the afternoon of 10 September with its companions and did not report again.

At 1105 hours on 12 September, the crew of Blenheim V BA.99/'J' of No.13 R.A.F. Squadron, while on patrol S.E. of Sardinia sighted a fully surfaced submarine which they took for a German 500 ton U-boat(3) slightly S.E. of Sardinia. The aircraft attacked it, making full use of sun and cloud, with four 250 pound depth charges and 200 rounds of .303 ammunition. The depth charges were dropped in a short stick straddling the submarine. The third depth charge exploded within 10 yards of the conning tower. To this point there is no mention in the report of any exchange of recognition signals. The submarine disappeared from view in a cloud of steam and spray. Later an oil slick of 300 feet was seen on the water and air bubbles were seen rising. 15 survivors were seen and photographed by the crews of this aircraft.(4)

Aircraft Z of No.221 Squadron reported having seen some time between 0600 and 1025 hours, i.e. at least 30 minutes before the Topazio was sunk, a fully surfaced submarine, which identified itself as Italian, and was photographed. It can only be concluded that either the submarine failed to give the appointed recognition signal to aircraft 'J' or that if it did, it was not understood as such by the aircrew, who believed it to be German. (5)

The surrender of Italian submarines in September 1943

The Short Instrument of Surrender stipulated 8 September, 1943 as the date when all seaworthy units of the Italian Fleet were to sail for Allied ports. On 1 July 1943, there were 53 first-line submarines(6) and

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- (1) No.13 R.A.F. Squadron O.R.Bs. Navi Perdute, Vol.I
 - (2) 591 tons.
 - (3) All German U-boats used in the Mediterranean were of 769 tons displacement. This fact appears not to have been appreciated by Allied Intelligence at the time.
 - (4) No.221 Squadron O.R.Bs.
 - (5) Ibid.
 - (6) Including 5 of the First World War H class (1,2,4,6 and 8) the Ambra (on special duty) and the Baiamonte and Rismondo in reserve.

11 midget submarines available for operations. Between 1 July and 12 September, 11 first-line craft were lost, which leaves a balance of 42 to be accounted for. (1) 28 first-line craft and 5 midgets reached Allied ports safely. 1 left for the Atlantic, 10 were scuttled, 2 were captured by the Germans and 1 (the Pietro) is unaccounted for. 1 midget was scuttled and 5 captured by the Germans. (2)

Fate of Bettalina type and transport submarines under construction in September 1943(3)

In September 1943, the Germans were building 9 submarines of the Bettolina type S class(4) for the Italian Navy in the dockyards at Danzig. These were to replace in the Mediterranean submarines used by the Italians for the transport of materials to and from the Far East. Their Italian crews were standing by to man their craft, when the news of the surrender came; the submarines were confiscated.(5)

12 transport submarines of 1,300 tons had been planned. In September 1943, 10 of these were building in Taranto, Monfalcone and Muggiano.(6) The 6 building at Monfalcone and Muggiano were captured by the Germans and given new tactical numbers - U.I.T.1 to U.I.T.6. The intention was apparently to complete construction, but for various reasons, such as destruction by air attack,(7) none of them went into service.

B. EASTERN BASIN

Axis Submarine Policy

German decision to operate U-boats in the Eastern Mediterranean

June was marked by new German measures to meet the changed situation, an extension of the field of operations and some determined and successful attacks on merchant shipping. Since 21 April, operations had been confined to the Western Mediterranean, where successes proved more important. This concentration had led logically to a closer Allied supervision of their defences in that limited area. It would be a good counter-move, the Submarine Command considered, to split Allied defences by sending a few U-boats into the Eastern Mediterranean. At any rate for a time, the defences would be lax. So two U-boats from the Pola base were detailed, one to the area Benghazi-Derna, the other to the area East of 31 degrees East.(8) U.97 put out at 1400 hours on 5 June and U.81 put out at 1330 hours on 6 June, both from Pola. U.81 occupied the Benghazi-Derna area and U.97 the area east of 31 East, which includes the Palestinian coast.(9) U.593 left Pola on 14 June, put in to Messina for repairs on 16 June, but was held up.

(1) C.M.1.

(2) C.B.7, 13, 14, 15 and 16.

(3) A.H.S. and F.D.S.

(4) Tonnage not known by the Italian Naval Historical Office. Nos. S.1 to S.9 inclusive.

(5) Navi Perdute and A.H.S./F.D.S.

(6) R.3 to R.6 in Taranto, R.7 to R.9 in Monfalcone and R.10 to R.12 in Muggiano, (La Spezia).

(7) Refer to Part II of this volume.

(8) Captain U-Boats Italy war diary June 43. (Admlty/F.D.S.).

(9) Ibid.

German Intelligence having reported a large number of merchant ships in Alexandria, assumed heavier Allied traffic in the Eastern Basin. Another U-boat - U.596 - was therefore sent from Pola on 17 June, but on 20 June, owing to failure of an engine, returned to base. U.97 was sunk on 16 June.(1) U.453 left on 23 June to replace U.97.

U-Boat Command's belief in Allied plans to attack the Dodecanese, Peloponnese and Turkey

Axis air reconnaissance was intensified through June and early July over Allied ports in the Eastern Basin, especially those in Egypt and Cyrenaica. Offensive air operations were abandoned. Supplies being pressed through the Gibraltar Straits were, the U-Boat Command Italy believed, partly storage in the Eastern Basin for diversionary attacks. The take-over of the French Fleet in Alexandria had restored the Allied naval preponderance in that area and they could now provide adequate naval support for amphibious landings.

Italian submarine policy, May to 8 September, 1943

There were a few Italian submarines stationed in the Eastern Basin during May and June.(2) They were sighted and reported in the Tobruk - Matruh waters and the Gulf of Sirte in June; but there is little reference in official records to suggest anything but routine patrols and avoidance of direct action. The absence of attacks or successes of any kind points to a policy of conservation in the Eastern Basin.(3) No Italian submarines were brought to battle or sunk by Allied aircraft and few were sighted in the vicinity of convoys or Fleet formations.

Preparations for the attack on Sicily, which the Italian Naval Command felt certain was imminent in July, and operations in the defence of Sicily (already narrated), show clearly where the Italian's interest lay and the extent to which they were prepared to go after their losses in the Desert and Tunisian Campaigns. Probably all first-line craft fit for combat were concentrated within working radius of the Sicilian Straits.

According to Admiral R. Bernotti, Italy still had 9 operational submarines in the Ionian Sea on 18 August 43.(4) Italian submarines in the Eastern Basin between the end of Operation 'Torch' and the Italian Surrender need not be taken into account. Little is known of them and nothing is claimed on their behalf by official Italian sources.

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- (1) Infra.
 - (2) Normally they operated in an area east of 4°30' East, where the German U-boat zone ended, as far as to Bone and from Tripoli to 19°40' East.
 - (3) Log of Submarine Tracker, O.I.C., C.-in-C.Med.(A.H.S.)
 - (4) Of the 5 submarines of the 5th Group based on Leros, the Nereide was sunk in July, off Catania, the Amestista and Sirena sunk in Italian waters and the Beilul seized by the Germans in September 1943 and sunk by aircraft at Monfalcone in May 1944. Admiral Bernotti must be referring to second-line, perhaps transport submarines.

Axis Submarine OperationsJune - U-boat successes

Not all convoys were escorted by aircraft at this period, for there were not enough suitable aircraft to meet the greatly increased convoy commitments.

On 12 June, the Dutch steamship Palima(1) was, according to the Admiralty, sunk about 30 miles S.S.W. of Beirut by U.97. This U-boat made no claim to the sinking, but U.81 claimed to have sunk a transport (of 6,000 tons) in approximately that position on the following day - 13 June.(2) The only contact by aircraft appears to be in the report by a Walrus of No. 701 Squadron that while making an anti-submarine sweep for a convoy southbound from Haifa three rafts with survivors were sighted in the position of the sinking.

On 15 June, S.S. Athelmonarch was sunk off Jaffa. On 17 June, S.S. Yoma was sunk West of Derna. On 26 June, two schooners(3) were sunk off Beirut and the next day a Greek steamer(4) was sunk off Latakia.(5)

July - U-Boat Successes(6)

Three Allied merchant ships were sunk during July in the Eastern Basin by U-boats. On 1 July, S.S. Oligarch was damaged off Marsa Susa (Appollonia) and the schooner Gayuli sunk off Latakia. On 6 July, S.S. Shah Jehan was sunk off Appollonia; and on 7 July, a small tanker sailing vessel was sunk in the Aegean.

August and September - U-Boat successes(7)

During August, the U-boats were mostly occupied with operations off Malta and Sicily. They nevertheless succeeded in sinking a sailing vessel off Jaffa, two schooners off Tripoli, two schooners off Beirut and a sailing vessel off Limassol (Cyprus).

Operations during September were on a very low scale, only one boat operating off the Palestinian coast. No successes were recorded, except one schooner sunk on 7 September south of Cyprus.

No. 201 Group's anti-submarine and convoy escort operations during Operation 'Avalanche'

In support of the invasion of Sicily, No. 201 Naval Co-operation Group had provided for convoys from Alexandria to Meridian 15°00'E. by maintaining a continuous inner patrol by day and outer patrol by night with one aircraft. West of that meridian, the presence of fighter aircraft and the great concentration of surface escorts were considered

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- (1) 1,179 G.R.T.
 - (2) War diary of Captain U-Boats Italy (A.H.S./F.D.S.).
 - (3) Nesley and T. Allah.
 - (4) S.S. Michaelos.
 - (5) Details of Allied losses from log of Submarine Tracker O.I.C. C.-in-C. Med. (A.H.S./Admlty.)
 - (6) Ibid.
 - (7) Ibid.

SECRET

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adequate to deal with the submarine threat. They deployed fighters in addition from D-21 to D + 2 days.(1)

In August, they protected in all 80 convoys out of 146 at sea in their area, as against 77 protected in July out of 137 at sea. Their responsibilities in connection with Operation 'Avalanche' were less, owing to the centralisation of Allied loading ports in the Central Mediterranean. Nevertheless they covered 75 convoys out of 300 at sea.(2)

C. RADAR

Allied detection measures and enemy counter-measures
(May to September 1943)

Difficulties of operating enemy submarines(3)

There were four important contributory factors to the difficulties of enemy submarines operating in the Mediterranean. The first was the routeing of Allied convoys so close to shore. The second was the opposition from British submarines, particularly outside submarine bases. Five German and fourteen Italian submarines were sunk during the war by Allied submarines. The third was radar detection by aircraft and shore stations. This imposed practically total submergence for long periods and lack of mobility. The fourth was the bombing by aircraft of submarine bases. This caused damage to, or loss of, submarines, casualties to personnel and damage to dockyard and harbour facilities. The only one of note up to the Spring of 1943, the very successful attack on La Spezia on the night 18/19 April 1943, had resulted in widespread damage and forced transfer of part of the Flotilla to Toulon.(4)

Advantages of operating enemy submarines(5)

There were four important factors in the favour of enemy submarines.

The first was that the water was usually deep, which neutralised the use of fixed defences and mine barrages.

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- (1) With 3 Beaufighter squadrons of their own and 1 from Malta, supplemented on D - 1 by 2 squadrons of U.S. Lightnings.
 - (2) Comparative monthly sorties flown on anti-submarine patrols and escort were:-

June	630	plus	217	on area patrols
July	699	"	319	" " "
August	673	"	219	" " "
September	598	"	284	" " "
 - (3) Report of the Submarine Tracker, O.I.C., C.-in-C.Med. (A.H.S.).
 - (4) Attacks on submarine bases along the western European seaboard did not produce the expected results. A German survey of Anglo-American air operations from 1942 to 1944 stated that although little damage was caused to U-boat pens, plant, workshops etc. without reinforced concrete protection received devastating hits, and some bases were temporarily put out of action. (A.H.B.6 Translation Nos. VII/VIII).
 - (5) Report of the Submarine Tracker, C.-in-C. Med. (Admty Hist. Sec.).

The second was the two levels of the prevailing set, which was 2 to 3 knots from west to east down to 100-200 feet. Below this depth, the current reversed. The third was the varying temperature of the water, which placed limitations on, and at times negated, asdic detection. The fourth was the proximity of neutral water off Spain and Spanish Morocco, which German U-boat commanders unquestionably and freely used. When they did so, however, they were denied the advantage of using the prevailing set.

Allied anti-submarine radar Progress

One of the most decisive factors in the elimination of the enemy submarine force both in and outside the Mediterranean was the superiority of Allied radar detection and pursuit methods (as used by aircraft and surface craft) over the enemy's counter-measures. Allied airborne radar progress up to September 1943 will now therefore be briefly reviewed, without lingering over technical details to be found elsewhere.(1)

In May 43, no aircraft at Gibraltar or Mediterranean bases were fitted with the new centimetric radar transmission sets, although they had been in limited use in the Atlantic since November 1942. Only metric radar was in use, a system insufficiently sensitive and also detectable by German submarines. In June 1943, a few Gibraltar aircraft(2) began to operate with centimetric search transmission:(3) In July, Leigh Light Wellingtons for night patrol work arrived with it fitted. No. 36 R.A.F. Squadron was converted to it. A period of tactical surprise was thus initiated in this area, which was to last until the end of the year of 1943.(4)

It must be emphasised that the tactical advantage derived directly from actual radar contacts was still limited. In the Atlantic, visual sightings of submarines outnumbered radar contacts by roughly 9 to 1. Good intelligence soundly integrated and applied, as well as German misconceptions of both Allied radar and intelligence, accounted for the actual successes of aircraft and surface vessels equipped with location devices. Radar's real claim to success so far was confined to night operations in the transit areas.(5)

German counter-measures(6)

From the Spring of 1943 onwards, Admiral Doenitz and his staff made a number of tactical errors based on wrong assumptions. German scientists had caught up with the Allied use of metric radar detection. They knew of the

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- (1) R.A.F. Signals Monograph Vol.VI (A.H.B.).
 - (2) Of No. 172 R.A.F. Squadron.
 - (3) Mark III A.S.V.
 - (4) Ref. R.A.F. Signals in the Second World War, Vol.VI (S.D.736) Ch. 8 for a full account of the operational development of centimetric A.S.V.
 - (5) Vol.III of this narrative; The Defeat of the Enemy Attack on Shipping (Admiralty); N.A.C.A.F. O.R.Bs and appendices.
 - (6) R.A.F. Signals Monograph Vol.VI (A.H.B.):
Captain of U-Boats Italy war diary: Vol.III of this narrative.

use of H2S, a centimetric radar device in heavy bombers used on land targets. They knew in March 1943 that Allied aircraft in the Caribbean were using a detection system to which their Metox search receiver did not respond, but they did not believe centimetric radar was used in the Mediterranean until the end of 1943, when it was too late to counter it. The Naval High Command and Submarine Command credited metric radar with a much greater range than it possessed and they thought that other instruments were in use that picked up the radiation from their submarine instruments. While a great deal of time was spent devising means of restricting radiation, the U-boat commanders lost faith in the cumbersome search receivers and progressively used them less frequently.

On 6 May, Doenitz recorded that along with enemy aircraft, enemy radar location was the U-boat's worst enemy. The answer to it was, he thought, improved instruments and counter-techniques. In the early Summer of 1943, a more sensitive search receiver - 'Hagenuk' or 'The Magio Eye' was installed in U-boats, but this proved only a slight improvement on the Metox. In the meantime, research continued on an even more sensitive receiver - the Naxos.⁽¹⁾

Having indicated this much of the measures and counter-measures in operation, reference will be made to the generally successful evasion by the U-boats of air control of Gibraltar Straits, and the narrative will then proceed to the re-organization of Coastal Air Force to use the new radar techniques to the fullest possible extent.

U-Boat methods of passing through Gibraltar Strait(2)

U-boats had standing instructions to abandon the passage of the Straits only in the event of serious defects, failure of radar search receivers or after making several abortive attempts. The journey to Gibraltar was often itself a triumph of navigation. At the period under review, they were neutralizing the Allied superiority in the field of radar by hugging the rocky coast of southern Spain, where echoes confused the reading of instruments in aircraft.

Their practice had been to break through between the middle of the Strait and the 100 fathom line on the African side, an area they found relatively free of air patrols. Unless continuous aircraft radar was recorded, the passage through the narrows was made on the surface and at night, as in the approaches they were forced to submerge.

By September 1943, U-boats with improved under-water endurance dived off Cape Trafalgar, keeping to the Spanish side in the approach, and passed through still submerged at night. Even if detected by 'Asdic', the water conditions were such that contact was lost before accurate attacks could be made. To avoid the strong westward current below 100-200 feet they made the submerged daylight approach at shallow depth. It was here that they were caught by the

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- (1) General references - The Defeat of the Enemy Attack on Shipping Vol.I (Admiralty): Captain U-Boats Italy War Diary (F.D.S./Admlty.): N.A.C.A.F. O.R.Bs. R.A.F. Monograph on Signals, Vol.VI. (A.H.B.)
 - (2) Ibid.

M.A.D. detection apparatus and destroyed by joint action when the days of 'Swamp' operations began later in the year.

Slow progress of the Allied air deterrent

The units engaged in air counter-measures felt no sense of wasted effort when they weighed results against their many handicaps and the hours flown. To them the submarine menace involved a double commitment - U-boat hunts and strikes, and convoy escorts for defence against possible U-boat (and aircraft) attacks. Their base facilities, equipment and range all still left much to be desired.

An example of the sense of accomplishment may be found in the monthly summary of the officer commanding No. 500 R.A.F. Squadron at the end of May.(1) In May, the squadron had attained a new record of 1424.40 operational hours, thus exceeding its previous record by nearly 60 hours. It involved 250 sorties. Although the number of submarine sightings and attacks, three of each, seemed low relative to 1424 hours flying, one had to bear in mind, he recorded, that nearly one-third of the sorties flown were on convoy escort, and that the remaining sorties were patrols in areas near the coast where U-boats were suspected of operating and not in the passage areas where U-boats were more likely to be found on the surface.(2) Depth charges could have been used to good effect on the three sightings, had they been held, but this deficiency was being made good by the re-arming programme. They had been trained for rocket projectile armament in April, but in May only No. 600 had been converted.

The mission of the Hudson aircrews of Nos. 500 and 608 Squadrons at this time was to carry out U-boat patrols between the Algerian and Spanish coasts and, at the same time, escort convoys and co-operate with surface craft in the hunting of U-boats. They had had two successes in March, but none in April. The situation was, however, retrieved in May. They were not equipped with 10 or 3 centimetre A.S.V.

Airborne radar in the general context of radar development

While considering in isolation the specific airborne radar measures used in the detection of submarines, it is important not to lose sight of the fact that its development was only a part of a revolutionary change in maritime and land warfare. Radar had grown from the subject of obscure laboratory experiment before the war into a weapon with great and immediate possibilities. The Northwest African Coastal Air Force fully realised those possibilities, and set to work to construct an organisation powerful and flexible enough to meet a situation of unprecedented complexity and fluidity and to maintain the Allied lead in technical matters. The use of airborne radar must hence be placed in that much wider context for a balanced view.

(1) No. 500 Squadron O.R.B. May 1943.

(2) Successes were obtained under both these conditions.

Allied air radar organization's preparations for mobile warThe Coastal Air Force Radar organization converted from static to mobile war conditions

The role of the Northwest African Coastal Air Force during Northwest African operations had been based on static military conditions. Its defence responsibilities on land ended 50 miles behind the front line, at which point the Tactical Air Force took over.(1) From mid-May on to September, the theatre was filled with increasing movement. Hardly had an operation reached a static stage when it flowed over into some new undertaking. Rapidly the newly-won littoral became a rear area, (although its defence was none the less vital) while the needs of Coastal Air Force multiplied up to the front lines in Sicily and to neighbouring islands, across to Italy, with wide flanking movements encircling Sardinia and Corsica.

Nothing was more vital in the period just prior to the invasion of Sicily than flexible long-term planning, and nothing more difficult to implement. They never succeeded in obtaining the essential equipment on any but a short-term basis. They were continually haunted by material shortages and hindered by higher priorities from reaping the first-fruits of Allied scientific inventiveness.(2) The planning was nevertheless thorough and flexible and what materials came to hand were used to great advantage. The air force was somehow able to keep up with the kaleidoscopic changes in the situation.

With their wide commitments to the defence of shipping and bases, they proceeded to extend the old 'Torch' machinery of operations so as to exploit the scientific lead in radar to the utmost. Radar could give them the initiative in the coming struggle for air superiority over the sea. The new organization must reflect the needs of amphibious operations in the direction of Europe, as well as reach out to the limit to westwards and eastwards to cover the very long maritime supply lines. The expansion therefore involved both ground and airborne radar, ground radar for recognition of enemy intruders approaching Allied territory and for the scrambling of fighters, and airborne radar for the control of night fighters and the detection of submarines and surface craft. The general principle was to move the more mobile equipment eastwards, absorbing from Tactical and Western Desert Air Forces all available surplus mobile stations, while leaving in Algeria and Morocco the heavier, more static and 'expeditionary' types for long-term defence tasks.(3)

Effect of Luftwaffe switch to low-level attacks(4)

During the period April-May, the enemy concentrated on last light or night attacks on the ports of Algiers, Oran,

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- (1) An exception was the loan of elements of two night fighter squadrons to Tactical Air Force (who had none) on request for employment in the battle areas at night, both in the South by Monastir and to the West in the Mateur sector.
 - (2) N.A.C.A.F. Air Staff and Operations O.R.Bs and appendices.
 - (3) Ibid.
 - (4) Ibid.

Philippeville, Bone and Bizerta, their aircraft approaching at medium heights in the region of 8,000 feet. These tactics determined the pattern of Allied radar siting. It was decided to site COL(1) ground radar stations all along the North African coast as high as possible so as to obtain the maximum area of coverage: fixed U.S. stations were used to meet this need.

Radar Control Stations

Since the arrival of the first night fighters in Algeria at the close of 1942, radar had acquired a growing status as a weapon of war. In the spring of 1943, it may be said to have been still in the 'teething' stage of development. But there was a definite form to the organization of it. There is no intention here of examining its vocabulary or enlarging on minute details of its operation. Those topics are dealt with elsewhere. It is important, however, to evaluate its exact contribution to maritime air warfare in the last two years of the war. The minimum possible definitions will therefore be given once and for all for present and future reference.

The stations from the West of Oran to the East of Bone existing on the fall of Tunisia were of four types, all British. They were M.R.U.s, i.e. Mobile Radar Units, L.W.s, i.e. Light Warning stations, G.C.I.s, i.e. Ground Control Interception stations, and C.O.L.s, i.e. Chain Home Low (for Overseas use) stations. The M.R.U.s and L.W. sets were for warning purposes only and the G.C.I./C.O.L. for the control of fighters. The C.O.L. station, designed originally for warning and information only, was unable to control fighter aircraft until provided with Very High Frequency gear and controlling personnel. When thus equipped, they were sited along the coast for the protection of convoys against low flying attack. The G.C.I.s, with their higher cover, were reserved in the main for the defence of ports. As American equipment arrived, it was substituted in the West for British stations, which moved forward.

The protection of convoys and ports in the day time was effected by the use of single engined fighters either directly under radar control or vectored as a result of radar information. For night operations, there were three Beaufighter squadrons equipped at this stage with Mark IV A.I. One squadron based at Maison Blanche defended shipping between Oran and Algiers areas and those ports. Two others at Setif defended shipping in the forward areas, the ports of Bone and Philippeville, and also intruded in Sardinia, vectored to and from that island from Cape Serrat G.C.I./C.O.L. station.

C.O.L. stations aimed at a range of 45 miles. New Mark VII Beaufighter crews were trained to intercept at low altitudes under their control and soon brought enemy aircraft losses back to their previous high level.(2)

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- (1) Chain Home Low for Overseas use - a British station.
 - (2) In the 12 days ending 15 April, 5 enemy aircraft were destroyed by night fighters. In the latter half of the month 21 were destroyed and 9 in May.

Radar preparations for Operations 'Corkscrew'(1) and 'Husky'

Three new and immediate tasks now faced the Coastal Air Force. They were, firstly, the establishment of radar coverage throughout the newly-captured territory; secondly, operations against Pantelleria and Lampedusa and: thirdly, the installation of control (R.D.F.) stations on them after capture.

In addition to the general move forward of British stations and replacements by U.S. stations, the important Sousse-Sfax area, embracing a complex of Allied bomber airfields, was given cover by units from the Middle East; a squadron of Mark VIII A.I. Beaufighters based near Tunis was available for co-operation. Cover was extended to Pantelleria before its capture.

The assault convoys against Pantelleria were accompanied, for the first time, by G.C.I./C.O.L. sets installed in Landing Craft Tank. They controlled convoy protection, were driven ashore and established. Their success led to the wider adoption of waterborne sets in the Sicily landings.

The installation of radar stations on Pantelleria and Lampedusa fitted the gaps between Tunisia and Malta, as well as giving advance low-level coverage for the flat country round Sousse and Sfax, where the ground was too low for the efficient siting of stations.

Radar coverage during the Sicilian Campaign(2)

In Operation 'Husky', Coastal Air Force's responsibilities became the normal ones of the protection of shipping and ports as vacated by the Tactical Air Force 50 miles behind the front line. After the fall of the western part of Sicily, a Beaufighter squadron operating from La Sebala maintained continuous night patrol over the part of Palermo in order to protect shipping. This squadron operated in conjunction with G.C.I. stations established in this area and on the island of Ustica.(3) It was thus possible to plot enemy aircraft as far away as the Bay of Naples. The radar system now covered North Africa and Sicily as well as convoy protection through the Mediterranean.

As the battle moved northward, radar stations in the southern area were withdrawn, first from Sousse, then from Pantelleria and Lampedusa, and finally from Malta, for use elsewhere. Sufficient equipment was left in Malta for its own defence. It was during 'Husky' that American night-fighter squadrons, equipped with Mark IV A.I., became operational, mainly for port defence, while British squadrons, equipped with Mark VIII, were released for convoy protection.

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- (1) The capture of Pantelleria.
 - (2) N.A.C.A.F. O.R.Bs. and appendices.
 - (3) Occupied on 6 August 1943 by a combined American naval and military force. Lipari and Stromboli in the Aeolian group surrendered to an American naval expedition on 17 August 1943.

Radar development in August and early September(1)

In August, Coastal Air Force was supporting operations in Sicily, actively planning for the coming operations against Italy and deciding on what to leave behind from Morocco to the Tripoli border. New Group headquarters, new fighter sectors based at Naples, Taranto, Vibo Valentia, North Sardinia and South Sardinia and new general reconnaissance control stations at Borizzo (Sicily) and at Naples and Taranto, had to be manned and equipped for radar control and interception as part of the radar screen for Italy. These were only a few of the manifold moves proceeding behind the day-to-day offensive, defensive and deterrent operations.

Coastal Air Force had taken over the defence of Western Sicily to a line 14 degrees East, and prepared to take over the entire coastline of the island. They formed Palermo Sector, defended by No. 242 Group, based on Palermo and Trapani airfields and transferred substantial forces there. They struggled with effete landline communications and shortages. The Sousse-Sfax sector was closed down, only one squadron being left at Sousse to cover the built-up of landing craft there. No. 323 Wing was withdrawn from Bizerta and held in readiness to operate in Italy as soon as the Allies held Naples.

Special efforts were called for against the intense German reconnaissance of ports. The Luftwaffe began to use 'Window'. Coastal Air Force experienced great difficulty with enemy jamming used on air attacks on Bizerta, the main American supply base for Sicily. Special officers came out from the U.K. to investigate the possibilities of countering the surprise use of this weapon.(2) Night Beaupfighters were equipped with more modern radar instruments. American night Beaupfighter squadrons arrived.

In addition to the use of 'Window', enemy aircraft seemed to have found a satisfactory method of attack on ports. They used low approach, quick climb and concentrated raids lasting 40 minutes, always in the first half hour of the night.

If one bears in mind the primitive material conditions ruling in so many fields of action in the countries denuded and ravaged by the enemy and the course of battle and how hard it often was to come by the elementary materials for moving, erecting, communicating, operating, keeping fit, obtaining shelter and so forth, it is evident that the progress of Coastal Air Force's radar organization between May and September must have resembled a series of quick-change acts. The time was found by this by no means overstaffed force to plan for the launching of the invasion of Italy. They arranged for

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- (1) N.A.C.A.F. O.R.Bs and appendices.
 - (2) Experiments were initiated, which proved successful, of using information from M.R.U.s and Army sets which were unaffected by the type of 'Window' used.

cover of all convoys up to a zero hour. A special air/sea rescue service was planned and signals facilities installed on Ustica and Salina Islands.(1)

Pantelleria was cleared except for its radar sets. By September there were ninety radar ground stations in the Command.

The enemy threat to ports along the North African coast and shipping in those areas was bound to increase, not diminish, for Oberst Pelz was hard at work developing new air bases in Southern France and building up his bomber strength.(2) The enemy change of tactics to low approaches had forced the introduction of new equipment - the radio altimeter, and heightened the need for more centimetric radar search instruments and for increased training facilities.

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- (1) C.O.L.'s and three types of beacons.
(2) On 26 June, he had been ordered to take over the bomber units of Luftflotte 2 and to set up in this connection two Battle Headquarters in Italy, viz. No.1 at Legnano (near Milan) and No.2 at Frascati (near Rome).
(Captured enemy documents A.H.B.6).

CHAPTER 3THE EXPANSION OF THE ALLIED COASTAL AIR FORCESNorthwest African Coastal Air ForceOrganization and responsibilities during the Tunisian Campaign (1)

When the Northwest African Coastal Air Force was created on 17 February, 1943, their main responsibilities were to plan the air defence of Northwest Africa, direct the operation of the air-to-air and air-to ground recognition system for Northwest Africa, control all sea/air reconnaissance, anti-submarine and shipping protection operations and shipping strikes. They were to control and develop airfields and to communicate direct with the Naval Commander-in-Chief. They protected Allied installations from Casablanca to Bone and protected shipping from longitude 3 degrees West as far as Bone. The radar system developed reasonably quickly, although not quickly enough. The force was deficient in long range reconnaissance and shipping strike aircraft, all-weather airfields and landing grounds.

Preparations for the period between the end of North African operations and the invasion of Sicily.(2)

During April, stock was taken of the problems to be faced when the campaign ended and plans were laid to cover the needs for convoy protection and air superiority in the Western Mediterranean and provide cover for the preparations for, and launching of, Operation 'Husky' - the invasion of Sicily. Tactically, the problems fell into three broad categories, namely, defence against submarines and surface craft, reconnaissance and fighter defence. The following decisions were made and closely adhered to in execution.

There would certainly be more shipping to protect from about one month after the campaign's ending. There might be more enemy submarines to contend with. It was known that the Germans had a search receiver to counter the use of A.S.V. Centimetric radar should be introduced forthwith into the Mediterranean.(3) More aircraft were essential. The Hudsons equipped with A.S.V. were to be turned over to night operations; and reinforcements, which, owing to shortage, were unlikely to be suitably equipped for detection, were to be put on day patrols until the radar supply situation improved. The holdings were then two A.S.V. squadrons, twelve Swordfish and six French seaplanes. Future requirements were three A.S.V. squadrons, three squadrons of bomber type, one squadron of Swordfish, one of Albacores and one of French seaplanes.

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- (1) N.A.C.A.F. O.R.Bs and Appendices. Feb. to May 1943: The R.A.F. in Maritime War Vol. VI (first draft) A.H.B. Air Ministry. Details of the operations during 'Torch' of the U.S. fighter group and three R.A.F. wings and ancillary units are given in Volume VI of this narrative.
 - (2) N.A.C.A.F. Air Staff O.R.B. Appendices.
 - (3) Refer to minutes of the A.O.Cs. meeting of 21 April 1943. N.A.C.A.F. O.R.B. Appendices.

Reconnaissance requirements of all kinds would soar: Hudsons were unsuitable for covering enemy coastwise shipping, and lacked the necessary range. So the present holding of one Marauder and one Albacore squadron would have to be increased by one general reconnaissance squadron (possibly Baltimore III. As), two Wellington VIII squadrons and a squadron of photographic reconnaissance aircraft devoted entirely to Coastal Air Force's needs.

Coastal Air Force was to be responsible for air defence from Oran to the Tunisia - Tripolitania border. Air defence included the protection of merchant convoys, Allied naval forces when at sea and also all ports. The weight of enemy attack on convoys in the most critical sector, viz., between Algiers and the Tripolitanian border, was difficult to assess. Much would depend on the weight of Allied deterrent air attacks on enemy air bases in Sicily, Sardinia and Italy. But it was certain that the improved Spitfire was the answer to the Ju.88 so often used in convoy attacks as far as Cape Bon. If loaded ships were of value, (and they were), an extra squadron might save a ship and justify the expense. The same fighters would have to scramble to defend Tunis, Bizerta and Bone. Hurricanes, although obsolescent, would still serve as cover to convoys on the east Tunisian coast to Tripoli. Naval forces far out at sea called for long range aircraft protection. The present holding of one Spitfire, three Hurricane, three Airacobra and three night Beaufighter squadrons must be increased by three Spitfire, two Hurricane, three Airacobra and two long range fighter squadrons.

The new organization⁽¹⁾

A whole air group was taken over from the Tactical Air Force. Airfields were planned, constructed, extended or vacated. New fighter sectors were created. Some old bases fell out of use, new ones assumed importance. The entire radar control pattern was expanded, and re-organized. It would serve no useful purpose here to follow the progressive changes day by day. The effects of the general change are best seen if one studies the three orders of battle given at Appendix 9. The first shows the modest structure at the close of the Tunisian campaign. The second shows the appreciable strengthening of operational units and the shift in regional emphasis. The third shows the more or less completed pattern as it stood at the launching of the assault in Sicily. Even then, the peak of strength had by no means been reached, but the form was adapted to the purposes of a major enterprise and was, at any rate experimentally, ready to face the operational needs of the whole Western Basin. After the fall of Sicily, the form will be seen to flow again into a new matrix adapted to the needs of the invasion of Italy.

The increase in strength in terms of squadrons

The course of events during the following year was to bring about a trebling of the Coastal Air Force's squadron strength. While this is only a rough measure in itself, a

(1) N.A.C.A.F. Air Staff, Operational Administration O.R.Bs. and Appendices.

table of the expansion in terms of squadrons is given.⁽¹⁾ It shows at a glance the rapid rise of strength from 18 squadrons in April 1943 to 56 in early 1944 and will serve as an index of the effect of major amphibious and ground operations on the cost of air superiority over the inland sea, and the changes in the body of the air force so largely responsible for it.

One must visualise, over and above the aircraft, the various stations, command posts, fighter control sectors, headquarters and air warning radar stations dotted all along the shores of the Northwest African coast from the frontier of Spanish Morocco to Tripoli. By the summer of 1944, they reached to the coastline of Allied-held Italy from below Rimini to below Pisa, all over Corsica and Sardinia and on the Adriatic island of Vis.

One of the main features of the expansion which began in June was the almost doubling of British strength. The following eight months saw a steady increase in the number of U.S. and French squadrons, but the British squadron representation was always greater than that of their Allies. In June 1943, it was roughly double that of the combined Franco-American forces, but American personnel and aircraft totals exceeded the British by increased margins.⁽²⁾

Fighter developments⁽³⁾

Night fighter tactical development, especially in conjunction with convoy protection, was an outstanding

(1) N.A.C.A.F./M.A.C.A.F. Strength (in Squadrons)
April 1943 to September 1944.

Month	R.A.F.-S.A.A.F. R.A.A.F. Sqns.	U.S.A.A.F. Sqns.	F.A.F. Sqns.	Total Sqns.
<u>1943</u>				
Apl.	11	7	0	18
May	13	9	3	25
June	23	9	3	35
July	24	11	3	38
Aug.	23	13	5	41
Sept.	23	14	8	45
Oct.	25	14	8	47
Nov.	20	16	10	46
Dec.	20	16	10	46
<u>1944</u>				
Jan.	30	16	10	56
Feb.	28	18	10	56
Mar.	28	16	10	54
Apl.	27	16	10	53
May	26	13	10	49
June	29	7	10	46
July	25	7	9	41
Aug.	18	7	8	33

Source: N.A.C.A.F. O.R.Bs. and appendices.

- (2) Two contributing reasons were their greater manpower resources and the fact that the initial establishment of their single-engined fighter squadrons was 25 as against the British 16 aircraft.
- (3) N.A.C.A.F. Air Staff, Operations and Admin. O.R.Bs. and Appendices.

feature in May. Airocrews grew, with training and experience with radar stations along the coast, skilled in the difficult task of intercepting low level enemy approaches and attacks. There was No. 325 Wing based at 'Paddington' near Souk-el-Khemis and detachments at Maison Blanche in the sector of that name, at Bone and at Achkel in the Bizerta sector. No. 153 Squadron had Mark VII A.I. fitted Beaufighters, controlled by high sited COL radar stations.

When the Axis had been expelled from Northwest Africa, Coastal Air Force took over the defence of Tunis, Bizerta, Sfax, Sousse and the coastline as far as the Tunisia - Tripolitania border. A complete re-shuffle inevitably followed, both of day and night fighter units and the complementary radar organization. The loss of No. 600 night fighter squadron to Tactical Air Force was more than compensated for by the transfer of No. 219 Beaufighter Squadron from the U.K. in June and, later in the month, by two U.S.A.A.F. night fighter squadrons - the 414th and 415th Squadrons. Only one of the U.S. squadrons was fully operational on the eve of Operation 'Husky' - the 415th. In the order of battle for 'Husky' issued on 23 June, there was stated to be one squadron of night Beaufighters at Maison Blanche (No. 153), one at Bone (No. 219), one at Sebala (No. 255) and one at Monastir (No. 415). The radar station development, which proceeded in harmony, looked beyond the immediate attack on 'Husky' to embrace cover over all convoy routes.

The day fighter force was enlarged in May by the transfer of No. 242 Group from Tactical to Coastal Air Force. It had previously been a tactical fighter group and was quite unsuited in its actual composition to assume its new role of static defence, control of an offensive general reconnaissance wing for future shipping strike forces, and for air sea rescue. It was accordingly remodelled in May and set up a combined headquarters with the Naval authorities in Bizerta. Its aircraft - seven and one-half squadrons - were based at Protville near Tunis.

It had been found in May that neither Spitfires nor Airacobras had sufficient climb or speed to intercept Me.109s with long range tanks, or high flying Ju.88s, when these were engaged in reconnaissance of Allied shipping and harbours. Northwest African Coastal Air Force had been pressing Air Ministry for a long time for Spitfire IXs and Lightnings. Now at last, in June, the Spitfire squadrons were given two Spitfire IXs and the Airacobra squadrons two Lightnings.

The old airfields, from Tafaroui and Arzeu in the west of Algeria as far as Bizerta, were mostly retained.⁽¹⁾ Bone, on the orders of Air Vice Marshal Sir Hugh P. Lloyd, the Air Officer Commanding Coastal Air Force, was extended and developed into a first class airfield, more suitable for the role it would have to play as a fighter sector centre. Protection of convoys past Cape Bon on to the East brought the old El Djem area into prominence; Sousse fighter sector⁽²⁾ was created in place of El Djem. By the time 'Husky' was about to be launched, there were a squadron of Airacobras,

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- (1) Refer to Map 5 in the R.A.F. Narrative on The North African Campaign (first draft) Air Historical Branch.
 (2) Sometimes referred to as Sfax fighter sector.

one of night Beaufighters and one of Hurricanes at Monastir, (near Sousse), and a squadron of Aircobras at Sfax.⁽¹⁾ The most active point of the fighter convoy and defence commitment was the Tunis sector, covering the Sicilian Narrows. The filling out of this area with airfields and aircraft continued.

Plans were made during May for the selection and building of runways and all weather aerodromes for the forthcoming winter. The lessons of the last difficult winter campaign had been well taken to heart. Questions of radius and range brought the Tunis sector straight into the foreground. There was great activity from La Sebala, and Sidi Achmed (where the two French squadrons were based with their Warhawks and Spitfires). All the air forces concerned with the sector shipping were handy at Protville (No. 328 Wing).

Need for expansion of reconnaissance and anti-shipping strike forces⁽²⁾

While enemy naval and merchant shipping losses had been heavy, new construction, requisitioning and reinforcement were certain to render great activity possible. This, with the increasing dominance of the Germans in Mediterranean affairs was likely to be sustained and offensive in character and pursued with the utmost ingenuity. Coastal Air Force, therefore, needed to expand its reconnaissance and anti-shipping units, whose activities were closely interlinked and who often combined both or switched tasks. The movements of the Italian Fleet called for the maximum degree of alertness as D Day 'Husky' drew nearer.

Air reconnaissance for the invasion of Sicily⁽³⁾

Allied naval plans called for elaborate air reconnaissance. It was assumed that the disposition of the Italian main units remained unaltered; i.e. the Littorio class battleships at La Spezia, the cruisers at Genoa and the Cavour class battleships and cruisers at Taranto.

Day and night searches were maintained in the Tyrrhenian Sea, Gulf of Genoa and west of Sardinia. Day and night block patrols were maintained on the Eastern Mediterranean area at the mouth of the Gulf of Taranto. Photographic reconnaissance of the principal enemy bases was ordered to be carried out twice daily. An air striking force was held available to strike the enemy fleet, if it put to sea. There were special air anti-submarine patrols in operation. These were only the main tasks of reconnaissance for the invasion of Sicily. Beyond Sicily lay the even greater task of the invasion of Italy.

Details of reconnaissance and anti-shipping forces' expansion

During late May, illumination and torpedo exercises in co-operation with the Navy were carried out by No. 458 Wellington Squadron⁽⁴⁾ off Algiers. The newly arrived No. 242 Group developed a reconnaissance wing - No. 328.

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- (1) Refer to Appendix 9 for details of the squadrons.
 - (2) N.A.C.A.F. Air/Ops. O.R.Bs and appendices.
 - (3) Admiralty Battle Summary No. 35 (A.H.B.IIK/18/27).
 - (4) Transferred ex Middle East.

In June, this wing, based at Protville, (near Bizerta), brought its weight into the field of offensive and reconnaissance effort. June was a month of urgent and heavy reinforcement. New additions followed one another rapidly, - No. 52 Baltimore Squadron, Nos. 614 and 13 Bisley Squadron, No. 36 Wellington Squadron and the French Air Force Latecoere Squadron (equipped with Leo aircraft), No. 47 Torpedo Beaufighter Squadron⁽¹⁾ and No. 52 Baltimore Squadron⁽²⁾ were all brought in for day operations. Nos. 458 (R.A.A.F.) and No. 221 (R.A.F.) squadrons were set up for night reconnaissance and shipping strikes. No. 144 Torpedo Beaufighter Squadron came out from the U.K. and a group of Wellingtons - No. 221 - was loaned by Malta. The U.S. forces were built up to three Airacobra squadrons for day defence of the Algiers sector in June - 345th, 346th and 347th.

During July, in the first days of Operation 'Husky', No. 328 Wing⁽³⁾ stood by to watch the Italian Fleet. When it was taken for granted that there would be no interference from that quarter, the wing was turned over to anti-shipping strikes.

During August, a month of preparation, the major development was the establishment by Coastal Air Force in Sicily of a forward base for anti-shipping day and night fighter squadrons. The long range anti-shipping forces stayed back at Protville. No. 458 Squadron's Wellingtons acted as reconnaissance aircraft for naval units or dropped flares. Nos. 14 and 52 Baltimore Squadrons hunted for enemy convoys and watched for reconnaissance aircraft.⁽⁴⁾

On 19 August, Coastal Air Force Command Post was formed.⁽⁵⁾ On 5 September, Coastal staff boarded the headquarters ship H.M.S. Hilary. On 9 September, they were in action off Salerno, controlling fighters.

No. 201 (Naval Co-operation) Group

Organization on the eve of the landings in Sicily.⁽⁶⁾

From the Tunisia-Tripolitania border eastwards, responsibility for long range convoy protection and reconnaissance for Operation 'Husky' lay to a great extent with No. 201 Naval Co-operation) Group. Beyond the range of its long-range fighters, Air Headquarters Malta was to take over; eastwards, roughly beyond a line from the Cyrenaican Hump to Crete, began the responsibility of Air Defences Eastern Mediterranean. Convoys leaving Alexandria and Port Said for the assembly areas for 'Husky' were to pass from one zone to another. Duties overlapped and sometimes ran concurrently, without hard and fast geographical lines.

(1) Ex Middle East.

(2) Ibid.

(3) Marauders, Torpedo Beaufighters, Baltimores, Wellingtons and Hudsons.

(4) Refer to the order of battle in Appendix 9 for the organization into which these reinforcements and changes fell.

(5) Est. LWE/NWA/2033A. C.O. Capt. Clark. 14 officers and 83 other ranks. C.A.F. O.R.B.

(6) No. 201 Group O.R.B.'s and appendices.

By 10 July 1943, No. 201 Group had grown to constitute four wings⁽¹⁾ including one general reconnaissance unit,⁽²⁾ its operational component comprising R.A.F., S.A.A.F., R.A.A.F. and the R. Hellenic Air Force elements. It bore some F.A.A. units on the strength, but they were terminating operations from land bases and preparing to transfer to carriers.⁽³⁾

No. 201 Group's long range fighter strength was inadequate to meet all commitments when the convoys were concentrating between Tripoli and Malta; and it was decided to reinforce No. 201 Group with two Lightning squadrons⁽⁴⁾ from the North-west African Coastal Air Force and No. 272 Squadron (Beaufighters) from Malta.

The functions of No. 201 Group in Operation 'Husky'⁽⁵⁾

The intentions were twofold, namely to ensure the safe conduct of convoys coming within its area and to find and shadow naval forces should they break out. The execution of the intentions involved anti-submarine escort, reconnaissance and shadowing, an air striking force and fighter defence.

Close anti-submarine escort was provided during the passage of convoys from Alexandria to meridian 15°00' East. West of this meridian, the presence of fighter aircraft and a great concentration of surface escorts were considered adequate to deal with the submarine threat.

Air units of other commands were to carry out photographic reconnaissance of enemy harbours and maintain block

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- (1) Nos. 235, 238, 245 and 247.
 (2) No. 1 G.R. Unit.
 (3) Organization and aircraft of No. 201 (N.C.) Group on 10 July 1943

<u>Unit</u>	<u>Aircraft</u>
No. 701 Sqn. (F.A.A.)	Walrus
<u>No. 235 Wing</u>	
Sqns. No. 13 (Hellenic)	Blenheim
No. 227 (Det.)	Beaufighter
No. 454 (R.A.A.F.)	Baltimore
No. 459 (R.A.A.F.)	Hudson
No. 815 (F.A.A.)	Swordfish
<u>No. 238 Wing</u>	
Sqns. No. 16 (S.A.A.F.)	Beaufort
Nos. 227 (Det.) and 603	Beaufighter
No. 815 (F.A.A.) (Det.)	Swordfish
<u>No. 245 Wing</u>	
Sqn. No. 16 (S.A.A.F.)	Beaufort
No. 38 (Det.)	Wellington
Other units	
No. 1 General Reconnaissance Unit	Wellington
<u>No. 247 Wing</u>	
No. 38	Wellington
No. 203	Baltimore
No. 227 and 252	Beaufighter

- (4) 97th and 98th (82nd U.S.A.A.F. Fighter Groups).
 (5) H.Q. No. 201 (N.C.) Group Operation Order No. 3, 16 June 1943. (No. 201 Gp. O.R.Bs.)

patrols across the Gulf of Taranto by day and night and across the Straits of Messina by night. In the event of the enemy fleet putting to sea and passing either of these blocks, the O.C. No. 247 Wing (No. 201 Group) was to use his force of reconnaissance aircraft(1) at Berka III airfield to locate and continually shadow the Italian Battle Fleet. The same wing was to hold a small force of Wellington torpedo-bombers ready to strike if it came within range, with battleships as the primary target.

Three assault convoys(2) and two follow-up convoys were to be covered; the three main convoys were to be provided with four long range fighters all day most of the time and the following convoys on a slightly diminished scale. Fighter resources were so deployed as to exert a sustained effort from D minus 21 Day to D plus 22 et seq Day, an intensive effort from D minus 9 Day to D plus 9 Day, and a maximum effort from D minus 2 Day to D plus 2 Day.

An Air/Sea Rescue service by aircraft and high speed launches was co-ordinated with parallel arrangements by the Coastal Air Force and Air H.Q. Malta. Five stations were linked for broadcast action on the Air/Sea Rescue Point-to-Point Safety Channel;(3) in addition, continuous watch on that channel East of Benghazi was maintained by the normal Air/Sea rescue stations.

Air Defences Eastern Mediterranean

Organization on the eve of 'Husky'

At the time the assault on Sicily was launched, H.Q. Air Defences Eastern Mediterranean (formerly Air H.Q. Egypt) held under command four groups, each responsible for a territorial area - No. 209 Group for the Levant, No. 210 Group for Tripolitania, No. 212 Group for Cyrenaica and No. 219 Group for Egypt. The operational squadrons and aircraft are given in the footnote.(4)

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- (1) 12 long range Baltimores of No. 203 Squadron and 6 Baltimores of No. 69 Squadron.
 (2) M.W.F. 36 and M.W.S. 36 from Middle East and M.W.S. 36 (x) from Tripoli.
 (3) H.Qs of No. 238 Wing, Nos. 210 and 212 Groups (H.Q. No. 247 Wing in direct communication with No. 212). H.Q. Malta and H.Q. Bizerta.
 (4) Organisation and aircraft of Air Defences E. Mediterranean on 10 July 1943

<u>Unit</u>	<u>Aircraft</u>
<u>No. 209 Group (Levant)</u> Sqns. No. 46 (Det.) No. 127	Beaufighter Hurricane, Spitfire
<u>No. 210 Group (Tripolitania)</u> Sqns. Nos. 3 (S.A.A.F.), 33, 213, 274 No. 89	Hurricane Beaufighter (N/F)
<u>No. 212 Group (Cyrenaica)</u> Sqns. Nos. 7 and 41 (S.A.A.F.), 94, 123, 134, 237 No. 30 No. 108 (Det.)	Hurricane Spitfire Beaufighter (N/F)
<u>Flights</u> Nos. 1563, 1654, Met. Flights	Gladiator
<u>No. 219 Group (Egypt)</u> Sqns. Nos. 74, 238, 335, 336, 451 (R.A.A.F.) No. 46	Hurricane Beaufighter (N/F)

The functions of Air Defences Eastern Mediterranean in 'Husky'

The convoy sailing from Alexandria and Port Said constituted one of the major forces in the operation. This Force A was heavily escorted by Allied naval forces.⁽¹⁾ The air responsibility for its protection and the screening of its composition, sailing and movements began weeks before it sailed. It was anticipated that the enemy might do one or more of four things. He might increase his air forces in Crete and Rhodes, intensify air reconnaissance of all Eastern Mediterranean ports, attack shipping in ports and mine the Suez Canal and port approaches. Air Defences Eastern Mediterranean's preparations for the invasion of Sicily were, therefore, different from those of the other co-operating commands. The following measures were taken from early in June.

To improve the air defences, the air raid warning system was enlarged in the areas of the Canal and the main ports. The day fighter force in the Delta and Canal area was increased to four squadrons. The Hurricane squadron in the Levant was increased to ensure adequate fighter defence in the assembly ports of Haifa and Beirut. All squadrons' strengths were temporarily raised from sixteen to twenty-one aircraft: the night fighter defence system was enlarged to cover the approaches to the Canal, the Canal, the Delta and Haifa: fighter reinforcement machinery was tightened up. As defence against high altitude reconnaissance by the Ju.86s (fitted with pressurised cabins), five Spitfire IXs were allotted to the Command at Aboukir and rendered capable of interception in the sub-stratosphere. The A.A. defences of Alexandria, Suez, Port Said, Beirut and the Canal were considerably strengthened. Rehearsals of air defence of, and co-operation with, the 'Husky' convoys were held, the former between 27 May and 18 June, and the latter between 11 and 15 June.

Enemy reconnaissance of 'Husky' convoys in Alexandria and Port Said and over Cyrenaica

Two two main assault and two main 'follow-up' 'Husky' convoys assembled in Alexandria and Port Said at the end of June. All preliminary sailings of these convoys and their component parts called for continuous fighter escort. In particular, the transmuting of the Canal by the main assault force on 1 July had to be safeguarded against air attack.

During the latter half of June, when the assembly ports were rapidly filling, German Ju.86s, operating at 45,000 feet and above, succeeded in reconnoitring Alexandria and Port Said once each. Another successful reconnaissance of Port Said was made by a special high speed Ju.88 reconnaissance aircraft at 32,000 feet on 2 July, but a Ju.86 attempting to photograph Alexandria the same day was shot down from 44,000 feet by special Mark IX Spitfires and destroyed. No further attempts were made before the main convoys sailed.

(1) For full details of ships in all 'Husky' convoys refer to Admiralty Battle Summary No. 35 (A.H.B.IIK/18/27).

During the same period, several successful enemy air reconnaissances were made over Cyrenaica with Ju.86's, Ju.88's and Me.109's, but no Spitfire IXs could be spared from the Delta to deal with them.

The 40 mile limit of responsibility for convoys⁽¹⁾

The system whereby all convoys were covered will be made clearer if the division of responsibility for fighter defence is elaborated a little at this point. It must not be lost sight of that no command involved yet had all the aircraft it believed it needed to fulfil its commitments.

Air Defences Eastern Mediterranean were responsible for the short range fighter defence of all 'Husky' convoys whether coming from East or West, while within 40 miles of the shore, as far West as a line joining the Tunisian-Tripolitanian frontier to Malta. West of this line, N.W. Africa Coastal Air Force was responsible. Outside the 40 mile limit, No. 201 Group was responsible for providing the actual escort, but Air Defences Eastern Mediterranean undertook always to hold a force of short range fighters fitted with long range tanks to operate if necessary in support of No. 201 Group's long range escort patrols.

Provision of landing grounds⁽²⁾

As it was impossible to provide continuous fighter escort by a force larger than one flight with the relatively low forces available, it was necessary to provide as large a force as possible at readiness on the nearest available landing ground to each convoy. No less than twenty-one main and intermediate landing grounds were therefore prepared for the purpose, stocks of fuel and ammunition laid down and pipelines installed.⁽³⁾

Air Headquarters Malta⁽⁴⁾

Expansion of resources for Operation 'Husky'

In February 1943, Malta possessed four airfields with the capacity to operate fifteen squadrons. On 11 July 1943, thirty-four and one-half squadrons employing approximately six hundred aircraft were operating from six airfields. All the improvements were carried out by the Air Ministry Works Directorate.

The old Fighter Operations Room could operate a maximum of twelve fighter squadrons. During the Spring of 1943, a large underground tunnel was completed by the Royal Engineers. A new Fighter Control was ready by the end of June and, during the assault phase of 'Husky', the Fighter Operations Room was operating thirty squadrons of day and night fighters, intruders, fighter bombers and tactical reconnaissance Spitfires.

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- (1) Air Defences Eastern Mediterranean Air Staff O.R.B. appendices.
 - (2) Ibid.
 - (3) No. 210 Group: Zuara, Mellaha, Valdagno, Misurata, Tamet.
No. 212 Group: Marble Arch, Magrun, Berca, Bersis, Savoia, Derna, Gazala, Bu Amud, Menastir.
No. 219 Group: Sidi Barrani, Mersa Matruh, El Daba, Dekheila, Idku, Bassandilla, El Gamil.
 - (4) Air H.Q. Malta. MS.5050/Air 26 July 1943 (Malta O.R.B's).

The R.D.F. system was improved and enlarged. A new Filter Room, double the size of the old, was in use in June 1943.

At the end of November 1942, there was about one week's aviation petrol in Malta, which was operating fourteen squadrons. R.A.F. Middle East planned the administrative build-up of Malta in preparation for 'Husky'. This, carried out by a highly intensive island effort, proved a success. From a starvation level, supplies were built up to a point at which thirty-five and one-half squadrons were kept working at a maximum effort.

A balanced force of twenty-six squadrons was planned, to include all types of day and night fighters, reconnaissance, fighter bombers and light bombers. Shipping was booked in advance as soon as tentative approval, about 1 January 1943, had been secured, a wise precaution which made realisation of the major effort six months later possible.

R.A.F. Malta's function in Operation 'Husky' ⁽¹⁾

Although the full account of Malta's participation in Mediterranean operations is developed in a special narrative, the function of Malta in the assault on Sicily must be briefly outlined to complete the whole pattern of air force responsibility.

Spitfire squadrons based on Malta were to provide fighter cover and close escort for approximately two thousand ships converging on Malta from the West, South and Southeast during their approach to Sicily. The general plan was to employ two-thirds of the available fighter effort on the close escort of convoys when they came within 50 miles West of South of Malta. The remaining one-third of the fighter force was employed over enemy airfields in the South of Sicily, and in giving close escort and top cover to bomber formations operating from Northwest Africa.

To assist in the protection of convoys after dark, fighter intruders were to operate throughout the night over enemy-occupied airfields in Sicily and Southern Italy. Beaufighters and Mosquitoes were to operate throughout the night as a screen between the enemy airfields and the advancing convoys. They were controlled by G.C.I. stations on Malta and on tank landing ships.

Malta provided visual and radio navigational aids to the two airborne assaults and protected the four hundred and fifty transport aircraft and gliders with a screen of night fighters and night intruders. Hurricane cannon fighters led the airborne formations across the coast of Sicily and effectively attacked searchlights exposing their beams. Fighters based on Malta, Gozo and Pantelleria covered the landing areas. ⁽²⁾

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- (1) Air H.Q. Malta. Report MS/5050/Air 26 July, 1943. (Malta O.R.B.'s).
(2) See the R.A.F. narrative 'The Sicilian Campaign' (A.H.B.) for a full account of air participation in Operation 'Husky'.

Malta's air organization and aircraft on 11 July 1943

For the purpose of Operation 'Husky', Malta was filled up with single-engine fighters, and as airfields in Sicily were captured, Spitfire squadrons were sent forward from Malta. To replace these, Malta called forward from Africa fighter bomber squadrons, which, as airfields became available, were sent forward to operate under Desert Air Force in Sicily. Malta then called in light bombers of the Tactical Bomber Force, retaining only five Spitfire squadrons for protection of shipping in Malta harbour and roads and for protection of convoys to and from southeastern Sicily.

For the assault, a great concentration of aircraft, far exceeding normal strength, was achieved by Air H.Q. Malta. The occasion passed, Malta's strategic value grew progressively less and no such aircraft strength ever became necessary again. There is no point in following the order of battle through all its phases, but it is of interest to study the order of battle on D Day 'Husky'.⁽¹⁾

(1) See Appendix 11.

CHAPTER 4THE ELIMINATION OF ITALY FROM THE AXISA. THE AIR OFFENSIVE AGAINST ENEMY SHIPPINGThe Axis sea supply situation in the 'Husky' periodIntroductory

After the victory in Tunisia, the Allied air forces continued unabated their offensive against the enemy supply lines, an offensive involving reconnaissance of, and attacks on merchant and naval vessels at sea, and attacks on ports and harbours, their installations and the shipping sheltering there.

The pattern of the enemy merchant and naval organization has not yet been made clear in this series. The subject will be developed in detail in appendices, but it will be essential first to outline briefly here the structure of the Axis merchant and naval shipping, so as to show precisely what it was against which the Allied air forces were pitting their effort.

The air operations against sea supply and naval objectives will then be related in three phases, viz., 14 May to 30 June, 1 July to 17 August (the 'Husky' period) and from 18 August to 8 September (the last days of the Italian armed forces). The contribution of the various air commands to the protection of the convoys to Sicily will then be recorded.

The question of the successful Axis evacuation of Sicily has already been partially dealt with,⁽¹⁾ but it will be opportune to examine one or two aspects of the problems in the light of enemy documents which have since been made available. The result will clarify this controversial theme.

Allied air protection for the 'Avalanche' convoys and preparatory air operations have been fully dealt with in another narrative.⁽²⁾ But the surrender of the Italian Fleet and the failure of many units to escape from the Germans will be related here, with supporting figures proving the magnitude of those happenings.

The reinforcement of the islands (3)

Immediately after the loss of Tunisia, the most pressing material problems before the Axis were to reinforce the islands of Sardinia, Corsica and Sicily and to improve the coastal defences of those islands, of the French and Italian Rivièras, the coasts of Italy and parts of Greece. The available shipping and air and naval escorts fell far short of their requirements. The Allied air forces and surface naval craft had taken a very heavy toll of both

(1) R.A.F. narrative 'The Sicilian Campaign' (A.H.B.)

(2) R.A.F. narrative - The Italian Campaign - Vol. I (A.H.B.)

(3) Bernotti:- 'La Guerra sui Mari nel Conflitto Mondiale.'

during the Tunisian campaign and many craft were due for repairs. Admiral Weichold, who from November 1941 up to the date of his removal in March had been in command of all German naval forces operating in the Mediterranean, admits the heavy losses and quotes for April 1943 the loss of fifteen merchant ships totalling 48,000 tons on the Tunisia route alone: of these no less than 68 per cent were sunk by aircraft. The air transport services had been cut to pieces by the Allied air formations; ninety of their aircraft had been destroyed in April alone.(1)

In May 1943, the Italian Admiralty estimated the monthly material needs of the islands as:-

Sicily	160,000 tons of supplies
Sardinia	50,000 tons of supplies
Corsica	20,000 tons of supplies

These figures excluded the reconstituted naval escort services and the eventual reinforcement of troops.

The problem was much more complicated for the Italians than for the Germans. The Italians still had troops to maintain in Dalmatia, Albania, Greece, the Aegean and the Dodecanese.

Axis shipping and escort crisis(2)

Naval losses by the Axis, especially by Italy who controlled the majority of regular escort craft, had been grave. Many more were under repair. Losses were only replaceable on a low scale on account of the scarcity of raw materials, which limited shipyard output. Replacements for merchant shipping losses were equally meagre for similar reasons. In January 1943, the Minister of Communications had stated that for six merchant vessels lost only one was built. In mid-March 1943, he prophesied the early paralysis of the Italian merchant marine. Meanwhile, the Italians took over an increasing volume of French tonnage.

On 14 May 43, the Italians reviewed their naval escort situation. They had only eighteen destroyers left and only eight of these were operationally ready for the escort of big naval craft protecting traffic between Italy and Sardinia. They had only twenty-two torpedo boats left and of these only eight were ready, quite an insufficient number for the numerous escort tasks required. As for small surface craft, there was only one flotilla of Vas and Mas boats ready in the critical area, but there were a few Mas boats in the Aegean and Upper Tyrrhenian. This shortage of escort craft left nothing over for offensive operations. Pantelleria was blockaded after April, so that its airstrip was no longer available for use in air convoy escort.

The choice of air targets in the Axis supply system

Allied strategic air bombing was initiated soon after the conquest of Tunisia with the intention of preventing

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- (1) Weichold:- Axis naval policy and operations in the Mediterranean - 1939 to May 1943. Ref. G.H.S./5 F.D.S. Admiralty (restricted).
 (2) Bernotti.

an enemy build-up in Sicily. To this end a programme of operations was maintained against Palermo, Catania and Messina in Sicily, Cagliari and Olbia in Sardinia and Naples, Leghorn and Genoa in Italy. It was also a part of the Allied plan to destroy or immobilise the heavy units of the Italian Fleet in Naples, La Spezia, Genoa and Trieste⁽¹⁾ and to destroy as much as possible of the supply traffic at sea between the mainland and Sicily, Sardinia and Corsica. The offensive was maintained against normal supply traffic, such as oil tankers working their way round the Grecian coast back to the Adriatic and military supplies for the Aegean bases. The air forces hoped, too, to hinder the intensive Axis programme of minelaying and minesweeping with regular and auxiliary craft.

The Italian merchant shipping situation

The total merchant tonnage employed by the Italians in the Mediterranean had sunk by March 1943 to 1,473,712 tons from the total of 2,009,817 tons with which she had entered the war in June 1940. This figure would have been very much lower had it not been for the substantial tonnage accrued from the confiscation, requisition and special cession of foreign merchant fleets, new construction, salvage, purchases and returns from abroad. These total additions had amounted to no less than 741,518 tons.⁽²⁾ Since December 1942, a steady volume of French and Greek tonnage had been flowing into Italian ports.

The Italians had never succeeded in rationalising their merchant shipping. Everything was grist to their mill, big or small; and, in emergencies, small naval craft were employed for transport tasks.

In one sense the situation after the North African campaigns was easier, since the supply lines were shorter, but Allied air superiority was a major menace and the surface forces and submarines would take a steady toll. But the risks must be taken and the islands restocked and reinforced. Everything must travel by sea, except the German and Italian troops for Sicily, who were to be entrained down to the Reggio di Calabria area and ferried across.⁽³⁾ For this purpose an appreciable volume of small craft specially adapted for the task was available, both from the Italian and German naval and harbour strength.

The German merchant shipping situation

The German merchant tonnage available was much smaller than the Italian. Most of it had been seized or requisitioned, but much less of it was ex-French. In spite of their only partial grasp of Mediterranean strategy so far, they had at any rate evolved a standard type of merchant ship which was strong, capacious and fast enough for most supply problems and rendered valuable service throughout the operations in the Mediterranean and Black Sea. This was the Kriegs Transport (known as the KT) of 795 tons standard displacement. The fleet of KT ships came under

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- (1) Plans and operations are reported at length in the R.A.F. narrative on the Sicilian Campaign.
 - (2) Captured Italian document PI/4203 (F.D.S. Admiralty).
 - (3) Bernotti.

naval command. They were usually sent down in sectional form and assembled and launched in Italian shipyards. The total numbers could not have been above a dozen at this period and four had been sunk during the Tunisian campaign.

The Germans were concentrating more and more on the production and employment on transport tasks of all kinds of navy-controlled, small, standardised, well-armed ferry craft, such as Siebel ferries, (1) naval ferry barges (2) and oil and freight barges. (3) All these craft were difficult to see and attack with accuracy by aircraft at sea, especially at night, and more likely than large vessels to escape destruction by air attacks in ports and harbours. Their strength was small, but growing fast.

In the eastern basin, the rudiments of a plan for organizing and arming Greek caiques had begun. Before this period, R.A.F. Beaufighters had assumed with good cause that these small native Greek sailing craft were usually proceeding on their lawful business, but from April 1943, attacks on them by German gun crews on board the caiques pointed to the need for a counter-offensive. In fact, the Germans had seen the possibilities in the great number of these highly manoeuvrable and sturdy caiques throughout the archipelago and set out creating an organization, allotting tactical numbers, with the result that in 1944 a considerable fleet was in being, sufficient for their basic needs. It was estimated by No. 201 (N.G.) R.A.F. Group in April 1943 that the Germans had commandeered between six hundred to one thousand of them and that, on a conservative estimate, they distributed by this means between 10,000 and 15,000 tons of supplies weekly to the island garrisons. Caiques were also used as decoy ships for submarines. (4)

The Axis naval forces

In the Spring of 1943, the German naval forces fell under three commands, namely, Group West, German Naval Command Italy and Group South. The forces of Group West in the Mediterranean were the 6th Defence Flotilla (whose headquarters were at Montpellier) and the Admiral South Coast of France, with the Sea Defence Commandant Languedoc and French Riviera under his command. The Commandant Languedoc controlled a harbour defence flotilla of forty-three ex-motor fishing vessels; the Commandant French Riviera had no defence flotilla under command as yet. The German Naval Command Italy controlled the two S-boat Flotillas - the 3rd and 7th - stationed at Empedocle and Augusta in Sicily; (5) the 6th and 12th R-boat Flotillas of motor minesweepers, ex-yachts and tugs etc., (6) (later based at Leghorn); the 22nd Anti-submarine Flotilla of so-styled U.J.-boats, about six in number; (7) the 3rd and

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- (1) 80 tons average standard displacement.
 - (2) 120 tons average standard displacement.
 - (3) 200 tons average standard displacement.
 - (4) Air tactics and operational notes of No. 201 N.C. Group R.A.F. Sec. V. (II.J.11/178/10 A.H.B.).
 - (5) With a combined strength of about 12 S-boats.
 - (6) About 20 craft in all.
 - (7) An assortment of ex-corvettes, ex-steam trawlers, ex-yachts, transports and fishing-vessels.

4th Escort Flotillas of T.A.-boats (three ex-French torpedo boats) and S.G.-boats (three ex-French steamships); the 70th Minesweeping Flotilla (about twenty ex-motor fishing vessels numbered V.7001 onwards). Three landing flotillas - the 2nd, 4th and 10th, which comprised about sixty ferries and ferry barges, two gun lighters, eight infantry landing craft and five repair craft.

In the Aegean, they had had the 21st Anti-submarine Flotilla of UJ-boats, with its main base at the Piraeus, since June 1942. Its strength was about six and its tasks were anti-submarine and escort duties throughout the Aegean, from the Dardanelles and Salonica in the North to Crete and the Dodecanese in the south and off Western Greece.

The Italian forces presented a fairly simple problem.(1) The big ships were in port or making token manoeuvres, the few destroyers and torpedo boats in port or escorting convoys, the few Mas and Vas boats in Sicilian waters. The Allies had a fairly accurate photographic survey of locations by 11 July 43.(2) These will not be recapitulated here.

Allied air operations against Axis shipping
(14 May to 8 September 1943)

Merchant shipping sinkings at sea - 14 to 31 May 43(3)

The latter half of May found very few enemy ships, with or without convoys, at sea. The Axis tonnage was resting, repairing or refitting, or loading supplies and troops in port. On 14 May, U.S. Warhawks sank a fishing boat off Sant' Antioco (Sardinia): on 18 May, R.A.F. Spitfires bombed and sank the Italian trawler Enrico Gismondi.(4)

- (1) Status of Italian minor and auxiliary naval vessels on 1 August 43. (Source: Dati statistici - Vol. 7 of 'La Marina Italiana nella Seconda Guerra Mondiale (Air Min. Library H.55315 (H.3)).

<u>Type</u>	<u>No.</u>	<u>Tons</u>
Corvette	29	16,516
M.A.S.	49	958
M.S.	38	2,229
M.Z.	53	5,640
V.A.S.	41	2,460
Gunboats	14	14,495
Training and survey	11	16,654
Minelayers	14	5,820
Minesweepers	28	4,030
Supply and Admin.	20	58,633
Water tankers	20	25,821
Oil tankers	11	67,901
Tugs (ocean-going)	35	13,473
Local use	162	25,691

The general serviceability rate cannot be confirmed, but was certainly generally low.

- (2) In mid-August, Italian emissaries began negotiations in Lisbon with Allied representatives. The chances thereafter of the Italian Fleet undertaking offensive operations against the Allies were therefore not serious.
- (3) Enemy shipping losses in the Mediterranean (A.H.B.): Navi Perdute.
- (4) 693 G.R.T.

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On 26 May, twelve U.S. Lightnings operating in the Sardinian Gulf of Aranci sank the Italian s.s. Monte Santo (1) outside La Maddalena.

Signs that the Axis were in poor shape for action were evident in the Aegean, where movement declined to almost a standstill. The only sinking was effected on 14 May by five Baltimores, who attacked a fishing vessel - the Anna Maria II - off Katakolo - and forced her to run aground and sink. (2)

Warship sinkings at sea - 14 to 31 May 1943 (3)

There was parallel stagnation in naval movement at sea. The only success the air forces were able to record was the sinking of MZ.733, (in Italian motor landing craft), on the night of 20/21 May, 3 miles off Cape Granitola (Sicily) on its way to Pantelleria. R.A.F. Mosquitoes bombed, machine gunned and sank it. Allied surface craft and submarines, however, on their patrols during this period sank two ships (1,791 tons). (4) Their bases were not undergoing the extensive changes and expansion of the air bases and the rhythm of their effort continued at a more or less uniform tempo. The main Allied air anti-shipping effort was concentrated on the enemy ports.

Merchant shipping sinkings in port - 14 to 31 May 43 (5)

The loading and unloading ports and naval bases were crowded with shipping when Tunisia fell and provided a wealth of targets of which the Mediterranean Air Command took full and rapid advantage.

On 14 May, Civitavecchia was attacked by fifty-one U.S. Fortresses, Olbia (Sardinia) by fifty-four U.S. Mitchells and eleven U.S. Lightnings and Porto Torres (Sardinia) by fourteen U.S. Lightnings. At Civitavecchia four large Italian steamships were sunk. These were the Orione (1,144 G.R.T.), the Mira (3,615 G.R.T.), the Citta di Trieste (4,658 G.R.T.) and the Erice (2,350 tons). An auxiliary schooner - the Maria Grazia, a small steamship - the Christina - and a brigantine - the Lilla - three small vessels and a German tug were also sunk. At Olbia (Sardinia) on the same day, the Italian s.s. Agata (2,281 G.R.T.), the German ex-French s.s. San José (6,013 G.R.T.) and four small vessels were sunk. At Porto Torres, three small vessels and, at Sant'Antioco, two small vessels were sunk.

On 18 May, Trapani in western Sicily was attacked by forty Fortresses. They sank seven small auxiliary and fishing vessels. On 21 May, a few U.S. Liberators sank three small craft in Reggio. On 24 May, twenty-four U.S. Liberators attacked Reggio ferry terminus and sank

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- (1) 850 G.R.T.
 - (2) The Allied Navies were more successful in this period and sank 6 ships of a total of 9,355 tons, including s.s. Bologna (5,140 tons) sunk by submarine on 21 May off Cape Vaticano.
 - (3) Enemy shipping losses in the Mediterranean (A.H.B.): Navi Perdute.
 - (4) Including U.J.2213, the ex-French Heureux (1,045 tons).
 - (5) Enemy shipping losses in the Mediterranean (A.H.B.).

S.S. Gimma (1,542 G.R.T.), K.T.22 (795 G.R.T.) and four small craft. On the night 24/25 May, sixteen R.A.F. Wellingtons (of the Strategic Air Force, No. 205 R.A.F. Group), sank the Italian s.s. Tana (ex St. Simone - French) of 5,535 G.R.T.

On 25 May, fifty-three U.S. Liberators attacked Messina and sank the Italian s.s. Polluce (1,049 G.R.T.) and the ferry Reggio (899 G.R.T.). On 28 May, twenty-seven U.S. Fortresses, in an operation against the marshalling yards at Leghorn, sank, as a by-product, the Italian motor vessel Caralis (3,510 G.R.T.), s.s. Tiziano (1,333 G.R.T.), s.s. Lercara(1) (3,070 G.R.T.), s.s. Sandrina (793 G.R.T.), s.s. Mayalunga (556 G.R.T.), three sailing vessels and one tug. On 30 May, twenty-three U.S. Fortresses, attacking the Naples marshalling yards set on fire the big German (2) motor tanker President Herren Schmidt (9,103 G.R.T.) as well as the s.s. Enna, which appeared to be loaded with ammunition; the Enna(3) (3,325 G.R.T.) exploded, causing a large gap in the Vittore Emanuele mole, which was confirmed by a photograph taken by a Malta aircraft.

Record sinkings of enemy merchant shipping in May 1943

In spite of the general calm ruling at sea during the latter half of May, the total tonnage sunk by Allied action during the month constituted a record for the war. No less than 113 ships totalling to a tonnage of 118,489 were, according to reliable sources, (4) sunk either by the Navies, mines or the Air Forces. Of this figure, 17,403 tons were sunk by the Navies (including submarines) and 101,086 by the Air Forces. (5) Of this 101,086 G.R.T., 12,102 tons were sunk by the R.A.F., and 79,782 tons by the U.S.A.A.F. 14 ships totalling 12,158 tons were sunk by aircraft at sea and 80 (plus 2 very small craft of unknown tonnage) totalling 88,928 tons in port.

Warship sinkings in port - 13 to 31 May 1943

U.S. Fortresses, on 18 May, in the attack on Trapani, hit two Italian naval minesweepers. It sank one - R.D.38 - and damaged the other - R.D.16 - so badly that it was abandoned. On 24 May, the war freighter K.T.22 was sunk at Reggio. (6) On 25 May, U.S. Liberators bombed and sank the Italian torpedo boat Groppo and the minesweeper R.D.55 in Messina. The Fortress attack on Leghorn of 28 May, in addition to the five important transports named above, sank three Italian warships, viz., the two torpedo boats Antares (642 tons) and Bassini (670 tons) and the Italian corvette F.R.52(7) (630 tons). (8)

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- (1) Ex-French Chef Mecanicien Armand Blanc.
 - (2) Ex-Norwegian.
 - (3) Ex-Montesquieu - Fr.
 - (4) Enemy shipping losses in the Mediterranean (A.H.B.)
 - (5) In addition, 12 ships (2,481 G.R.T.) surrendered or were captured. 6 ships (7,777) were scuttled, 3 ships (72 G.R.T.) were sunk by other causes and 9 ships plus 8 very small craft (of 1,117 G.R.T.) by unknown causes.
 - (6) Referred to above.
 - (7) Ex-French aviso Commandant Rivière.
 - (8) Tonnages given against enemy warships denote standard displacement.

One hundred and three U.S. Fortresses attacked Cagliari harbour on 13 May, but their only worthwhile kill was the Italian submarine Mocenigo (941 tons).

Comparative review of enemy warship losses in May 1943

The Allies had sunk 41 warships of 27,975 tons in April: the May sinkings fell to one-half of this figure - 14,308 tons - although this represented 52 ships as against 41 in April. By far the largest tonnage had been sunk by aircraft, viz 48 warships of 11,031 tons total, as against 4 ships of 3,277 tons total sunk by surface craft and submarines. There had been a progressive tendency, as the air strength grew, for the sinkings by air to approach and frequently surpass in volume the sinkings by the Navy.

Growing effectiveness of U.S. daylight bomber attacks on ports

Another important development was that the tonnage sunk by the U.S. heavy day bombers in port was eating rapidly into the enemy potential of both merchant and naval shipping. Had there been a comparable force of night bombers, it is certain that the cumulative effect of the weight and tempo of round-the-clock port bombing would have induced a state of crisis in shipping affairs much earlier. But the British policy did not stretch to the expansion of Wellington, Liberator and Halifax production which would have brought this desirable consummation within reach. Nor did the priority given by the Americans to oil targets allow of a greater weight of bombs for use against shipping targets and dock installations by the day heavy bombers.

The totals of merchant shipping sunk by aircraft in April and May provided striking proof of the destructive effects of the U.S. day air attacks. In April, U.S. bombers sank 45 ships of a total tonnage of 52,527 G.R.T. against the R.A.F. record of 4 ships of a total tonnage of 4,950 G.R.T. In May, U.S. bombers sank 82 ships of a total tonnage of 79,782 G.R.T. against the R.A.F. record of 8 ships of a total tonnage of 12,102 G.R.T.

The figures for enemy naval losses indicate a parallel tendency. In April, U.S. bombers sank 27 ships of a total tonnage of 18,744 against the R.A.F. record of 1 ship of 1,620 tons. In May, U.S. bombers sank 41 ships of a total tonnage of 8,746, against the R.A.F. record of 1 ship of 120 tons and the Fleet Air Arm's 6 ships of a total of 2,165 tons.

This ability of the U.S. heavy and medium bombers to impose loss and damage in large allotments persisted throughout the war, but it is to be noted here that the disproportion between the national effort was levelled up to a great extent after the Italian surrender, when the maritime war changed from one of big ships and big ports to one of increasingly smaller ships and smaller ports.

Nor were the losses confined to active supply shipping alone: aircraft took a mounting toll of small harbour craft such as tugs, pilot boats, ferries, salvage craft, floating cranes and self-propelled landing stages and of quayside and dockyard installations, often rendering a port temporarily

unservicable and so incapable of handling the undamaged shipping awaiting loading or unloading, or damaged shipping awaiting repair, overhaul, or shipping fitting-out or in construction.

Merchant shipping sinkings at sea - June 1943(1)

Urgent repairs continued to tie up Axis shipping during the first three weeks of June, but on 24th, 25th and 27th three valuable Italian cargo vessels were sunk by aircraft, viz. the Cor Jesu (3,993 G.R.T.) on 24 June in the Aranci Gulf by U.S. Mitchells, the Iris (5,175 G.R.T.) on 25 June by Fortresses off Messina harbour and the Quirinale (3,779 G.R.T.) on 27 June by Beaufighters north of Levkas (Western Greece). Two small sailing vessels were sunk off north-western Sicily.

Warship sinkings at sea - June 1943

There was little movement of enemy warships across the open waters in June. On 23 June, some activity was apparent, for three R.A.F. Beaufighters torpedoed and sunk the U.J.2212(2) in the position 37° 57' N. 13° 54' E. on its way to Palermo from Naples, so reducing the strength of the 22nd Anti-submarine Flotilla by one more of its converted craft and making it so much the easier for Allied submarines to operate in the vital pre-'Husky' period. Surface craft sank an Italian torpedo boat, and two MZ boats. The submarine Safari sank K.T.12.

Merchant shipping sinkings in port - June 1943

The main attacks on ports during June were concentrated on Sardinian ports, Leghorn and Messina. The Sardinian attacks were the most profitable. On 1 June, eighteen U.S. Marauders attacked the Sardinian port of Porto Ponte Romano and reported three near misses on a large merchant vessel. On the same day, and probably as the result of the same attack, Italian sources(3) reported the sinking of the Italian s.s. Sfinge (4,496 G.R.T.). On 18 June, eighty-seven U.S. Marauders attacked Olbia and reported considerable damage to shipping. A photograph taken the same day showed a merchant vessel of some 9,000 tons severely damaged and partly submerged. This was the Conegliano(4) (7,997 G.R.T.) It was salvaged later, but was useless for operations and sank on 5 March 1949 off the Corsican coast while in tow to the breakers' yard.(5).

On 28 June, Leghorn was attacked by ninety-seven U.S. Fortresses who sank the Italian motor vessel Campania (5,247 G.R.T.) a fishing vessel and a motor pilot vessel. On 25 June, the same attack which led to the loss of the Iris, accounted for two sailing and one auxiliary vessels.(6)

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- (1) Allied submarines accounted for 15 ships totalling 45,353 G.R.T. in June, including the 9,395 tons German tanker Henri Desprez: surface craft sank no merchant shipping.
 - (2) 1,096 tons: ex-French Pescagel.
 - (3) P.I./4203. (F.D.S./Admly.).
 - (4) Ex-French Min.
 - (5) Lloyds.
 - (6) Enemy shipping losses in the Mediterranean (A.H.B.).

Summarising the June air operations against ports, the losses inflicted by aircraft, although low in comparison with the high scale of effort exerted, made an appreciable gap in the strength of the larger tonnage cargo vessels, so bringing nearer the need for a more massive and diffused expenditure of manpower engaged in the traffic at all stages.

Warship sinkings in port - June 1943

On 11 June, an air attack on Lampedusa harbour was carried out by twenty-four U.S. Marauders. The only serious damage recorded was the sinking of two Italian Mas-boats(1) lying there after escorting the submarine Atropo. The next day, just before the capture of the island, the Italian naval tug R.20(2) was sunk by U.S. aircraft. A more serious loss was occasioned to the Italians when, on 20 June, Fleet Air Arm Albacores hit and sank the Italian naval tanker Velino.(3)

Cagliari had been to all intents and purposes destroyed in the air attack of 13 May. The air effort was diverted to Trapani, Palermo and Leghorn. On 28 June, the Italian cruiser Bari(4) was sunk in the attack on Leghorn by one hundred and nine Fortresses. The photographs failed to confirm this fact, as the harbour was obscured by smoke. This cruiser had once formed part of the Special Naval Force raised for the attack on Malta and had escorted convoys of troops sent to reinforce Corsica in November 1942.

On the night of 29/30 June, sixty-four R.A.F. Wellingtons bombed Messina harbour and sank another of the valued K.T. freighters - K.T.11. Photographs taken the next afternoon suggested that she had been loaded with ammunition.

Merchant shipping sinkings at sea - July 1943

The keynote of Axis merchant shipping activities in July was supply and reinforcement. While the larger units plied along the open routes, a growing fleet of small regular and auxiliary craft, both German and Italian, sailed, usually at night, across the short space of water between Sicily and the mainland and round the coasts of Sicily. The Allied air forces, surface craft and submarines, realising the increase in valuable targets at sea, increased their patrols and attacks with very satisfactory results.

In the first half of the month, Allied submarines claimed all the successes, sinking four big transports(5) but on 14 and 15 July aircraft began to find ships. On 14 July, eight R.A.F. Beaufighters attacked a group of three vessels which they described as tankers, off N.E. Sardinia, and sank one of them - the German Capitaine le Diabat (3,107 G.R.T.) with a torpedo in the position 31° 45' N.,

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- (1) Mas. 539 and 564.
 - (2) 70 tons.
 - (3) 1,339 tons.
 - (4) 3,248 tons.
 - (5) The Sabbia, Tripoli, Valfiorita (all Italian) and the Tell (German ex-French). During July, Allied submarines sank no less than 24 ships totalling 44,937 tons. Allied surface craft sank no merchant shipping.

8° 35' E. for the loss of one aircraft. On the same day, eight other Beaufighters sank the ex-French San Francisco (6,013 G.R.T.) in convoy off N.W. Corsica with two torpedoes in the position 43° 23' N., 8° 31' E. On 14/15 July, a formation of eight Wellingtons and one Marauder located a convoy of one merchant vessel escorted by three destroyers. They sank the merchant vessel - the Italian Aquitania (4,971 G.R.T.) and left the destroyer burning⁽¹⁾. On the night of 22/23 July, four R.A.F. Wellingtons torpedoed and sank the ex-French Mont Agel (4,572 G.R.T.) while she was proceeding in escort (from Montegrosso), 3 miles north of Elba.

Two small successes followed on 24 and 28/29 July. On 24 July, R.A.F. Beaufighters torpedoed and sank the Italian s.s. Santa Lucia (451 G.R.T.) off Ventotene Island and on the night 28/29 July, three Wellingtons bombed and partially sank the Italian s.s. Elvira Vaselli off Alimnia Island near Rhodes.

On 29 July, a formation of four torpedo Beaufighters and four anti-flak cannon Beaufighters attacked an important motor vessel - the Italian Alfieri - under escort by a destroyer and two m.t.b.'s, and hit her in the position of 40° 5' N., 14° 42' E. She was so gravely damaged that, after drifting, she sank 5 miles north of Licosa Point (south of the Gulf of Salerno). Although hit by cannon bursts from the anti-flak aircraft, the destroyer and one m.t.b. escaped.

The only small craft sunk at sea during July by aircraft was the Domenico Padre, a fishing vessel (38 G.R.T.) which was destroyed by a small mixed formation of R.A.F. Bostons and U.S. Mitchells off Cape Orlando. Most of the Axis small craft sunk were in port, and sunk during day raids, proof that they sailed usually at night. Enough has already been quoted to show to what extent Axis maritime policy was shaped by the growing Allied air ascendancy. The faster the big transports were sunk, the more precious became the small steamships and auxiliaries and the greater the navigational caution exercised in their preservation. The big transports and their escorts accepted the grave risks, for time was running out and every ton of material and every man counted.

Warship sinkings at sea - July 1943

Allied aircraft sank ten naval craft during July, all after the landings in Sicily and all in Sicilian waters: on 20 July, two German naval ferry barges⁽²⁾ were sunk off Ionia (Catania area): on 22 July, the Italian naval tug Terracina⁽³⁾ was sunk near Barcellone (N. Sicily) en route from Trapani to Messina; on 23 July, four more German naval ferry barges⁽⁴⁾ were caught about 50 miles roughly east of Palermo near Cape Stefano by unspecified U.S. aircraft and sunk. They were evidently part of a small flotilla under way, as the U.S. aircrew reported ten destroyed.

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- (1) The Italian Admiralty report in Navi Perdute does not confirm its loss.
 - (2) M.F.P. 466 and 147 (120 tons), by R.A.F. aircraft.
 - (3) 173 tons, by U.S. Mustang A.36s probably.
 - (4) M.F.P. 149, 432, 460 and 546.

On 29 July, R.186, one of the few German motor mine-sweepers co-operating with the Italian naval forces, was hit, either by U.S. Warhawks or Mustangs, off Messina and sunk: and on 31 July, the Italian motor landing craft MZ.734 (motozatter) was sunk off Giardini, en route for Bagnara in the Toe of Italy from Ionia (Sicily), by two U.S. Warhawks. More was to be seen and heard of these 120 ton Italian landing craft during the evacuation in August. At the end of July, they were gathering in the obscure ports of Calabria.

Apart from the outstanding successes against enemy submarines in July, the Allied naval forces' only sinkings at sea were the Durazzo, (1) (a small Italian minelayer), and the F.R.70, (2) (a small Italian minesweeper). They captured five naval tugs at Augusta and one supply transport at Syracuse.

Only four small craft were scuttled. The Axis decision was to fight it through with their limited, shrinking resources and, if it became necessary, to evacuate Sicily with as much material and as many men as possible.

Merchant shipping sinkings in port - July 1943

During July, Allied aircraft destroyed in port nineteen merchant ships, sailing and auxiliary craft of various kinds, totalling to 11,916 tons. All of these were sunk after the initial landings. It was hoped that heavy attacks on Messina would neutralise it as a ferry terminus. One of the attacks in force made to this end was that of 14 July, when one hundred and seventy-nine U.S. bombers(3) attacked the harbour and railway station at Messina, with the result that the German s.s. Patria's(4) (1,341 G.R.T.) cargo of ammunition exploded and she sank; s.s. Venezia (4,207 G.R.T.) was heavily damaged and never used again; the fishing vessel Francesco (86 G.R.T.) and the motor vessel San Rocco (321 G.R.T.) were sunk. The motor vessel Puntamica (399 G.R.T.) was sunk at Termini Imerese on the night 15/16 by a small force of R.A.F. Baltimores and Bostons.

On 20 July, aircraft sweeping the Ionia area, near Messina, accounted for twelve small craft in Ionia. On 26 July, U.S. Mustangs sank the new motor vessel Niccolo Tommaseo (4,572 G.R.T.) in Catania during a round visit by sixty of these aircraft to Messina, St. Agatha and Catania.

Warship sinkings in port - July 1943

On 6 July, U.S. Mustangs scored a direct hit on S.59, a German S-boat(5) (60 tons) in Port Empedocle. Thereafter

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- (1) 530 tons.
 - (2) 120 tons.
 - (3) 96 Portresses, 36 Mitchells and 47 Marauders.
 - (4) Ex-French Christine, ex-Norwegian Patria.
 - (5) These Schnell Boats were of various tonnages, but 60 tons displacement has been given by the Foreign Documents Section of the Admiralty Historical Section as a sound average figure for the Mediterranean. It differs from the tonnage types used in the Atlantic and Home Waters.

the S-boats did not use the port again. On 10 July, the Italian gunboat Oriole(1) (330 tons) attempted to escape from Augusta, but was forced to return to port. She was damaged by aircraft(2) and blown up by her crew to prevent capture. U.S. aircraft destroyed an Italian motor torpedo boat - MS.62 - on some date between 12 and 31 July in Milazzo, two motor boats - Mas.535 and 548 - Terminia Imerese on 15 July and hit the Italian corvette Cigogna (565 tons) in the Paradiso-Ganzirri area, near Messina, on 24 July. The Italians blew up what was left of her.

Merchant shipping sinkings at Sea - August 1943(3)
(exclusive of evacuation traffic)(4)

On 7 August, the Italian salvage tug Tenax (215 G.R.T.) was sunk by aircraft.(5) The same day, a fishing vessel - the Delfino (54 G.R.T.) was sunk, very probably by the same formation. On 11 August, the auxiliary sailing vessel Vincenzo (243 G.R.T.) was sunk by a formation of U.S. Warhawks and R.A.F. Kittyhawks 6 miles off Lipari. On 18 August, a small fishing vessel - the Antonietta (15 G.R.T.) was sunk by aircraft(6) near Bagnara in the Toe. The same day, the fishing vessel Beatrice (102 G.R.T.) was sunk off Punta Malfatano (Sardinia). It will be appreciated that in August the Air Forces were primarily concerned with supporting the land operations in Sicily, neutralising strategic targets in Italy, covering convoys and patrolling for submarines. The sinking of the Carlo Zeno (1,446 G.R.T.) is still problematical. Lloyd's records give it as sunk by surface craft on 15 August at Vibo Valentia, but this is improbable. The Italian Admiralty give it as sunk on 14 August by aircraft.(7) It was probably sunk by a force of forty-eight U.S. Mitchells operating in the area.

Warship sinkings at sea - August 1943 (exclusive of evacuation traffic)

On 13 August, the German R.6 was sunk by Beaufighters 9 miles N.W. of Civitecchia. On 19 August, the German oil barge Falke (200 tons) was sunk by four Beaufighters off Punta San Stefano. On 24 August, the German minesweeper S.G.14 (647 tons) (ex-French Matelot Leblanc) was sunk by U.S. Mustangs south of Sapri.

The Navies' effort during August was especially fruitful and included a naval tug - the Tenace - sunk off Crotona during a bombardment, the Italian naval tanker Gioberti (1,568 tons) sunk off Spezia, the Italian naval transport

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- (1) Ex-Tabud, the Yugoslav minelayer.
 - (2) Probably by U.S. Mustangs.
 - (3) Enemy shipping losses in the Mediterranean (A.H.B.)
 - (4) For sinkings of evacuation craft see Part C. of this chapter.
 - (5) Probably the 4 Mitchells and 24 Lightnings who fired at escort vessels north of Cape Vaticano.
 - (6) Impossible to say whether R.A.F. or U.S.A.A.F.
 - (7) Sinkings by the Navies included 4 large merchant ships in the Bari - Brindisi area (all by submarines) and one special prize - the Nantaise (1,798 tons) - a French vessel flying the German flag which was sunk by H.M. Submarine Rorqual off the Dardanelles as it was sailing through from Rumania to the Piraeus with a cargo of petrol and timber.

Asmara (6,850 tons) sunk by submarine off Pedagne Lighthouse (Brindisi) the Italian torpedo boat Lince (679 tons) sunk by submarine off the Punta Alice lighthouse in the Gulf of Taranto, the German patrol vessel S.G.10 (2,526 tons) 26 miles S.E. of Bastia and, on the last day of the month, the Italian naval tanker Flegetonte (1,162 tons) sunk 2 miles N. of Bari. An Italian corvette - the Gazzella (565 tons) was sunk by a mine N. of Asinara while returning to La Maddalena with the Minerva after an anti-submarine patrol.

Merchant shipping sinkings in port - August 1943
(exclusive of evacuation traffic)

Heavy losses were inflicted in the air attacks of the night 2/3 and the day 4 August on Naples. On the night of 2/3 August, R.A.F. Wellingtons sank the Italian transport Bari(1) (4,706 G.R.T.). In the Fortress raid of 4 August, the Italian s.s. Lombardia (20,006 G.R.T.), the German s.s. Catania(2) (6,176 G.R.T.) and the Italian s.s. Sant' Agata (4,299 G.R.T.) were all lost beyond repair. On 22 August, the Italian s.s. Ginetta was sunk by aircraft(3) at Preveza (W. Greece) and was not salvaged until after the war. On 28 August, U.S. Liberators and R.A.F. Wellingtons sank four small vessels in Taranto.

The total sinkings by aircraft during August (including the evacuation craft), totalled to seven ships at sea of 1,362 G.R.T. and twenty-one ships in port totalling to 36,967 G.R.T. When the naval score of nine ships totalling 13,889 G.R.T., the Piemonte (15,209 G.R.T.) scuttled in Messina, the ship of 1,416 G.R.T. sunk by mine and the nine small craft sunk by unknown or other causes are added to these figures and the July totals, it will be seen that the summer's effort by aircraft, surface forces and submarines had materially reduced the enemy's carrying capacity.

Warship sinkings in port - August 1943 (exclusive of evacuation traffic)

In the attack of 4 August on Naples, the Italian torpedo boat Pallade (679 tons) was sunk in addition to the transports named above. On a date not recorded, between 1 and 15 August, the Italian naval tanker Avisio (265 tons) was sunk in one of the air attacks on Messina before the port fell.

On 8 August, Genoa was visited by R.A.F. bombers from the United Kingdom. Two bombs, with a very near miss, sank the Italian destroyer Freccia (1,206 tons). Damage to evacuation craft in Calabrian ports and the Messina area beaches is related in Part C of this chapter. The total naval shipping sunk by aircraft during August (including submarines) was sixteen ships (2,767 tons) at sea and twenty-two (4,731 tons) in port. Sinkings by the Navy (including submarines) were eleven ships (15,070 tons).

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- (1) Ex-French Equateur, ex-Greek Oasis.
 - (2) Ex-French St. Martin ex Adolfo Chandri (? Greek).
 - (3) Probably R.A.F. Beaufighters.

Merchant shipping and warship sinkings at sea and in port
1 - 8 September 1943

In view of the progress of the negotiations with the Italians for an armistice and the intensive preparatory air operations against the Italian mainland and German installations before the landings in September, only one sinking that month to the credit of the air forces is recorded before D Day Operation 'Avalanche'. This was the Amabile Angelina, an Italian sailing vessel gravely damaged by aircraft on the day of the landing in Calabria - 3 September. There were no air attacks or naval attacks on enemy warships during this period. The main pre-occupation at A.F.H.Q. was to bring the Italian Fleet to anchor in an Allied port.

B

AIR SUPPORT OF THE ASSAULTS ON PANTELLERIA,
LAMPEDUSA AND SICILY

The assault on Pantelleria - Operation 'Corkscrew' (1)

Decision to assault the island

It had been hoped that the air attacks which opened on 18 May, the naval bombardments which opened on 13 May and the air and naval blockade of the island immediately after the fall of Tunisia would lead to the surrender of Pantelleria. On 8 June, after a heavy combined naval bombardment and air bombing, three aircraft(2) dropped leaflets demanding immediate cessation of hostilities and unconditional surrender of all military personnel. Immediately after, bombers showered the island with leaflets pointing out the futility of further resistance. Six hours passed, but the prescribed signs of surrender were not displayed. The air assault was renewed. A second call to surrender was made on 10 June, but it likewise met with no response.

The outline plans for the assault and capture of Pantelleria were now proceeded with. The Allies needed the airfield there for the invasion of Sicily, to provide more fighter cover than could be given from Malta and Gozo.

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- (1) For full records of air force operations prior to the assault the best sources are the American 'The Army Air Forces in World War II, Vol. II, the R.A.F. narrative on 'The Sicilian Campaign' (first draft) (A.H.B.) N.A.T.A.F. and No. 242 Group O.R.Bs. For details of the naval bombardments refer to 'The War at Sea' Vol. IV (A.H.S.) and the History of U.S. Naval Operations in World War II, Vol. II. The best Italian versions of the proceedings are those in the histories of Bernotti and Bragadin and the Italian A.A. bulletins held by A.H.B.6.
 - (2) Of the U.S. 33rd Fighter Group.

The scope of Allied air preparations(1)

From 8 May to 11 June, the Northwest African Air Forces flew 5,285 sorties against Pantelleria and dropped 6,200 tons of bombs, for the loss of only four aircraft destroyed, ten missing and sixteen damaged.(2) U.S.A.A.F. units flew 83 per cent of the sorties and dropped 80 per cent of the bombs.

The Strategic(3) and Tactical(4) Air Forces were responsible for bombing operations, the Coastal Air Force and Air H.Q. Malta for air cover of the assault convoys and naval forces respectively. It was an awkward juncture for the Coastal Air Force, whose territorial expansion was at its height, but No. 242 Group from its bases in Tunisia was found competent to cover the two assault convoys.

Conditions on Pantelleria were unusually favourable for the use of air power and the Allies took full advantage of them. The docks at Porto di Pantelleria was badly damaged and the town was in ruins. Roads were cut or obstructed by debris and at some points almost obliterated. The communication system was paralysed; no telephone line was intact. The electric power plant was destroyed and its lines broken in many places. The water mains were broken, although despite the Italian claim that lack of water had forced the surrender - there was a sufficient supply to meet all needs.(5) But the air threat prevented the distribution of water and rations. The airfield was heavily cratered, but the 'underground' hangar unharmed. The anti-aircraft defences were outfought and the enemy's will to resist materially impaired by the programme of air attacks. Statements by prisoners-of-war indicate that battery crews deserted their posts and that both soldiers and civilians took cover or fled to safety in the central and southern parts of the island. Only two hundred of the garrison were killed. The Germans withdrew all but seventy-eight of their six hundred strong garrison at an early date. They had clearly no hope of saving the island.

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- (1) The A.A.F. in World War II, Vol. II: N.A.A.F. O.R.B. appendices.
 - (2) 23rd S.C.O.R.U. recorded 5,255 sorties and 6,313 tons of bombs. (III/A.36/IM/IBB A.H.B.).
 - (3) U.S. 2nd, 97th, 99th, 301st Bombardment Group (Fortresses); U.S. 17th, 319th, 320th Bombardment Groups (Marauders); U.S. 310th, 321st Bombardment Groups (Mitchells); U.S. 1st, 14th, 82nd Fighter Groups (Lightnings); U.S. 325th Fighter Group (Warhawks); R.A.F. No. 205 Group (Wellingtons).
 - (4) U.S. 12th and 340th Bombardment Group (Mitchells); U.S. 47th Bombardment Group (Boston A-20s); U.S. 27th Fighter Bomber Group (Mustang A-36s); U.S. 33rd, 57th, 79th Fighter Groups (Warhawks); U.S. 31st Group (Spitfires); R.A.F. No.326 Wing (Bostons); R.A.F. No.232 Wing (Baltimores); S.A.A.F. No.3 Wing (Bostons and Baltimores); two R.A.F. tactical recce squadrons The 12th and 340th Bombardment Groups and the 57th and 79th Fighter Groups were units of the Ninth Air Force attached to N.A.A.F.; all the rest of the U.S. units belonged to the Twelfth Air Force.
 - (5) A.A.F. in World War II, Vol. II.

On seven occasions between 13 May and 11 June, the Allied air assault was supplemented by naval bombardment of Pantelleria's harbour and gun defences(1) and their effects must be taken into account when assessing the ultimate cause of surrender.

Air cover for the convoys and patrols over shipping

Three convoys were involved in the assault on Pantelleria on 11 June 43, two fast and one slow. The fast convoy 'A' left Sfax at 1300 hours on 10 June. The troops(2) were detailed for the first shore-to-shore assault in the Mediterranean of the war. The fast convoy 'B', carrying troops for a ship-to-shore assault, left Sousse at 0130 hours on 11 June. These fast convoys, protected by N.A.C.A.F. fighters and surface craft, overtook the slow convoy 'C' which had left Sousse at 1930 hours on 10 June. A covering and bombing force, escorted by fighters, left Malta at 2130 hours on 10 June and joined combined convoy about daybreak on 11 June.

Air cover for the four convoys on 11 June involved one hundred and eighty sorties. Harbour and airfield protection involved eighty-eight sorties as well as six Spitfires scrambled to augment the airfield defences. Three Walrus air/sea rescue searches were carried out.(3)

On the night 11/12 June, sixteen Beaufighters operated in the operational area and patrolled over shipping in harbour. Four Albacores escorted a convoy; one did not return. On 12 June, from dawn to dusk, intensive air operations continued. Five convoys were escorted safely entailing seventy-six sorties. Another one hundred and seventy-two sorties were expended in dawn to dusk patrols over Pantelleria, shipping concentrations in the vicinity and Bizerta and Sousse harbours.(4)

Enemy air opposition

No serious enemy air opposition was put up by the island until the increase in Allied air attacks on 6 June. On that day, thirty-four Me.109s opposed our bomber forces and of these six were destroyed. On 7 June, twenty-three enemy aircraft were encountered, four of which were destroyed. On 8 June, eight out of twenty-four and one probable were destroyed. On 9 June, one out of twenty-two was destroyed. One Spitfire was lost. On the evening of 9 June, eight Mustangs encountered fifteen Me.109s escorting sixteen Ju.52 transport aircraft and damaged one Me.109. On 11 June, fighter opposition was intensified and one hundred and sixteen interceptors were plotted.(5)

On 11 June, formations of F.W.190 fighter bombers, with Me.109s as top cover, made several attacks on shipping. One of these attacks caused slight damage to the headquarters ship Largs at 1248 hours, but no other damage or

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- (1) 13 and 31 May, 1, 3, 5, 8 and 11 June (The War at Sea - Admiralty Historical Section).
 - (2) 1st Br. Infantry Div.
 - (4) No.242 Group O.R.Bs.
 - (4) Ibid.
 - (5) Report on 'Husky' by 23rd S.C.O.R.U., (N.A.A.F. O.R.B. Appx.).

losses to shipping were occasioned. No. 4 Squadron destroyed one F.W.190 and damaged another and one Me.109. No. 93 Squadron destroyed two F.W.190s and probably destroyed two more.

On 12 June, F.W.190s covered by Me.109s again bombed shipping without success and for the loss to No. 4 Squadron of two F.W.190s and one Me.109. On 13 June, two engagements with F.W.190s and Me.109s took place, in which two Airacobras of 346th Squadron were lost and one F.W.190 destroyed. Every day there were scrambles, some of which made no interceptions. At night Beaufighters patrolled, sixteen on 11/12th, eleven on 12/13th and seven on 13/14th and a few thereafter.

The surrender(1)

At 1900 hours on 10 June, the Italian Commander sent a signal to Supermarina reporting the mortal injury inflicted on the defences and communications by the steadily increasing weight of the Allied bombing. Many units had been without bread and water for two days and the civilians were begging for victuals, water and refuge. It was impossible to continue resisting. The signal was deciphered at 0500 hours on 11 June. At 0900 hours, Mussolini authorized Supermarina to cease resistance. Many batteries could no longer be maintained with supplies. The means to resist had gone as well as the will. At 0930 hours, the Commander gave orders to the airport and semaphore to expose signals announcing the cessation of hostilities at 1100 hours. He signalled to the Allied Admiral Commanding at Malta his surrender owing to lack of water. There was mist in the harbour and the Allied ships could not be seen from shore.

At 1032 hours, assault craft began their approach to the port. At 1100 hours, the cruisers of the covering force began to bombard selected targets, followed by the destroyers and a gunboat. At 1125 hours, the Laforey reported that a white flag was flying from the semaphore tower, but that some batteries were still firing occasionally.(2) A white cross was reported to be displayed on the airfield. At 1135 hours, a heavy air attack began, which lasted until 1145 hours. There was no time to prevent it. At 1155 hours, troops began to land; the enemy in their vicinity began surrendering. At about 1238 hours, the Italian signal was received which had been intercepted from Malta, signed by Admiral Gino Pavese.

Further bombing missions were promptly cancelled, twelve fighter bombers and twelve medium bombers were held in readiness on call, and fighter cover was maintained over the island all day. Soon after 1330 hours, General Clutterbuck and his staff went ashore. At 1735 hours, the formal surrender was signed in the 'underground' hangar.

At the end of June, the 33rd U.S. Fighter Group of Warhawks moved to Pantelleria and covered the two western assaults on Sicily.

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- (1) Bernotti: Bragadin: The War at Sea (A.H.S.): N.A.A.F. O.R.Bs: A.A.F. in World War II.
 - (2) The order to surrender had not reached them (Bernotti).

The capture of the Pelagie Islands(1)The assault on Lampedusa

The Coastal Air Force had a particular interest in Lampedusa. It had a small airfield and a radar station, which would be very useful in the provision of fighter cover for convoys for Sicily and, later, Italy.

Soon after noon on 11 June, twenty-six Marauders were airborne towards Lampedusa and opened the air assault. Throughout the afternoon, Tactical Air Force Mitchells, Bostons and Mustangs bombed the port and town of Lampedusa and adjacent gun positions. Wellingtons continued the offensive during the night. The enemy flak reaction was fairly accurate, but in no great volume. Long range enemy fighters attacked, losing fourteen aircraft against the destruction of three Allied fighters. A naval task force from Pantelleria, carrying one company of the Coldstream Guards, preceded the night air attack with a bombardment of installations.

On the morning of 12 June, unfavourable weather brought the naval bombardment to a halt at 0630 hours, but aircraft were able to operate. Medium and fighter bombers swept in relays across the island, registering some four hundred and fifty sorties by the late afternoon. They severely damaged the island's main installations and, with about two hundred and seventy tons of bombs, neutralised one-third of its batteries.

An R.A.F. sergeant pilot, suffering from engine trouble, landed on the airfield and found the garrison ready to surrender. White surrender flags were displayed at 1900 hours. Thereafter, negotiations for surrender were officially initiated and the terms signed on the morning of 13 June 1943.

Linosa and Lampione were promptly occupied by British naval units, without previous bombing or shelling.

Lampedusa becomes a fighter sector

Lampedusa was allotted to Northwest African Coastal Air Force for use as a fighter sector. A small wing began to form at Sousse. No. 253 Squadron, flying Hurricanes, assembled on 16 June at Monastir ready to transfer to Lampedusa as the core of the wing, and with it went three A.M.E.S. and two squadrons of the R.A.F. Regiment, one of them a field and the other an anti-aircraft squadron.

Air cover for the 'Husky' assault convoys in the Eastern BasinConvoy cover by Eastern Mediterranean Air Defences

Recapitulating the terms of division of responsibility for the defence of the 'Husky' convoys, Eastern Mediterranean Air Defences were responsible for the short range fighter

(1) A.A.F. in World War II, Vol. II: N.A.A.F. and No. 242 Group O.R.Bs: Report by 23rd S.C.O.R.U. in N.A.A.F. O.R.Bs: Bernotti.

defence of all convoys, whether coming from the East or West, while within 40 miles of the shore, as far West as a line joining the Tunisian frontier to Malta. West of this line, N.W. African Coastal Air Force were responsible. As the convoys reached a line 50 miles West of South of Malta, they came under the close escort of Malta's fighters. No. 201 Group provided long range escort outside the 40 statute mile limit as well as anti-submarine patrols. A rider was that No. 210 Group of the Eastern Mediterranean Air Defences was responsible for escort of K.M.S.18 outside the 40-mile limit on one evening (Y plus 4 day) and handed it over direct to the Coastal Air Force between the Sfax fighter sector and No. 2 sector at Tripoli on the line from the Tunisian-Libyan frontier to Malta. This convoy, K.M.S.18, was off Tripoli on the evening of Y plus 4 Day.

Eastern Air Defences protected all the preliminary convoys between Egyptian and Levantine ports during the loading phase. The main convoys assembled in Alexandria and Port Said. The Suez Canal was protected from mining and the two assembly ports protected from reconnaissance and attack. The convoys sailed in the following order:-
 M.W.S.36(1) on Y Day: M.W.F.36(2) on Y plus 2 Day:
 M.W.S.37(3) on Y plus 3 Day, (4) and M.W.F.37(5) on Y plus 5 Day. All four convoys were heavily escorted by destroyers and corvettes and the first two convoys each included an Escorting Ship with long range radar and full fighter direction facilities. Middle East convoys followed the inshore routes, except in the Gulf of Sirte.(6)

The first slow assault convoy sailed from Alexandria on the afternoon of 3 July.(7) The first fast assault convoy(8) sailed from Port Said on the morning of 4 July. Both convoys, closely escorted by fighter defence and anti-submarine patrols, proceeded West without incident apart from the loss of one H.T. ship - the Shah Jehan - by submarine action off Benghazi on 6 July, and the spotting of 'Carbon' by a Ju.86 at 1250 hours on 7 July off Tobruk.

'Carbon', having sailed 12 hours ahead of schedule, was re-routed inshore off the Gulf of Sirte, which necessitated the location by No. 210 Group of a single-engined fighter squadron at Tamet West to operate, as had been provided for, in support of No. 201 Group's long range escort patrols. Both convoys finally passed out of the Eastern Mediterranean Air Defences area of responsibility, south of Malta, on the morning of 9 July, the fast assault convoy 'Carbon' having caught up the slow convoy 'Cobalt'.

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- (1) Speed 8 knots. 30 M.T. ships.
 - (2) Speed 12 knots. 12 troopships.
 - (3) Speed 7 knots. 30 M.T. ships.
 - (4) Y Day was 3 July 1943.
 - (5) Speed $10\frac{1}{2}$ knots. 12 troopships.
 - (6) Refer to Figure 2 for convoy routes to Sicily.
 - (7) 12 hours before the scheduled time, on account of congestion. Codename 'Cobalt'.
 - (8) Codename 'Carbon'.

The second slow 'Husky' follow-up convoy(1) sailed from Alexandria on 7 July; the second fast follow-up convoy(2) left the same port on 9 July. Both convoys proceeded West under air cover without incident apart from a threat of E-boat action from Crete. The slow convoy was re-routed well inshore of the Gulf of Sirte. This necessitated the provision of short range fighter patrols to support No. 201 Group. These patrols were provided by No. 212 Group from Marble Arch and No. 210 Group from Tamet West. The two convoys passed out of the area of responsibility on the morning of 12 July, South of Malta.

Assault convoys from the Middle East were to converge South of Malta with convoys of comparable strength mounted from the United Kingdom; and follow-up convoys were to converge there three days later. Although it had been originally planned for No. 210 Group to escort these U.K.-mounted convoys while off the Tripolitanian coast, they were re-routed at the last moment and No. 210 Group's additional responsibilities were reduced to the escort of small convoys of L.S.T.'s from Tripoli.

During the ten days of intensive escort patrols between 3 and 12 July, the Eastern Mediterranean Air Defence provided close on one thousand aircraft sorties for convoy defence, totalling approximately two thousand hours of operational flight. There were no interceptions or engagements of enemy aircraft; only one pilot was lost. There was not a single case of any ships being shadowed or attacked by enemy aircraft.

On 6 July, the 1st Division Force 'H', including the carrier Indomitable, sailed from Algiers to rendezvous with the 2nd Division which sailed on 7 July from Alexandria. The 2nd Division included the carrier Formidable. Both the carriers provided anti-submarine air patrols, but in both cases a squadron of shore-based aircraft was allotted for air defence of the Force while within 40 miles of the North African coast. Some difficulties were encountered in identifying unnotified arrivals of aircraft(3) from the Formidable. The fighter defence of convoys of empty shipping returning from Operation 'Husky' and of unscheduled sailings of minor convoys and naval units were provided as and when necessity arose and did not constitute any particular difficulty.(4)

The assembly of forces by No. 201 (Naval Co-operation) Group

No. 201 Group was to ensure the safe conduct of all convoys coming within its area of responsibility. This was to the east of a line running from the Tunisian-Tripolitanian border to a point 35° 17' N, 13° 50' E, outside 40 statute miles of the African coast and as far as 50 nautical miles off Valetta (Malta).

-
- (1) Codename 'Budget'.
 - (5) Codename 'Bowery'.
 - (3) All of them were fitted with Mark III I.F.F.
 - (4) Air H.Q., E. Med. Air Staff O.R.B. appendices.

The size and importance of the convoys, comprising transport, escort and major naval units, compelled No. 201 Group to expand and reorganize its forces. No. 272 Squadron of Beaufighters was borrowed from Malta; and the 96th and 97th Pursuit Squadrons of Lightnings, accompanied by the Commanding Officer of their group - the 82nd Pursuit Group - comprising thirty-six aircraft, landed on 8 July at Gardabia West. The Lightning pilots were new to the work; and the problem of finding convoys over 100 miles from shore by single-seater aircraft was regarded with some apprehension. They were thoroughly briefed on 8 July and operated without mistakes the next day. Sixteen pairs of Lightnings were despatched during the day and, although weather conditions were bad, only two failed to find their convoy. The Air Officer Commanding No. 201 Group and members of his Air Staff went on 7 July to Misurata, the hub of the Group's operations.

For the purposes of 'Husky', the total of available aircraft in No. 201 Group was two hundred and eighteen aircraft. The composition and locations of its units are given in the footnote.(1).

An interesting point is the high percentage of aircraft employed on night operations. These comprised the Beauforts of No. 16 (S.A.A.F.), the Wellingtons of No. 38 and its detachment, the Baltimores of Nos. 203 and 454 (R.A.A.F.), the Beaufighters of Nos. 227, 252 and 603 and the Hudsons of No. 459 (R.A.A.F.) Squadrons and these enabled the Group to exert a round-the-clock effort to which it would be hard to find a parallel.(2)

(1) Air forces available for 'Husky' and their location within No. 201 Group.

Squadron	Base for Operation 'Husky'	Approx. No. of aircraft available	Type
No. 13 (Hellenic)	L.G.07	12	Blenheim V
No. 15 (S.A.A.F.)	L.G.91	12	Baltimore
		4+	Blenheim V
No. 16 (S.A.A.F.)	Misurata West	15	Beaufort and Blenheim V
No. 38	Berka III	15	Wellington
No. 69	Berka III	6	Baltimore
No. 203	Berka III	12 +	Baltimore
No. 227	Magrun North	12 +	Beaufighter
96th Pursuit } 97th }	Gardabia West }	36 +	Lightning
No. 252	Magrun North	12 +	Beaufighter
No. 272	Gardabia West	12 +	Beaufighter
No. 454 (R.A.A.F.)	Gambut III	12 +	Baltimore
No. 38 Det.	L.G.91	3 +	Wellington
No. 459 (R.A.A.F.)	Gambut III	12 +	Hudson
No. 603	Misurata West	12 +	Beaufighter
No. 701	Beirut	6	Walrus
No. 815	L.G.8	10 +	Swordfish
No. 1 G.R. Unit	Ismailia	3	D.W.I.
			Wellington
Sea Rescue Flight	Berka III	8	Wellington

(2) No. 201 Group O.R.Bs.

Participation in Operation 'Husky' by No.201 Group(1)

The convoy N.P.3, which sailed from Beirut at 0001 hours on 2 July, was given anti-submarine cover by a Valrus.(2) Force 'H'(3) entered the Group's area from Algiers and was escorted from 1104 hours on 2 July. Both groups reached Alexandria without incident.

The first main convoy, M.W.S.36(4) left Alexandria on 3 July. On 5 July, the C.-in-C. Levant reported a flotilla of E-boats off the South coast of Crete. Three Baltimores(5) were despatched to search for them by day and a Wellington(6) that night. Reconnaissance for the E-boats was maintained daily to protect the passage of the convoys past the Cyrenaican Hump. At 1750 hours on 9 July, a Baltimore(7) observed four E-boats close together and one, possibly two motor launches in the position 35° 12' N, 23° 37' E. Two Beaufighters(8) and a Baltimore(9) were despatched to attack these E-boats early on 10 July, but sighted only a schooner and a larger vessel. One aircraft attacked the large vessel, but was hit by intense flak and crashed into the sea. Three small craft were sighted later in the day by three Baltimores on a search in about the same position; the aircraft were engaged by two Me.109s, one of which they badly damaged.

When the Shah Jehan of convoy M.W.S.36 was sunk by the U-boat on 6 June, a combined air/navy hunt was commenced. This lasted 111 hours, ending at 0600 hours on 11 July, by which time the second follow-up convoy had passed through the danger zone.

Meanwhile, convoy M.W.F.36(10) had left Port Said at 1530 hours on 5 July, while H.M.S. Mauritius(11) and convoy M.W.S.37(12) left Alexandria at 1000 and 1830 hours respectively on 6 July. H.M.S. Warspite, Valiant and Formidable with nine destroyers left Alexandria at 1230 hours on 7 July.

It is probable that M.W.S.36 and M.W.F.36 were both sighted by an enemy aircraft between 1330 and 1400 hours on 7 July, but they both passed out of No. 201 Group's area without incident. There was further evidence of a submarine off the Cyrenaican coast during p.m. on 7 July, but objects sighted resembling a submarine disappeared. H.M.S. Abdiel left Alexandria for Malta at 2140 hours on 8 July and was provided with eight cover sorties.

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- (1) No. 201 Group O.R.Bs.
 - (2) No. 701 Squadron.
 - (3) H.M.S. Valiant, Warspite, Formidable (fleet carrier) and 9 destroyers.
 - (4) 33 m/vs, 4 destroyers, 3 corvettes, 4 escort vessels and monitor Erebus.
 - (5) No. 203 Squadron.
 - (6) No. 30 Squadron.
 - (7) No. 203 Squadron.
 - (8) No. 252 Squadron.
 - (9) No. 203 Squadron.
 - (10) 20 m/vs, H.M.S. Carlisle and escorts. 73 sorties flown.
 - (11) 7 sorties flown.
 - (12) 32 m/vs and 10 escorts. 93 sorties flown.

Force 'H'(1) provided a distinct problem. Force 'H' joined H.M.S. Warspite, Valiant, Formidable and nine destroyers at 0630 hours on 9 July in the position 33° 00' N, 18° 00' E. The combined force sailed on a north-easterly course to simulate a threat to the West coast of Greece as part of the cover plan. But it changed course to take up a position off the East coast of Sicily to cover the merchant vessels and landing craft engaged in the assault. Both divisions of the Battle Squadrons were given air protection while within range. In the cover of these and its preceding movements, Force 'H' was provided with thirty-one sorties involving one hundred and thirty-three flying hours.

The fast follow-up convoy M.W.F.37 from Alexandria, like M.W.S.37 had an uneventful passage. They reached Malta safely on 12 July, as did Force 'H', which left Benghazi on 11 July. Ninety-three sorties were flown as cover to M.W.S.37 and fifty-eight to M.W.F.37.

Three United Kingdom convoys were given fighter protection. K.M.F.18(2) and K.M.S.18(3) entered the area on 9 July and K.M.S.19(4) on 11 July. Nos. 272 and 603 Beaufighter Squadrons flew a total of forty-four sorties between them.

Sixty-two independent area anti-submarine patrols were carried out between 2 and 12 July to sweep the approaches to the shipping routes. This involved a total of sixty-seven sorties and two hundred and thirty-eight flying hours.(5).

The reconnaissance off the South-west of Greece - code name Operation 'Seduce' -, made to guard against the development of the threat from E-boats sighted in that area,(6) involved thirty-seven sorties. The intensive search for the U-boat which attacked convoy M.W.S.36 involved thirty sorties and two hundred and nine flying hours.

-
- (1) 1st Div. of 1st Battle Squadron (H.M.S. Nelson, Rodney, Indomitable (fleet carrier)), 1st and 2nd Divs. 12th Cruiser Squadron and 3 destroyers.
 - (2) 9 troopships, 14 destroyers and 4 minesweepers, 12 Beaufighter sorties.
 - (3) 21 m/vs, 9 L.S.T's, 1 netlayer, 12 destroyers and 4 minesweepers. 8 Beaufighter sorties.
 - (4) 32 merchant vessels, 6 L.S.T's and 7 sloops, 24 Beaufighter sorties.
 - (5)

<u>Sorties</u>	<u>Aircraft</u>	<u>Squadron</u>
23	Baltimores	454
8	Baltimores	15 S.A.A.F.
5	Beauforts	16 S.A.A.F.
7	Baltimores	203
7	Bisleys	13 R.H.A.F.
4	Hudsons	459
3	Beauforts	16 S.A.A.F.
6	Swordfish	815
4	Wellingtons	38
<u>67</u>		

- (6) Infra.

INVASION OF SICILY OPERATION HUSKY

ASSAULT CONVOY ROUTES

BRITISH

TRANSPORTS ETC.

- K.M.F.18 U.K. TO MEDITERRANEAN, FAST.
- K.M.S.18 U.K. TO MEDITERRANEAN, SLOW.
- M.W.F.36 MIDDLE EAST ASSAULT, FAST.
- M.W.S.36 MIDDLE EAST ASSAULT, SLOW.
- M.W.S.36(x) MIDDLE EAST ASSAULT, SLOW.

LANDING CRAFT

- S.B.F. NORTH AFRICA ASSAULT, FAST.
- S.B.S. NORTH AFRICA ASSAULT, SLOW.
- S.B.M. NORTH AFRICA ASSAULT, SLOW.

UNITED STATES

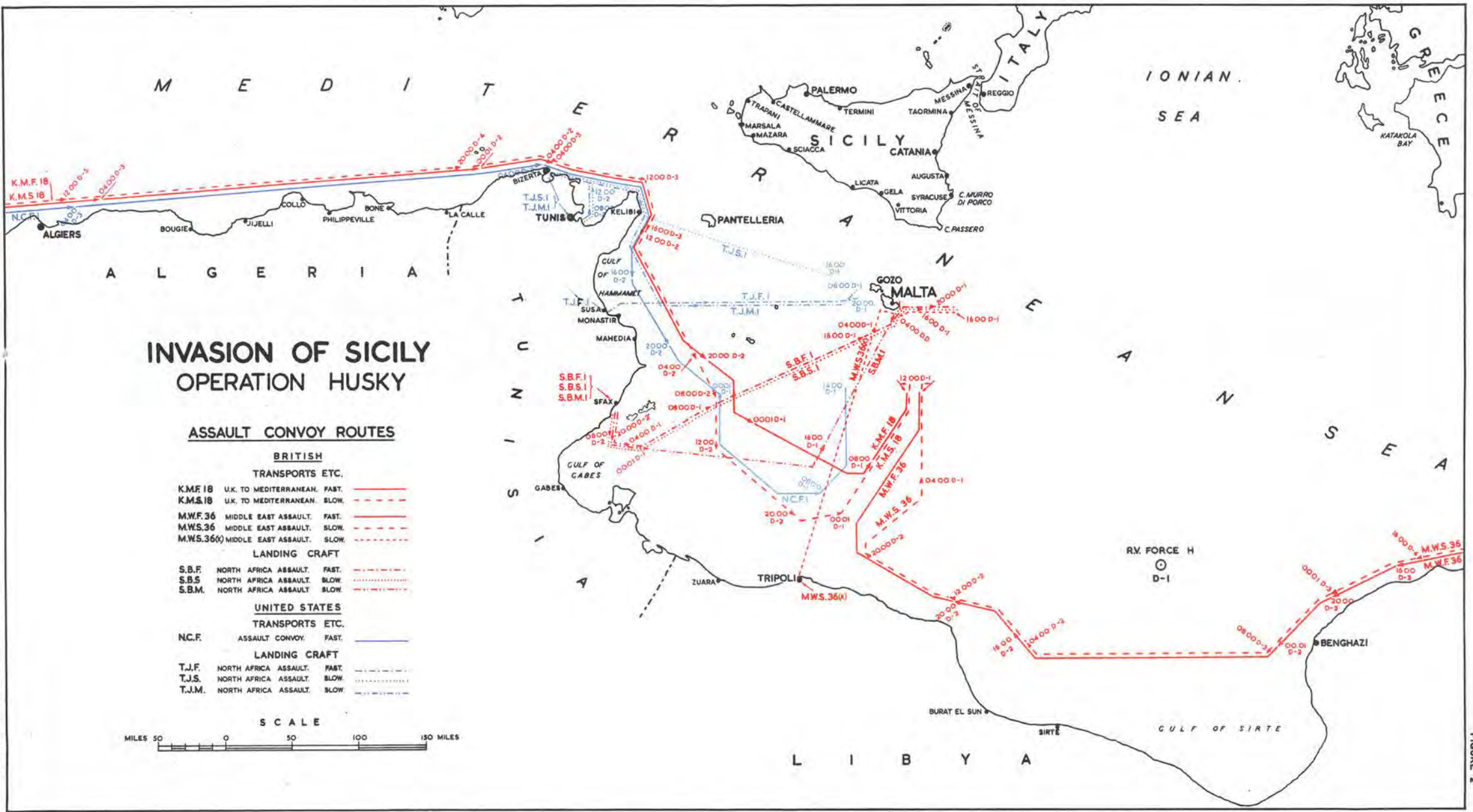
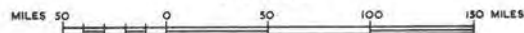
TRANSPORTS ETC.

- N.C.F. ASSAULT CONVOY, FAST.

LANDING CRAFT

- T.J.F. NORTH AFRICA ASSAULT, FAST.
- T.J.S. NORTH AFRICA ASSAULT, SLOW.
- T.J.M. NORTH AFRICA ASSAULT, SLOW.

SCALE



The total effort of No. 201 (Naval Co-operation) Group in support of the 'Husky' assault was five hundred and ninety sorties and 2800.14 hours.(1)

The air threat from Crete(2)

It was realised in June by the 'Husky' planning staff that the small German air forces based on Crete would constitute a menace to the Middle East assault convoys. At the time, there were some fifteen single-engined fighters (Me.109s) based at Kastelli and Maleme, ten Arado 196s at Suda Bay, a long range reconnaissance Staffel of five Ju.86s and Ju.88s at Kastelli, as well as some thirty Ju.87 dive bombers usually based at Argos, which could be switched to Crete at short notice. There was also in Greece a mixed force of bombers, dive bombers, twin engined fighters, single-engined fighters and bomber reconnaissance aircraft, both German and Italian, which could be brought into play in an emergency, although its exact serviceability could only be estimated. This small but dangerous force was not likely to be reduced if the Allied deception plans succeeded; on the contrary.

Naval raiding parties in Crete(3)

On 22 June, small naval raiding parties were landed in Crete with the object of doing what they could to diminish the air threat to the 'Husky's' convoys. They found no aircraft at Herakleion, but burned a considerable quantity of petrol. At Kastelli they burned more petrol and destroyed eight aircraft. They brought back two German prisoners and twenty Cretan refugees in Motor Launch 361 on the night 11/12 July. It was reported later that not less than sixty hostages were shot by the enemy as a reprisal for these raids.

Crete had been evacuated by the British and Dominion forces between 28 and 31 May 1941, over two years previous to 'Husky'; and the inhabitants must have thought their deliverance postponed indefinitely when it was seen that the main Allied thrust was against Sicily. It would be a good thing, therefore, if some show of strength could be devised to raise their morale and to teach the Germans a sharp lesson.

(1)

<u>Convoy</u>	<u>No. Of sorties</u>	<u>Hours flown</u>
N.P.3	16	78.28
Force 'H' (all movements)	31	133.30
Force 'R'	15	84.53
H.M.S. <u>Mauritius</u> (to Malta)	7	31.48
H.M.S. <u>Abdiel</u> (to Malta)	8	29.50
M.W.S.36	73	345.07
M.W.F.36	51	249.50
M.W.S.37	93	471.25
M.W.F.37	58	282.54
M.W.S.36 (A)	14	58.31
K.M.S.18	8	37.50
M.M.F.18	12	51.07
K.M.S.19	24	123.00
K.M.F.19 (not covered)	-	-
N.C.F.1	22	88.22
N.C.S.1.	4	20.48
S.B.M.1.	14	56.51
Area anti/sub. patrol & photo Recce	82	273.56
Recce of S.W. Crete	37	176.49
U-boat search	30	209.55
TOTALS	599	2800.14

(2) Air Defences Eastern Mediterranean O.R.Bs.

(3) The War at Sea (Admiralty Hist. Sec.)

The background of the fighter 'rodeo' operation against Crete - code name 'Thesis'(1)

In mid-July, it was apparent that the enemy had withdrawn most of his fighter defences from the Aegean and Crete for operations from Italian bases. His installations on Crete were therefore more vulnerable than normally.

After the formation of Air Defences Eastern Mediterranean in February 1943 out of the old Egypt Command, the role of their day fighter squadrons became increasingly one of shipping protection. They followed close behind the advancing Eighth Army and Western Desert Air Force, consolidating the new territories into static sectors and, during this period, exerted a maximum effort with their meagre forces, with few departures from the uncontested routine. There had been occasional scrambles to intercept single enemy reconnaissance aircraft, but these had been fruitless until the recent arrival of a few Spitfire IXs.

For the purposes of Operation 'Husky' the whole command was brought up to a high level of training, efficiency and expectation and the maximum effort had been put out until the convoys were handed over to Air H.Q. Malta. This intensive period passed without the firing of a single shot. There followed a period of anti-climax and frustration not only throughout the fighter units but, as is now generally admitted, throughout the Middle East Command. Without accurate foreknowledge of the operations and misfortunes awaiting them before the close of the same year, they felt that the war had passed over them, leaving them stranded with no prospect but indefinite routine and stagnation. A report by Air Defence Eastern Mediterranean on Operation 'Thesis'(2) refers to the "dangerous psychological situation which might have had disastrous effects on the morale of the day fighter squadrons and was none too good for the other formations in the Command". It was therefore decided by the Air Defence Commander that a large scale offensive operation employing most of the day fighter squadrons would have a desirable tonic effect. The Air Officer Commanding-in-Chief gave his authority on 17 July for a daylight attack on Crete by all available single-engined aircraft of Nos. 219 and 212 Groups and certain aircraft of No. 201 (Naval Co-operation) Group. The operation involved the longest sea crossing such a formation had ever undertaken in the Command and much 'hedge-hopping' in largely mountainous country in which the anti-aircraft defences were likely to be dense.

Summarising the advantages likely to accrue from the fighter sweep, they were reprisals in casualties and dislocation, possible enemy air reinforcement at the expense of the strength in Italy so badly needed for Sicilian and other local operations, moral support for the Cretans, and change of experience and a tonic for the Allied day fighter squadrons.

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- (1) Air Defence H.Q., E. Mediterranean Operation Instruction No. 9 of 1943 19 July 43 (in Air Def. E. Med. Air Staff O.R.Bs.).
 - (2) Air Def. E. Med. Air Staff O.R.B's Appendix 17.

Air Forces for Operation 'Thesis'

The attacking force comprised three specially created fighter wings, one Naval Co-operation flight, a covering force and Air/sea Rescue units. The operational units consisted of ninety Hurricanes, twelve Spitfires, six Baltimores and six Beaufighters, making one hundred and fourteen aircraft in all. The three wings were referred to by their base-names, viz. the Derna, Bu Amud and Sidi Barrani Wings. They had each two coastal Beaufighters as navigational leaders and twenty-seven, twenty-seven and thirty-six Hurricanes respectively. Twelve Spitfires constituted the Savoia Covering Force, based at Savoia, detailed to cover the withdrawal in case of enemy fighter action. The Gambut Force of No. 235 Naval Co-operation Wing, with its flight of six Baltimores and two reserves, was to attack with bombs and machine guns in conjunction with the fighter attack, but from its own base at Gambut.

Executive control of the operation was delegated to Wing Commander the Hon. Max Aitken, who moved to Bu Amud and began the briefing on the morning of 21 July.(1)

Operation 'Thesis'- the air attack on Crete, 23 July 1943(2)

The three wings were airborne between 0700 and 0720 hours on 23 July. The Baltimores were airborne at 0730 hours and set course to follow the Sidi Barrani Wing. The

(1) Disposition of forces taking part in Operation 'Thesis'Sidi Barrani Wing (ex-No. 219 Group and No. 235 Wing)

No. 335 (R.H.A.F.) Squadron	9 Hurricane II C's
No. 336 (R.H.A.F.) Squadron	9 Hurricane II C's
Nos. 74, 238 and 451 Squadrons	18 Hurricane II B's and C's
No. 227 (N.C.) Squadron	2 Beaubombers (plus 1 reserve)

Gambut Force (No. 235 Naval Co-operation Wing)

No. 454 (N.C.) Squadron	6 Baltimores (plus 2 reserves)
Air Sea Rescue Flight	4 Wellingtons, 2 Walrus

Bu Amud Wing (ex-No. 212 Group and No. 235 Wing)

No. 123 Squadron	9 Hurricane II C's
No. 134 Squadron	9 Hurricane II B's
No. 41 (S.A.A.F.) Squadron	9 Hurricane II B's
No. 227 (N.C.) Squadron	2 Beaubombers (plus 1 reserve)

Derna Wing (ex-No. 212 Group and No. 235 Wing)

No. 7 (S.A.A.F.) Squadron	9 Hurricane II C's
No. 237 (Rhod.) Squadron	9 Hurricane II C's
No. 94 Squadron	9 Hurricane II C's
No. 227 (N.C.) Squadron	2 Beaubombers (plus 1 reserve)
Air Sea Rescue	2 Walrus

Savoia Covering Force (ex-No. 212 Group)

No. 80 Squadron	12 Spitfire V's
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Tobruk

Air Sea Rescue	3 H.S.L's (1 at sea)
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Derna Harbour

Air Sea Rescue	3 H.S.L's (2 at sea)
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(2) No. 201 (N.C.) Wing and Air Def. E. Med. O.R.B's.

mean time of the fighter wings' arrival on target was 0855 hours. Just before arrival at the shores of Crete, the fighter crews jettisoned their long range tanks. They all flew at low altitudes over Crete.

The Derna Wing swept the western end, the Bu Amud the centre and the Sidi Barrani Wing and Baltimore Flight the eastern end. Avoiding aerodromes because of flak concentrations, the fighters looked for hutted and tented camps, military headquarters, radar, and radio stations and M/T parks. The Baltimore flight selected harbour installations and ships in harbour for low level bombing attack. All crews worked on photographs taken for the occasion on the previous day by No. 608 Squadron.

The Derna wing crossed the Cretan coast east of Maleme and attacked a staff car and a power station at Maleme, a radio station at Selinos Kastelli and the lighthouse on Gavdos Island. The Beaufighters sighted two Arado 196s in flight and each attacked one. Strikes were seen on one aircraft, but the attack could not be pressed home for fear of turning across the following Hurricanes. They sighted few Germans, found only indifferent targets in the Alikiano area and reported light anti-aircraft fire at Selinos Kastelli and Gavdos. One Hurricane, seen to crash in some trees on a mountain N.E. of Tupolias, was lost.

The Bu Amud Wing made landfall at Tymbaki. They strafed, with satisfactory results, military traffic, machine gun posts, tents, huts and a petrol (or ammunition) dump: they shot up camps south of the Tymbaki - Herakleion road, blew up a truck loaded with German troops, and hit the radar station at Leonda. They met heavy anti-aircraft fire around Tymbaki and up to 5 miles out to sea. No. 134 Squadron lost two Hurricanes; No. 41 (S.A.A.F.) lost one Hurricane and No. 238 Squadron lost three Hurricanes.

The Sidi Barrani Wing made landfall at Hierapetra where they attacked the radar station, a bridge and a machine gun post. They flew on to Mirabello Bay, where the Beaufighters of No. 227 Squadron scored a near miss on a 100-ton caique, later attacked by fighters. Buildings (possibly a German H.Q.) near Ag Paraskais, a radio station at Ag Johannis and buildings at Ag Nikolaos were attacked. They reported heavy anti-aircraft fire from Herakleion and from the N.W. end of Kastelli landing ground and light fire from near Nikolaos and at scattered points. One pilot was attacked by a Ju.88 just south of the island. Their general impressions were that the country was too difficult for an attack of this kind to be really successful, full of narrow gullies and twisting roads, that if many camps existed they must have been well concealed and that most other suitable targets were only sighted when it was too late to attack them. The Wing lost six Hurricanes, two from each of Nos. 238, 335 and 336 Squadrons.

The Gambut Force of eight Baltimores, escorted by twelve Spitfires, swept over the East end of Crete. Their bombs burst on the Hierapetra soap factory, on the end of a causeway at Spinalonga and on a factory at Herakleion. They scored a near miss on a caique in Mirabello Bay. Their losses were severe, five Baltimores of No. 454 Squadron, and one other crashed on landing on the beach north of Gambut.

The total losses, including three Hurricanes and the Baltimore which crashed on landing, were sixteen Hurricanes and six Baltimores. This price was admitted to be incommensurate with the material damage inflicted on the enemy from a strictly material point of view, but it was considered undeniable that the medicine administered to the enemy coupled with the tonic effect on the day fighter groups made the operation a success on balance.

Participation by N.W. African Coastal Air Force in 'Husky' Assaults

Preliminary operations (3 to 7 July 1943)

The varied escort tasks of the Coastal Air Force may be considered as reaching their culmination on 9 July, when the main assault convoys from all areas of the Mediterranean began to come under the protection of Malta's fighters from the 50-mile radius to the beaches on D Day and onwards. No. 242 Group, however, continued to cover convoys on 10 July and thereafter up to the Tunisian - Tripolitanian border and the perimeter of Malta's cover.

The nature and weight of forces engaged in convoy escort has been exemplified in some detail in the account of the participation in the approach by Air Defences Eastern Mediterranean and No. 201 (Naval Co-operation) Group. It is intended, therefore, to omit all comparable detail on the Coastal Air Force's effort and to indicate briefly its weight in terms of sorties for each activity for the period 3 to 7 July and to indicate what was done to protect the Navies from interference by major naval units and submarines and the North African ports from enemy air attacks while the ships were on-loading troops and equipment. This will be followed by parallel figures for 8 and 9 July combined, the period of most intensive pre-assault operations in which the force was engaged.

The total sorties flown by N.W. Coastal Air Force from 3 to 7 July 43 inclusive were:-(1)

685	fighter	sorties	on	convoy escort (20 convoys)
319	"	"	"	defensive patrols
50	"	"	"	air/sea rescue
4	"	"	"	photographic reconnaissance
91	sorties	by other coastal		
		aircraft	on	convoy escort
67	"	"	"	sea reconnaissance
108	"	"	"	anti-submarine patrol
75	"	"	"	attacks on shipping and
				submarines
39	"	"	"	air/sea rescue

Enemy aircraft crossed the North African coast on only one occasion, the night of 6/7 July. This was an ineffectual attack by about sixty-five bombers, one of which was destroyed by night fighters, on Bizerta. Earlier attacks in June had been vigorously discouraged by the

(1) Report by 23rd S.C.O.R.U. on 'Husky' in N.A.A.F. O.R.B. appendices.

defences and the Allies air offence against the enemy air force in general, aircraft and crew shortages and low strength and serviceability rendered it increasingly difficult to do more than stage an occasional attack on one or two selected targets. The enemy's fighter reaction to Allied attacks was also inconsistent for similar reasons. He had insufficient strength to cover all his commitments and, although not demoralised, was harassed continually by Allied attacks on his airfields. These led to a series of moves back to more secure bases. All this did not provide a congenial background for sound operational planning.

Preliminary operations (8 and 9 July 1943)

The total sorties flown by N.W. Coastal Air Force on 8 and 9 July demonstrate an intensification of effort in almost all its fields of activity:-(1)

574	fighter sorties on	convoy escort
150	" " "	defensive patrols
6	" " "	air/sea rescue
40	sorties by other Coastal	
	aircraft on "	convoy escort
24	" " "	sea reconnaissance
43	" " "	anti-submarine patrol
37	" " "	attacks on shipping and
		submarines
52	" " "	air/sea rescue

The enemy bomber effort for the period was nil.

Operations by No. 242 Group (8 to 10 July 1943)(2)

The assault itself brought no break in the all-round activity of No. 242 Group of N.W. African Coastal Air Force. Situated at the centre of the mounting area, it went through a period of intensive operations from 8 to 12 July.(3) The footnote (3) gives the total sorties expended on convoy escort, port defence, night defence and the watch on the Italian Fleet both in port, at the approaches to the ports and over the whole Tyrrhenian Sea. In addition to this effort, the group carried out several day scrambles against enemy aircraft and attacked shipping in convoy carrying supplies to Sicily.(4)

- (1) Report by 23rd S.C.O.R.U. on 'Husky' in N.A.A.F. O.R.B. appendices.
 (2) No. 242 Group O.R.B's.

(3)

Date	Convoy escort	Port defence	Recce of Italian Fleet	Night Beaufighters
9 Jly	226 (5 convoys)	41	7 day	9
9 "	173 (6 ")	-	7 day	8
10 "	158 (4 ")	2	6 day	8
			7 night	
11 "	162 (7 ")	14	9 night	9
12 "	166 (3 ")	20	6 day	4
			10 night	

- (4) Sinkings by Allied aircraft are recorded in Part A of this chapter.

Participation by Air Headquarters Malta in the 'Husky' Assaults

Protection of the 'Husky' convoys

To round off the record of the contribution made by the four Allied air commands to the protection of the 'Husky' convoys, a brief summary of Malta's effort must be included. This will be in general terms on the lines of a report by its Air Officer Commanding.(1) Their effort falls naturally under three headings, viz., the protection of the assault convoys, of the seaborne and airborne assaults, and shipping in the build-up phase (D plus 1 to D plus 4 Days). Malta's support of the land forces in Sicily as well as complete details of all the operations herein outlined may be found elsewhere.(2)

The Spitfire squadrons based on Malta provided fighter cover and close escort for approximately 2,000 ships that converged on Malta from the West, South and South-east during their approach to Sicily. Two-thirds of the available fighter effort was employed on the close escort of convoys when they came within 50 miles West of South of Malta. The remaining one-third of the fighter force operated over enemy airfields in the South of Sicily, and also gave close escort and top cover to bomber formations operating from N.W. Africa. No attacks were made on any convoy during daylight hours on D minus 1 Day and they were not reconnoitred, so efficient was the air screen.

As a long-range measure of convoy protection during the hours of darkness, fighter intruders operated throughout the night over occupied enemy airfields in Sicily and Southern Italy. Specially equipped Beaufighters(3) and half a squadron of similarly equipped Mosquitoes were employed throughout the night as a screen between these enemy airfields and the advancing convoys. They were controlled by G.C.I. stations in Malta and carried in Tank Landing Ships.

During the night of D minus 1/D Day, Malta provided visual and radio navigational aids for the four hundred and fifty transport aircraft and gliders (in Operations 'Ladbroke' and 'Husky No. 1') by a screen of night fighters and night intruders. Hurricane cannon fighters led the airborne formations across the coast of Sicily and attacked enemy searchlights that exposed their beams, very effectively, according to reports. Admiral Hewitt, who commanded the Western Naval Task Force, regarded air forces coverage of the convoys as "the most carefully planned and most successfully executed" phase of 'Husky'.(4)

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- (1) A.V.M. Sir K. R. Park. MS/5050/Air. 26 July 43 (Malta O.R.B's).
 - (2) Refer to the R.A.F. narratives on the Sicilian campaign and Malta (A.H.B.).
 - (3) With A.I.
 - (4) Report by N.C.W.T.F. on 'Husky'. A.F.H.Q. (Cabinet Hist. Archives).

Protection of the landings

On D Day, the shipping lying off the five landing areas and the troops landing were afforded continuous fighter patrols during the first 1½ hours of daylight and the majority for the first 2 hours and over. Landings were also given continuous patrols for the last hour of daylight. Additional fighter patrols were provided for periods when it was anticipated the enemy air forces might attack in strength.(1) Throughout the 16 hours of light, there was fighter cover to at least one or two of the landing areas, which were widely separated. There was not sufficient fighter strength to maintain continuous cover over all beaches during the sixteen hours of daylight.

Several factors limited the full employment of the numerically strong fighter force: the operational capacity of the fields on Malta and Pantelleria; the long distance from those bases to the assault areas and the resulting short time which each sortie could give to flying cover; and the heavy commitments to fighter escort for bombing missions. The director units in the U.S.S. Monrovia and U.S.S. Ancon lacked combat experience and adequate training as a team. Plans came late to completion.(2)

Justification of air cover for the landings(3)

There were differences of opinion later between the U.S. Navy and the air forces as to the effectiveness of the air cover. The U.S. Navy insisted that close support by aircraft in amphibious operations, as they understood it, did not exist. In support of this statement they pointed out that the average number of fighters maintained over the American beaches ('Joss', 'Dime' and 'Cent') was approximately ten; that on two occasions there were no fighters in any of the areas and on several occasions no cover over one or two areas; and that because of the limited number of aircraft available patrols had been maintained at only one level.

The reply to the latter complaints is implicit in the text of the previous sub-section (b). Northwest African Air Forces presented these facts and further strong arguments to support its view that the cover had been effective. Not only had its Spitfires and Warhawks flown 1,092 sorties on D Day, but only twelve vessels had been lost against the Navies' anticipated loss of up to 300 ships during D minus 1 and D Day. Aircrews had had to face fire from friendly ships which had forced the fighter patrols up from 5,000 and 8,000 feet to 10,000 and 14,000 feet, so increasing the danger of enemy aircraft breaking through. Furthermore, many ships had been anchored so far from shore (up to 6 miles) that it had been found difficult to cover simultaneously ships, landing craft and beaches. There is no doubt that the volume of fire from friendly ships was a serious menace to operations. Similar hazards were run by the airborne mission 'Husky No. 2' on

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- (1) 0730-0830, 1130-1230 and 1600-1700 hours.
 - (2) Craven and Cate:- The A.A.F. in World War II, Vol. II.
 - (3) Ibid.

the night 11/12 July. Allied naval and merchant vessels brought heavy fire to bear on them as they approached Sicily, and partial failure of the operation resulted. Again, on the night 13/14 July, the airborne operation 'Fustian' ran into heavy fire from Allied naval vessels as well as friendly and hostile shore batteries. Of the 124 aircraft engaged, 11 were destroyed and 50 damaged by friendly fire.

The British Admiralty stated, (1) more approvingly, that casualties to shipping in the several invasion areas were considerably less than had been anticipated. Admiral Sir B. H. Ramsay stated that this resulted from a very high degree of air superiority, which gave a surprising immunity from air attack. The C.-in-C. Mediterranean declared that the navies and armies owed a great debt to the air forces for the effectiveness of the protection offered them throughout the operation. (2) If one considered the record already given here of the scope of that protection and the thoroughness of the planned operations, (3) that may well be a just comment on 'Husky' viewed as a whole. For over and above the visible support over the convoys and beaches an even greater volume of air effort was being given without stint to neutralise the enemy's air and naval opposition and his supply system.

Sir Keith Park reported that the majority of the enemy air attacks appear to have been made against shipping lying off Licata and Gela, where the American divisions were under the protection of two U.S. fighter groups, the equivalent of nine British fighter squadrons. The beaches there were reported to have been attacked more heavily than the British beaches, where the ships lay close. Even when squadrons were driven up to between 10,000 and 14,000 feet, they were frequently engaged by ships' anti-aircraft guns.

Full details of air operations over the landing areas from D plus 1 Day onwards are given in the R.A.F. narrative The Sicilian Campaign (A.H.B.).

PART C

THE AXIS EVACUATION FROM SICILY

Axis plans for evacuation

Early discussions at Hitler's headquarters(4)

Immediately after the fall of Mussolini, Hitler called his service chiefs to a series of conferences. They discussed the changed military situation and the possibility of

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- (1) Battle Summary No. 35. (A.H.B.IIK/18/27).
 - (2) Craven and Cate.
 - (3) Refer to Sir K. Park's report, appendix C for the full fighter patrol programme. If this had allowed for more than two sorties per squadron per day, the effort could not have been maintained at the actual level so long.
 - (4) Fuehrer Conferences on Naval Affairs 1943
(Admiralty 1947): Weichold. Report on the German Naval War Effort. (N.I.D. 24/T 65/45). (A.H.B.6).

evacuating Sicily and Sardinia. A series of plans for seizing control of land and naval operations was outlined and the German Naval Command Italy detailed to evacuate German troops from Sicily if necessary. Plans for the evacuation were opposed by Doenitz, who was in favour of holding Sicily as long as possible. No decision had been reached by the end of 27 July.

All the measures designed to meet the situation and a possible Italian defection were completed under the codename of Operation 'Achse'. On 1 August, a signal was sent to the Commanding General, Armed Forces, South to the effect that when the code word 'Achse' was given he was to carry out at once Operation 'Schwarz', which involved, among other things, the evacuation of Sicily and Sardinia and the transfer of forces from Sardinia to Corsica. The tasks of the Navy included the execution of the evacuation transports from Sicily.(1) At this stage, the evacuation of Sicily was considered as an item in an over-all plan to meet a potential politico-strategic situation, not merely as an admission of defeat. A signal was sent on the same day by Keitel, (the C.O.S. Armed Forces High Command), to the effect that inconspicuous preparatory measures to accelerate operations comprised by 'Achse' could be proceeded with.(2) But the only part of 'Achse' put into operation in August was Operation 'Eiche', the rescue of Mussolini, which held priority on Hitler's order.

Jodl, who could see the urgency of the military situation, had already decided on action. Soon afterwards, he left for Italy with Rommel.

Jodl's orders to Kesselring and the German Commander in Sicily

On 14 July, XIV Panzer Korps was given unconditional command over all German troops in Sicily. On 15 July, Col. von Bonin was appointed Chief of General Staff of XIV Panzer Korps, (the Commander of which was General Hube) and summoned to the then Chief of Operations Staff, Armed Forces. Generaloberst Jodl, in East Prussia. Jodl gave him, verbally, he states, the following orders for General Hube:-

"In view of the great numerical superiority of the Anglo-American forces, and especially in view of the great difficulties of supplying even the relatively small German force in Sicily (chief causes of difficulty being the small capacity and the vulnerability of railroads in Southern Italy, the insecurity of sea transport, and the possibility of a blockade of the Strait of Messina), it is not to be contemplated that we can continue to hold the island. It is, however, important to fight a delaying action and gain further time for stabilizing the situation on the mainland. The vital factor, however, is under no circumstances to suffer the loss of our three German divisions. At the very minimum, our valuable human material must be saved."

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- (1) OKM/WFSt Nr. 661746/43 g.k. Chefs 1 Aug.43. In Fuehrer Directives. 1942-1945. (A.H.B.IIG.1/67 (B)).
 - (2) OKM/WFSt. Nr. 661747/43 g.k. Chefs 1 Aug.43, in Fuehrer Directives. (A.H.B.IIG.1/67/B.) Also refer to OKM/SKI to O.B. Sud 2096/43 26 July, 43 O.K.W./W.F.St. (A.H.B.6).

With these instructions, which had been communicated to Field Marshal Kesselring, von Bonin reached General Hube's tactical headquarters on 17 July. He found that the Germans had established a continuous defensive front. A third division was crossing the Strait into Sicily.(1)

General Hube's plan

The first German plan was that the Hermann Goering Division should begin evacuation on 1 August, the XV Panzer Grenadier Division on 12 August and the XXIX Panzer Grenadier Division on 15 August. So much was revealed by 14 August by documents captured in the course of the fighting, but by then the programme, upset by the rate of the Allied advance, had been revised.

General Hube had appointed as Commandant of the Messina Fortress Area Colonel Ernst Gunther Baade, G.O.C. LIX Panzer Grenadier Division, an energetic army officer, and had invested responsibility for organizing and operating the ferry service transit of the Strait in an efficient naval officer - Captain von Liebenstein, the Sea Transport Fuehrer Messina Straits. Baade was responsible for approaches, defences and sea traffic, as far as the Germans were concerned, and held unconditional command over that part of Sicily around Messina and over the mainland of Italy in the area of San Giovanni and Reggio,(2) known as the Messina Straits Fortress Area. Von Liebenstein was responsible for the ferry service, landing points, approaches, fuelling and for defence of the craft while at sea, XIV Panzer Korps only for discipline and maintenance of roads.(3)

Measures already in force included the removal of two pieces of heavy army artillery from the island to the San Giovanni area on the mainland to protect the ferry route against Allied naval vessels and prevent any attempt to force the Strait. These represented, stated Von Bonin, incorrectly, their only (and moreover very questionable) protection against action by the Allied Navy. There were, he stated, no coastal batteries available in Italy as reinforcements; the Navy had refused as impracticable the idea of laying mine-belts, and the effect, he stated, of 8.8 cm. anti-aircraft shells against contemporary naval vessels had to be considered as nil. H.Q. XIV Panzer Korps had ordered all installations on the island which could be dispensed with to be removed to the mainland. Wounded and redundant staff and equipment crossed to Italy every day and night.

A specific area in Calabria was allotted to each division for units they could dispense with and for the concentration of the division when evacuated. Command over bases, supplies

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- (1) Col. von Bonin - 'Considerations of the Italian Campaign - The Battle for Sicily'. A study written for the Canadian Military Mission 1947. (A.H.B. II/92/3: A.H.B.6 R.156). Referred to hereafter as 'Considerations'
 - (2) Information supplied by Cabinet Office Historical Section from Washington records 16.8.55: History of U.S. Naval Operations in World War II, Vol. IX: von Bonin - 'Considerations'. (A.H.B.II/92/8).
 - (3) Von Liebenstein's War Diary. (P.G./45898 Admty) (See Appendix 16).

and concentration of XIV Panzer Korps in Calabria was invested in General Heidrich(1) who was to form alarm companies, and establish protection and coast-watching in Southern Calabria.

O.K.W. had given an instruction to the German command on the tactics to be employed in Sicily, limited, however, by the clause that XIV Panzer Korps would receive further orders as to the time when evacuation was to begin. Until this order was given, the divisions were to be left to believe that Sicily was to be held permanently.

General Hube did not share the belief of Hitler and O.K.W. that the German soldier would fight better, and that staffs on the defensive would command better, if they were deprived of every possibility of retreat. His orders to evacuate dispensable troops and form mainland reception bases were on his responsibility, without knowledge and consent of O.K.W., states von Bonin.(2)

This is qualified by the air commander Rintelen,(2) who affirms that as Hitler could not make up his mind, Kesselring made it up for him. He ordered the operations officers of the divisions in Sicily to fly to his headquarters at Frascati to plan the evacuation, codename Operation 'Lehrgang'. Kesselring stated later that he ordered the evacuation in principle.(4) But on 16 August 1943, Jodl, (who was in Italy in early August), stated that it was he (Jodl) who gave the order to evacuate to Kesselring.(5)

The plan of evacuation of the three divisions foresaw five defence lines converging on Messina and growing progressively smaller round it. From all three divisions a total of 8,000 to 10,000 men was to be released at each

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- (1) Commander of I Parachute Division.
 - (2) Von Bonin - 'Considerations'. (A.H.B.II/92/8).
 - (3) Rintelen 'Mussolini als Bundesgenosse' p.224; 'Sicilian Campaign', Information from German sources (Hist.Sec. Canadian Army) (by courtesy of Cabinet Historical Section).
 - (4) Kesselring: Memoirs. Kimber. London 1953.
 - (5) Letter from Captain S. Jung to Captain von Wengenheim 16 August 1943. (A.H.S./F.D.S. P.G./31749).
 Commenting on von Bonin's 'Considerations', General Westphal is quoted by General W. Fries (29th Panzer Grenadier Division in Sicily (1947) as stating that O.K.W. was not informed of the evacuation plan when the evacuation began on 11 August. O.K.W. Operations Staff asked on whose order and with whose permission the evacuation was begun. The Chief of Staff to Kesselring replied, Westphal continued, that Kesselring had given the order and accepted responsibility. Thereupon no further queries or interference followed so it could be assumed, said Westphal, that Hitler had given it his consent. This must have come at a very late hour, for in the minutes of the discussions held from 9 to 11 August, it would appear that even on 11 August, Doenitz was still opposing the idea and Hitler had given no decision. He probably yielded to Jodl's suggestions some time on the night 11/12 or on 12 August. (Cabinet Historical Section, Enemy Documents.)

withdrawal and to proceed to the Messina area. On the fifth line of defence, the last remaining troops were to proceed to the boats in the last night before final evacuation. Concentration and embarkation areas, road routes, traffic control, ferry routes, ferry craft, landing points and transport to concentration areas on the mainland were all prescribed. General Hube himself ordered withdrawal to defence lines.(1) The time planned for the whole movement was five nights. It took six nights and five days. The maximum aimed at was movement across the Straits of all German troops and as much as possible of their equipment, artillery and tanks.(2) The Italians might evacuate their troops, but not vehicles or heavy weapons, all within the larger German plan, but must use their own surface craft. Kesselring signalled to O.K.M. on 2 August that the evacuation could begin on 6 August if required.(3)

The only Allied disturbance of Hube's schedule was the Americans' capture of Regalbuto, Sant' Agata and Troina within a week (2-8 August). This led to his determination to start the evacuation on 11 August. Operation 'Lehrgang' began at 1800 hours on 11 August.(4) The terrain was perfect for an orderly withdrawal, for the land tapered acutely towards Cape Peloro. But it was still possible for joint Allied action to prevent its completion. There were two more Allied leapfrog landings on the north coast, but they failed to cut off the main German forces: these retreated according to plan, not without heavy losses.

When the plan is considered, it is apparent that its smooth tempo was controlled from start to finish. It was a piece of machinery almost continuously in motion, with no points of concentration where men and materials would accumulate for any length of time; and therefore, from the point of view of the Allied air forces, a most unprofitable target system.

Admiral Barone's plan(5)

General Alfredo Guzzoni, the Italian island commander, having contended successfully with the vacillations of Mussolini, ordered Rear Admiral Pietro Barone, commanding the naval forces in Sicily, to evacuate troops and headquarters no longer required. The Italian forces were distributed in the Cape Peloro-San Stefano di Camastra, the Cape Peloro-Catania and the general Fortress area sectors.

The evacuation proceeded slowly and inconspicuously from 3 to 10 August. On 9 August, Guzzoni was ordered to begin to evacuate the entire XVI Army Corps, as much equipment as possible, various tactical units and the coastal defence batteries, on the afternoon of 11 August. The accelerated evacuation began one day earlier, in the afternoon of 10 August.

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- (1) Von Bonin 'Considerations' (A.H.B.II/92/8) and von Liebenstein's Report.
 - (2) War Diary and Report of Captain von Liebenstein. (A.H.S./F.D.S. P.G./45898/99)
 - (3) Admiralty P.G./32461. (F.D.S.).
 - (4) Von Liebenstein. See Appendix 16.
 - (5) Barone's report (A.H.B.II/J.5/144).

Admiral Barone divided his traffic into three parts. The troops and materials from the Sparta area in the north-eastern hump came down the Sparta-Messina road to Mortelle beach at the extreme end of the northern coast. Those approaching the Messina area down the Cape Peloro (or Peloritana) road embarked at a beach near the Reina Margherita hospital just south of San Salvatore (about 4 miles north of Messina) or in Messina. Those coming up to the Messina area along the Taormina road embarked in Messina itself at No. 3 ferry berth. His flotilla of craft was mixed, but its capacity was large; it was well covered by flak and coastal batteries, searchlights and warning systems in the Fortress area. There were assembly areas in Calabria. Messina (1) and Villa San Giovanni had been bombed on many occasions and with increasing intensity during July, and great damage had been effected. Reggio had suffered even greater devastation and was partially evacuated. Admiral Barone, with full knowledge of the risks, decided to use the ferry terminals and quays at Messina itself and at Villa San Giovanni, because the facilities for ferry boats and small steamships were greater there than on the beaches. The M.Z. launches, being of shallow draught, could operate from beaches. (2)

The German Ferry Service before evacuation(3)

By 1 August, at the height of the campaign, the Sea Transport Fuehrer Messina Strait had developed the German ferry service to a high pitch of efficiency. Every day and night, but mostly by day, his fleet of naval craft carried men, fuel, supplies and equipment in both directions from established landing points and by regular routes. There were remote bases in the system, linked with Naples. In spite of the Allied air offensive, the system had functioned satisfactorily and losses and damage to landing points and ferry craft were still bearable.

The supply headquarters at Reggio had already moved back to Gioia Tauro. Catania was threatened and the days of some of the southerly routes involving Molini, Ionica, Galati and Ponte Schiavo were clearly numbered.

Five main routes continued to function at high pressure up to the 10 August and four routes from 11 to 17 August, (4) with interruptions by Allied aircraft.

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- (1) The total of attacks on Messina in 1941 was 9, in 1942 it was 12, in 1943 up to 17 August, 76. Of the grand total of 96 attacks, 54 were day and 43 night. Of these, 21 attacks (involving 709 short tons of high explosive) were made on the ferry and harbour combined, and 29 attacks (involving 766 short tons of high explosive) on the harbour and railway. 2 ferry boats had already been sunk there.
 - (2) Source for details of the Italian evacuation plans and operations:- Admiral P. Barone's report 'L'opera svolta Della R. Marina Durante La Battaglia Di Sicilia' (Courtesy of Admiralty and Italian Naval Historical Office, Rome). (A.H.B.II J.5/144)
 - (3) Von Liebenstein's war diary (Admty. P.G./45898/99) at Appendix 16.
 - (4) Refer to Figure 4 for the complete ferry system.

These were:-

Up to 17 August

Route I

<u>Sicilian terminal</u>	<u>Italian terminal</u>	<u>Craft</u>
Faro North	Cannitello North	M.F.P. (1)
Faro Central	Cannitello Central	S.F. (2)
Faro South	Cannitello South	L-boat (3)

Route II

<u>Sicilian terminal</u>	<u>Italian terminal</u>	<u>Craft</u>
Ganzirri North	Pezzo North	M.F.P./L
Ganzirri South	Pezzo South	S.F.

Route III

Paradiso	Catona North	S.F.
	Catona Central	M.F.P.
	Catona South	M.F.P.

Route IV

San Salvatore	Gallico North	M.F.P.
San Salvatore - 2 } switch points	Gallico Central	S.F.

Up to 10 August

Routes I to IV (5)
and Route V

Pistunina	Gallico South	M.F.P.
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This was not all. There were important traffic points on the mainland up the Toe of Italy, where refuelling, revictualling, assembly, and the transfer of wounded were carried out. These were Bagnara, (5), Gioia Tauro, (6) Pizzo and Marina di Vibo Valentia, Palmi and a station 2 kilometres West of Milazzo. Dispersal was carefully thought out: craft moved to securer anchorages when standing by. After 12 August, Vibo Valentia was built up to full status as a ferry base.

Ferrying before the evacuation was carried out mostly by day. Von Liebenstein thought his crews insufficiently experienced to carry out the entire evacuation by night, because of heavy bomber attacks and inadequate lighting, but the Army pressed for the night crossings. Allied aircrews

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- (1) Naval ferry barge.
 - (2) Siebel ferry.
 - (3) Landing boat.
 - (4) The southerly route from Galati to three points at Occhio functioned until the fall of Catania on 5 August.
 - (5) It functioned until the railway line was destroyed by air attack.
 - (6) 2 landing points for M.F.Ps, with approach roads,

had been dealing for some time with maritime supplies to Sicily and traffic back to Italy and the general pattern was familiar to many. But it was not until 8 August that they began to divert aircraft in more considerable numbers on to it from other tasks.

Many of the ferries carried balloons, which von Liebenstein considered an even better defence than flak. He continued to press for more ammunition and balloons and strove with his superiors - the Sea Transport Headquarters - to retain his craft against outside demands. In between him and General Hube were the figures of Baade, von Kamptz (the Security Commander), the Higher Straits Artillery Officer and Heidrich, each jealous of his authority; and von Liebenstein had to by-pass them and overcome the handicaps of broken or effete telephonic communications, of roads and bridges cut by air attacks, as well as ensure the flow of portable bridges, steel road sections, caissons and floating landing stages, and supervise the work of the Pionier Battalion laying, maintaining and repairing the approaches to the landing and discharging points. His headquarters were at Faro North, but he made several tours across the Strait under aircraft attack.

The German Ferry Service Order of Battle for Operation "Lehrgang" (1)

On 8 August, von Liebenstein received the order to prepare for Operation "Lehrgang", the mass evacuation of the German army. He immediately requested Sea Transport Italy for the return of the naval ferry barges ordered by Kesselring to Naples on 5 August, for more anti-aircraft ammunition and for R-boats for escort duties. He made all necessary dispositions. On the afternoon of 10 August, XIV Panzer Korps ordered the operation to begin on 11 August to be completed in five nights. Stations were taken up and the following organization alerted:-

On the Sicilian shore:-

Faro North	<u>Sea Transport H.Q. Messina</u>
Faro Central and South	<u>Pionier Landing Battalion 771</u>
Ganzirri	<u>Pionier Landing Battalion 771</u>
Paradiso	<u>10th Landing Flotilla</u>
Salvatore	<u>2nd Landing Flotilla</u>

On the Calabrian shore:-

Canitello North	<u>4th Landing Flotilla</u> and local O.C.
Canitello Central	<u>Sea Transport Station Reggio</u>
Canitello South	<u>Pionier Landing Battalion 771</u>
Pezzo	<u>Representative of Naval</u> <u>C.O.S. Messina</u>
Catona North	<u>10th Landing Flotilla</u>
Gallico North and South	<u>2nd Landing Flotilla</u>

(1) Von Liebenstein's War Diary.

The total strength available for the evacuation was 5 M.F.P.s., 7 Siebel ferries, 4 Pi.-Siebel ferries, 10 landing boats, 2 flak Siebel ferries, 1 artillery lighter (M.A.L.), 6 infantry landing craft (I-boats) and 30 Pionier stormboats in reserve: this represented a total of 65 craft available to the Germans for the combined operation. All these craft were more or less heavily armed(1) and could give a good account of themselves in an engagement with aircraft or destroyers. Balloons were an additional deterrent to aircraft. R-boats of the 12th Flotilla were detailed for long distance night escort tasks.

The powerful armament of the German ferry units

Any reference to the German naval ferry craft as 'barges' is misleading. No measure of the task before the Mediterranean Air Command is possible unless it is understood that each one was very powerfully armed in relation to its size, difficult to approach and sink and admirably adapted to its purpose.

The armament of a supply Siebel ferry in that area was either one 88 mm or one 37 mm. and one or two twin 20 mm. guns; the special flak version carried either one or two 88 mm., one 37 mm. and two twin 20 mm. guns. M.F.P. naval ferry barges carried one 75 mm. and two 20 mm. guns. The artillery lighter (M.A.L.) carried two 88 mm. and two 20 mm. flak guns. The small I-boats carried one 20 mm. flak gun. They could all bring down aircraft. On 13 August, for example, the Sea Transport Fuehrer reported a day fighter shot down by a Pi-Siebel ferry and, on 15 August, one aircraft shot down by an I-boat and another by a naval ferry barge.

Most of them, as can be seen from the silhouettes in Figure 3, were narrow and streamlined and therefore difficult for aircraft bomb-aimers and gunners. The naval ferry barges were protected by 20 mm. steel armour plating over the steering house and the machine room above deck. The artillery barge was similarly protected. The I-boats carried armour along the sides of the hold.

The M.F.P. ferry barges could attain a speed of 10.5 knots and the Siebel ferries 8 knots. The large capacity of these craft meant that every voyage across the narrow Strait (the longest route was only just $5\frac{1}{2}$ miles) was a substantial contribution which could never be caught up by the Allied aircraft or the naval Messina Strait Patrol.(2)

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- (1) Refer to Figure 3 for armament, silhouettes, tonnages and dimensions of M.F.P.s., S.F.s., M.A.L.s., and I-boats. The tonnages given represent 'Wasserverdrängung' which is the displacement in metric tons of the empty ship with a full supply of fuel, water, ammunition and equipment (A.H.S./F.D.S.). One metric ton = 2200 lbs.
- (2) A Siebel ferry could carry 300 (maximum 540) troops in marching kit and light arms, or 8-10 vehicles. An M.F.P. could carry 200 (maximum 400) troops or 3-4 vehicles, or 3 Mark IV tanks and accessories. The M.A.L. could carry 300 troops or 6 heavy vehicles. Tonnages (see previous footnote): MFP/L 155, S.F. 130 M.A.L. 130. I-boat - 20. (F.D.S. Admty). Some craft flew balloons.

The Italian ferry service (1)

The plan envisaged the employment of ten MZ naval motor landing craft, (2) the train ferries Villa (3) and Cariddi (4) and the small steamers Baiamonte, (5) Ammiraglio Giovanni Viotti (6) and Luigi Rizzo. (7) The Villa carried about 3,000 troops: the MZ boats carried 800 - 1,000 troops each. The Cariddi had been already hit by bombs and was almost at the end of her career. On 6 August, unable to proceed under her own power, she was towed into Messina and loaded with heavy artillery. A tug was ordered to tow her to San Giovanni. (8)

On the quiet days of the evacuation, the Viotti and Rizzo sailed daily at dawn and without misadventure. When the confluence of troops increased, the Villa and Baiamonte were brought into service. On the morning of 11 August, four of the five ferry boats were damaged and only two MZ boats were operationally ready, says Barone: there were several other MZ boats working round Calabria on supply operations. In the last days of the evacuation, according to Barone, an unspecified number of minesweepers also carried troops and equipment across.

The Italian ferry routes (9)

MZ's ran from Mortelle to Cannitello up to the morning of 12 August and from a beach off the Hospital Reina Margherita (4 miles N. of Messina) thereafter. S.S. Villa and S.S. Cariddi ran from No. 3 ferry berth in Messina to Villa San Giovanni. They made normally two or three return trips daily. At night, one of them was moored at San Giovanni and the other off Paradiso (2 miles N. of Messina), S.S. Baiamonte, Rizzo and Viotti ran from the Bianchina Littorio and the Masotto Mole in Messina harbour to Scilla. (10).

German apprehensions on account of Allied air attacks

The Allied air forces gave ample evidence during the first ten days of August 1943 of how much they could do to hinder the supply traffic to Sicily. (11) The Germans were apprehensive as to whether they could carry out this operation in which, Kesselring said, surprise was improbable. Their whole energies were devoted to circumventing as far as possible the continuous air attacks they believed were inevitable. The thought and ingenuity displayed explain the measure of their success.

-
- (1) Barone.
 - (2) 120 tons standard displacement.
 - (3) 932 tons standard displacement.
 - (4) 2,809 tons standard displacement.
 - (5) 479 G.R.T. ex-Sarajevo (Yugoslavia).
 - (6) 254 G.R.T. ex-Topola (Yugoslav).
 - (7) 382 G.R.T.
 - (8) This never arrived, owing to delays in communications.
 - (9) Barone: Zuckerman report (A.H.B.II J.1/144/4).
 - (10) Refer to Figure 4. for Italian and German evacuation ferry routes.
 - (11) Refer to Appendix 15 for aircraft sorties and targets.

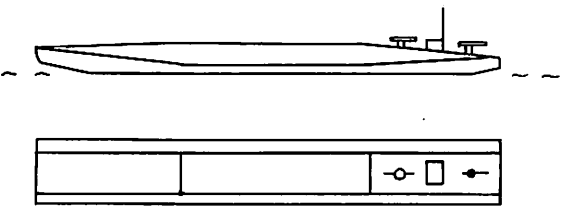
GERMAN NAVAL VESSELS EMPLOYED IN THE
EVACUATION OF SICILY — AUGUST 1943

NAVAL FERRY BARGE
M.F.P. (Type A-C) (F 100 to F 800)

LENGTH : 154' 2"
BREADTH : 21' 4"
FREEBOARD : 7' 6"

ARMAMENT { 1x75mm GUN
 2x20mm FLAK GUNS.
 20 mm STEEL PLATING ON
 STEERING HOUSE & MACHINE
 ROOM ABOVE DECK.

DISPLACEMENT : 155 TONS
SPEED : 10.5 KNOTS

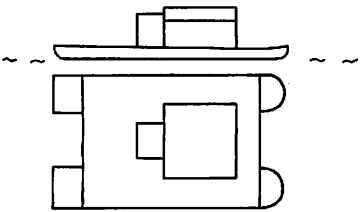


SIEBEL FERRY
S.F.

LENGTH : 78' 9"
BREADTH : 44' 11"
HEIGHT from keel : 17'
DEPTH under water : 2' 7"

ARMAMENT — { 1x88mm. or 1x37mm GUN
SUPPLY S.F. { 1or 2x20mm FLAK. GUNS
 NO STEEL PLATING

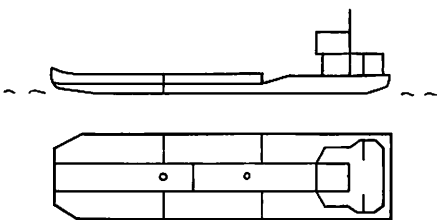
ARMAMENT — { 1or 2x88mm, 1x37mm GUNS
P-FLAK. S.F. { 2x 20mm SINGLE or QUADRUPL GUNS
DISPLACEMENT : 130 TONS
SPEED : 8 KNOTS



NAVAL ARTILLERY LIGHTER
M.A.L.(1-120)

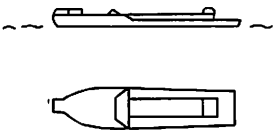
LENGTH : 105'
BREADTH : 24' 7"
HEIGHT from keel : 6' 6 1/2"
DEPTH under water : 2' 3"-2' 7"

ARMAMENT { 2x88mm GUNS
 2x20mm FLAK. GUNS
 STEEL PLATING (probably)
DISPLACEMENT : 130 TONS



I BOAT
SMALL LANDING AND SUPPLY FERRYBOAT

LENGTH : 60' 8"
BREADTH : 13' 1"
HEIGHT from keel : 7' 10"
DEPTH under water : 2' 3"
ARMAMENT : 1 x 20mm FLAK GUN
DISPLACEMENT : 20 TONS
SPEED : 7 KNOTS



More lights would be needed, which in turn would help the bombers to identify targets. Von Liebenstein tried hard to shake the Army from its conviction that the evacuation of troops must be carried out only at night. As he pointed out, the sustained all-night attacks drove the lorry drivers into air raid bunkers, prevented loading, paralysed vital points and slowed down the evacuation, whereas by day the heavy anti-aircraft batteries could deal with the less dangerous and more vulnerable fighters from key points in the Fortress area. The gun crews of the ferry craft had a better chance by day of shooting down fighter bombers. Stocks of portable bridge sections, steel planking for approaches, concrete caissons (which were filled with stones and sunk to carry pontoons), lights for recognition of embarkation points, ammunition, fuel and supplies were ready and in use. Diesel-driven tank barges were ready at Marina di Vibo Valentia and hospital ships detailed to collect wounded there.

The Luftwaffe and the Italian Air Force had been driven out of their forward bases and there was small hope of any support. Fortunately, although there was a wide variety of batteries and ammunition, the anti-aircraft defence was very strong at certain points. When Allied aircraft had attacked at Catona, Gallico, Paradiso and Cannitello, they had little success.(1) These points were mainly defended with light flak left behind by the Luftwaffe.

The Messina Fortress Area coastal defences(2)

The Military Piazza Messina-Reggio was one of the three fortress areas(3) in the Italian organization for the defence of Sicily. It was very heavily defended during the period of the evacuation by coastal batteries (manned by the Milmart),(4) Italian and German anti-aircraft batteries, searchlights, an observer corps, air raid warning units, port defence units, smoke units and mine-sweepers. The Navy controlled the defences until the last days of the evacuation, when the Army took over. Two large calibre German field guns were sited on the Calabrian shore.

In the absence of a detailed order of battle, it is still possible to build up a reasonably accurate general picture of the strength and composition of the Strait defences and so to establish a measure of the system the air forces tried so hard, although unsuccessfully, to destroy.

According to Admiral Barone, the coastal artillery defences consisted of two 152 mm and two 280 mm guns sited North and South of the Strait, and the two German 170 mm pieces from the XV Panzer Grenadier Division. The 6th Legion of the Milmart covered the Messina area and the

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- (1) Details of Allied air operations are given in the A.H.B. Narrative 'The Sicilian Campaign'.
 - (2) Barone: Luftwaffe flak map 30 Jly. 43 Ob.d.L.Fu. Stab Ia No.8538/43 (A.H.B.6.)
 - (3) The other two were Augusta-Syracuse and Trapani.
 - (4) Milizia Artiglieria Marittima.

14th Legion the tip of Calabria facing the Strait. The big calibre guns enumerated above were not new, (1) but, taken as a whole, were discouraging to surface craft of any displacement whatever. (1) Von Bonin, typically critical of the Italians, does not mention the naval guns and incorrectly states that the two pieces of heavy ground artillery were "the only (and moreover very questionable) protection against action by the Allied Navies." (2)

The anti-aircraft defences

It is only possible to arrive at an estimate of the strength of the anti-aircraft defences, but this is close enough to convey their formidable nature.

The Italian batteries comprised the new, mobile 90 mm guns. (3) They were sited in groups of three or four, tied in with the German interception units. There were six "batterie" of 76 guns on the Sicilian coast and two on the Calabrian coast for night barrages. The night defences included sixteen Italian sound locators and nine German searchlights. (4) On 10 July, six "batterie" of Italian 75 mm had been set up on the Sicilian shore, three in the northern zone and three in the southern zone. It cannot be traced how many of these were still functioning during the evacuation.

In addition, the Italians had set up about ninety 8 mm machine guns on the roofs of houses of Messina. These had been largely replaced by 20 mm machine guns, which, added to the weight of the four "batterie" of 37 mm machine guns, came into play in case of low level air attacks. Italian ammunition was sufficient for all operations and a reserve remained at the end.

Admiral Barone states that at the height of the evacuation the combined number of Italian 99 mm and German 88 mm guns in the Fortress area was in the region of 150. This figure is likely to be an understatement made in the absence of all the relevant documents. A captured Luftwaffe flak situation map dated 30 Jly. 43 (5) gives the total strength of German "batterien" (6) in the Messina-Villa San

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- (1) Barone.
 - (2) Von Bonin 'Considerations'.
 - (3) Calibre 90 mm; length of box 57 calibres: total length about 3 metres; length of barrel 4.77 metres (53 calibres): maximum horizontal range 14,000 metres; maximum vertical range 10,000 metres; rate of fire 20 rounds per minute. The gun was electrically connected to the fire control station. (U.S. Handbook on the Italian Armed Forces War Dept. TM30-420, by courtesy of the Cabinet Historical Section).
 - (4) Barone.
 - (5) Ob.d.L.Fu. Stab Ia. No. 8538/43 30 Jly.43 (A.H.B.6).
 - (6) Not to be confused with Allied batteries. A heavy Luftwaffe "batterie" had an establishment of four (occasionally six) 88 mm. and three 20 mm. guns. A medium "batterie" had twelve 37 mm. guns and a light "batterie" twelve 20 mm. guns. (Captured Flak records in A.H.B.6).

Giovanni-Reggio area as 28 heavy and 5 and 2/5 medium and light "batterien". In terms of German guns, this means between one hundred and twelve and one hundred and sixty-eight 88 mm and one hundred and forty-eight 37 mm. or 20 mm guns. Allowing for guns destroyed or abandoned during the retreat or destroyed by air attack, Barone's figures may well be on the conservative side.

The observer posts round the three big ports functioned to the end. Warning stations steadily lost their equipment. Pioneer units cleared the wreckage caused by air attacks. Motor minesweepers patrolled the Strait. Up to 15 August, some of them evacuated troops. One of them, (1) a Guardia di Finanza craft, was captured near Messina on 16 August. There were fifty smoke posts, which functioned until the service was terminated owing to the great destruction caused by air attacks on the ports.

Orders to blow up the Italian anti-aircraft batteries were carried out during the forenoon of 16 August and those to destroy the coastal batteries in the last hour of that day. The searchlights at Messina had been bombed out of action and two batteries on the Calabrian side were useless(2)

Allied Air operations against the evacuation

Indications of German preparations

Bearing in mind the flexibility of the Axis plans for evacuation as well as the many physical factors ruling in their favour, it was not to be expected that Allied Intelligence could keep pace with all their convolutions. The tactical problem of evacuation was only one among many engaging the Allies' attention; there were strict limits to what could be done to stop or hinder it, not only on account of the strong defences of the Messina Fortress Area, but on account of plans already laid for the assault on the Italian mainland. Notwithstanding, it was highly desirable that Allied Intelligence should acquire the maximum knowledge of Axis intentions and the pattern of the withdrawal in time to act on it. In the event this never came about. By the time the general picture was assuming clarity, the Axis had evacuated a substantial quantity of troops and material.

On 31 July, an air photographic reconnaissance flight was made over the Strait of Messina area.(3)

On 3 August, H.Q. Fifteenth Army Group sent the following signal to the Air Officer Commanding Mediterranean Air Command and to the Naval Commander-in-Chief Mediterranean:-

"Indications suggest that Germans are making preparations for withdrawal to mainland when this becomes necessary. It is quite possible he may start pulling out before front collapses. We must be in a position to take immediate advantage of such a situation by using all our full weight of Naval and Air power. You have no

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- (1) RD.25.
 - (2) Barone for all above information.
 - (3) J.I.C.(A) 1143 Aug.43. A.F.H.Q. (Cabinet Historical Archives.)

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doubt co-ordinated plans to meet this contingency and I, for my part, will watch situation most carefully so as to let you know the right moment to strike and this may come sooner than we thought."(1)

It will be noted that there is no reference to the Italian Army.

Appraisal of the situation by Air Forces on 3 and 4 August

The Air Forces were thinking along similar lines, for on the same day - 3 Aug. 43 - the A.O.C. Desert Air Force wrote to the A.O.C. Tactical Air Force in the following terms.

"There were very distinct signs yesterday that the German army is feeling the strain and that its morale and capacity to withstand further attacks are weakening. If this process continues in the way we hope, it is quite possible that the Hun may attempt an evacuation across the Messina Straits, possibly earlier than was thought possible a few days ago.

If this happens, I suggest that it will need a combined air and naval plan to deal with it, something on the lines of the Tunisian affair but, of course, applied to the particular situation here. I quite realise that we can do a lot with the air forces immediately available, but the exceptional flak on both sides of the Straits of Messina will need, I think, the use of Fortresses if we are to maintain continuous air action to defeat an attempt at evacuation. Presumably the Navy will be able to prevent sea movement at night, but here again they may need some help from us.

It is quite possible that all this has already been planned, but if not I suggest that you might like to give it your attention."(2)

The A.O.C. Tactical Air Force replied the next day - 4 August:-

"Strat/Force representatives are reporting to me on 5 August, as an effective day effort to stop evacuation should include full out attack on the other side of the Straits by P-38's etc. in addition to all that we can do.

But the night is our problem, and though the increasing moon will help the air, only a positive physical barrier, such as the Navy can provide, would be effective. The difficulties of operating Naval surface forces in the narrow part of the Straits are obvious and I do not see how we can hope for the same proportion of success as at Cape Bon.

Shall keep you informed on all progress."(3)

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- (1) Signal O31345 Alexander to Cunningham and Tedder dated 3 Aug. 43, received 1830 (B) hours (A.H.B.II J.1/90/15)
 - (2) File DO/AC. H.A.T.A.F./A.O.C. Personal (A.H.B. IIS/15).
 - (3) Ibid.

The C.-in-C. Mediterranean's proposals

At 1924 hours on 3 August, Admiral Cunningham sent the following signal(1) to Air Marshal Tedder and General Alexander:-

"Reference General Alexander's 031345.

We are already operating light craft in the Straits by night and this will be intensified.

When the retreat begins I suggest that to begin with that the air force should operate by day without let or hindrance North 38 degs. in the narrows and east of and including MILAZZO on the north coast.

As the coast batteries are mopped up it will be possible for surface forces to operate further into Straits. You will be kept informed.

It may be taken that all destroyers operating off the coast of SICILY are British or American.

Request your comments on the above."

Action on the proposals by the Air C.-in-C.

Both this signal and General Alexander's signal were incorrectly addressed to Mediterranean Air Command Algiers instead of to the Air Command Post, thus resulting in many hours delay.(2)

Air Marshal Tedder signalled his agreement with the Admiral's suggestion,(3) suggested that the conditions be put into immediate operation and asked to be kept in the closest touch by both Commanders-in-Chief.(4) He and General Alexander received confirmation of the Admiral's approval of immediate operations at 1857(B) hours on the 4th.(5) and advised all concerned. He signalled to A.V.M. Coningham that representatives of the Strategic Air Force were visiting him the next morning (5 August) to discuss co-ordination of operations to deal with an attempted evacuation.

Allied Intelligence on 4 and 5 August

The Italian evacuation began on 3 August, 1943.(6)

On 4 August, 1943, the Joint Intelligence Committee produced a paper entitled 'Estimate of enemy capability to evacuate Sicily' in which it stated "at the present time there is no sign that the enemy intends evacuation of Sicily and there is evidence that reinforcements still continue to

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- (1) Signal T00 031924 File JS.2026 C.-in-C. MED. M.E. (A.H.B. II.J.1/90/18).
 - (2) Signal ACMT 73 4 Aug.43 (same file as in (1)).
 - (3) Ibid.
 - (4) Signal ACMT.77 4 August, 1943, File J.S.2026 C.-in-C. R.A.F. Med. M.E. (A.H.B. II J.1/90/18).
 - (5) Signal 92/4, same file as in (2).
 - (6) Bernotti, Bragadin and Barone.

reach the island." They mentioned the air reconnaissance report of 31 July and said the interpretation of the photographs revealed, in the areas of the Strait, the following small craft which could be made available for an evacuation: 2 train ferries, 30 to 40 landing craft or Siebel ferries, and numerous small craft.(1)

At the same time, Army Intelligence officers were measuring the German ground withdrawals. On 4 August, General Patton's G-2 expressed his view that the object of the German's delaying actions was evacuation. On 5 August, he was more positive and correctly estimated three of the five withdrawal lines.(2)

Tactical Air Force's operational instruction of 6 August

On 6 August, Tactical Air Force issued an operational instruction(3) to Desert Air Force, XII Tactical Air Command and the Tactical Bomber Force. This assumed that the enemy might use in the initial phase any or all of the beaches from Milazzo to Taormina, and, later, those from Torre di Faro to Messina; that the bulk of the movement would be at night; that the Allied Air Force had to reckon with air opposition by some 100 fighter bombers by day, 15 fighters by night and perhaps some 100 long range bombers, mostly night-operating. This forecast of air opposition was to prove a pessimistic one in the event; there was no air escort to the ferry traffic and little air interference with Allied aircraft attacking it.

Nevertheless, Tactical Air Force was correct in allowing for opposition, in face of known enemy dispositions,(4) the main requirement being to determine exactly when the evacuation began, local Air Commanders were instructed to initiate daily reconnaissance to this end. The Tactical Bomber Force Commander was to plan night reconnaissance in the area from Milazzo to Taormina.(5) There was a plan for co-operation by the Strategic Air Force.

Arrangements for Strategic Air Force intervention

The results of the meeting of 5 August between Tactical and Strategic Air Forces were embodied in the operation instruction of 6 August.(6) The Air Commander-in-Chief allocated a proportion of the Strategic Air Force to assist occasionally on his direction, to be diverted for this purpose from objectives in Southern Italy on to "Messina". Later in the instruction "Messina" was enlarged to read "enemy evacuation area".

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- (1) J.I.C. (A) 1143/A.F.H.Q. (Cabinet Historical Archives).
 - (2) History of U.S. Naval Operations in World War II Vol. IX.
 - (3) T.A.F. Operational Instruction No. 16 6 August, 1943. Appendix 13 to this volume.
 - (4) M.A.T.A.F. Operational Instruction No. 16 is reproduced in full at Appendix 13.
 - (5) See infra for further details of the orders for air operations.
 - (6) See Appendix 13.

On receipt of a minimum of 12 hours notice from Tactical Air Force, the following plan, co-ordinated with Tactical Air Force, was to come into force. At 0900 hours, 72 Fortresses(1) were to attack the evacuation area. This attack was to be followed by a prolonged fighter bomber attack (presumably by Tactical aircraft on the same area.) A second Fortress attack (number of aircraft unspecified) was to follow 2 hours afterwards and this, in turn, continued by a second fighter bomber attack. Beyond this point, a medium Strategic bomber group was to be at readiness to undertake a third bomber attack, and was to be despatched by Strategic Air Force on request by Tactical Air Force.(2)

To prevent interference by the enemy force, and in pursuance of the pre-Baytown counter-air schedule, Strategic medium bomber groups were to continue their attacks on air-fields in the Crotone and Scalea areas; and, since the target system was the whole pattern of enemy movement between North-eastern Sicily and Western Calabria, Lightning groups (number un-specified) were to attack movement in the Toe of Italy.

All this was conditional on the direction of the Air Commander-in-Chief, but there was no hesitation in acting. The same day that the discussions were held i.e. 5 August, 69 Fortresses bombed Messina harbour. On 6 August, 52 Fortresses attacked Messina road junction. On 9 August, 54 Fortresses attacked communications in the Messina area.

The policy laid down on 2 August(3) excluding heavy bombers from anti-evacuation operations had, therefore, been partially modified to meet the new situation, although it had been considered on that date that Messina itself was not a particularly suitable target for heavy bombers and they were urgently required elsewhere.(4)

The Wellingtons had already began a series of night attacks on the northern Strait ferry terminal area on a scale of 60 to 90 sorties.(5) If the attacks justified it, this scale of attack was to continue. It did. In the meantime, there remained the urgent priority tasks of supporting the land forces, covering the three leapfrog landings, counter-air force operations, the destruction of the Italian railway system and the need for rest for many units weakened by fatigue, jaundice and malaria.

Strategic Lightning operations in the Toe(6)

After the decision of 5 August for co-operation by the Strategic Air Force, Lightnings were diverted on four days from their normal task of escorting bombers. As

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- (1) This number of 72 coincides with the daily average of Fortress sorties on the 8 days of operations between 1 and 16 August. This suggests a sober estimate of realisable effort at that stage.
 - (2) See Appendix 13.
 - (3) Infra.
 - (4) R.A.F. narrative (first draft). The Sicilian Campaign (A.H.B.).
 - (5) From 2300 (B) hours to 0400 (B) hours.
 - (6) Lightnings of 1st, 14th and 83rd Fighter Groups.

arranged, they operated in the Toe of Italy, which figured in the evacuation system as well as in the pattern of air support of the Allied armies in Sicily. Their operations may be classed as ground attacks. They were not trained in attacking naval surface craft.

On 8 August, 46 aircraft bombed and fired on trains and vehicles at Angitola, on the North coast, with good results and destroyed a Me.109. On 10 August, 13 aircraft attacked a train and set a switch house on fire at Bovalina; 34 aircraft attacked a radar station, a lighthouse and many trains in the Catanzaro - Locri area, claiming the destruction of several locomotives: 13 aircraft machine-gunned a radar station, a power line and rolling stock between Cape Spartivento and Siderno. On 14 August, 12 aircraft set vehicles on fire and damaged a radar station in the Sambiasi - Rosarno area.

On 15 August, Lightnings carried out their only fighter bombing in the area. Twenty-one aircraft swept the Toe for targets of opportunity, attacking rolling stock and troops in the yards with unobserved results. Twenty-four aircraft each dropped a 1000 pound bomb on the road bridge and tunnel at Punta di Staletti, with good results. The flak on all these missions was unimportant, a fact reflecting the high concentration over the Strait.⁽¹⁾ The total Lightning sorties for the 4 days was 162.⁽²⁾

These Lightnings were subject to conservation for the impending vital task of cover for the Salerno beaches, being the only suitable long-range fighters. They were in short supply: no reinforcements were coming through. The balance were employed as escorts to heavy bomber missions against Italy.

Strategic Warhawk operations against Sardinia

The Strategic Air Force held a group of three squadrons⁽³⁾ of P.40 Warhawks. Fifty-six of them were operationally ready on 7 August.⁽⁴⁾ These Warhawks were not used against the evacuation system, as they were considered more gainfully employed on strategic attacks on enemy installations in Sardinia and were the only aircraft available for the task. It was important to enforce the German evacuation of Sardinia at an early date and so eliminate a threat to the Allied left flank; these operations by Warhawks increased to a crescendo just before D Day Operation "Avalanche".

They did not operate daily, as the targets were at extreme range from their base at Mateur in Tunisia. They attacked targets on three days during the evacuation period, viz. 2, 7 and 13 August.⁽⁵⁾ It was never suggested that they should be diverted from their strategic commitment.

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- (1) All details from A.H.B.II J.1/123 (J and K).
 - (2) 8 August - 46: 10 August - 59: 14 August - 12: 15 August - 45.
 - (3) 325th U.S. Group, comprising the 317th, 318th and 319th Squadrons.
 - (4) A.H.B.II.J.1/157/2.
 - (5) On 2 August, 47 sorties; on 7 August, 48 sorties; on 13 August 46 sorties.

Strategic medium bomber operations

The N.W. African Strategic Air Force employed two U.S. groups of Mitchells(1) and three groups of Marauders.(2) Although it was stipulated that one medium group was to stand by for anti-evacuation attacks, none of the medium groups participated directly, except perhaps for the attack of 1 August by 24 Mitchells on Milazzo, an operation equally applicable to the enemy ground retreat in Sicily. Those medium bomber attacks which were made on the evacuation were carried out by a group (340th) lent by the Ninth Air Force to the newly-formed Tactical Bomber Force (under command of Tactical Air Force) and therefore represent, in a sense, strategic aid.

From 4 to 16 August inclusive, the five Strategic groups were engaged on ten of the thirteen days against airfields in Southern and Central Italy and railway and road targets in Southern Italy in preparation for the Italian landings. They had in the region of 278 aircraft operationally ready. The daily effective sorties total varied from 154 on 13 August (the day of the Rome attack) down to 76 on 11 August, the lowest figures (with serviceability falling and preparation for long range attacks in the Salerno area pending) being 56 on 16 August.(3)

These operations were in strict accord with the air plans for Operations "Baytown" and "Avalanche" and with contemporary conceptions of the true role of strategic bombers. The sorties average appears reasonable when the almost non-stop effort is set against a background of combat fatigue and essential conservation for the coming critical days of invasion.

If the question is asked why this sizeable force of Strategic medium bombers, as well as the Strategic Lightnings and Warhawks, were not diverted from priority tasks on to the evacuation, the answer must resemble that given to the complementary question regarding the Strategic Fortresses. The position was not accorded a degree of urgency by the Air, Navy and Army Commanders-in-Chief sufficiently great for presentation to the Supreme Commander as a "tactical emergency" calling for heavy Strategic air intervention out of role.

The degree of support afforded by the night-operating R.A.F. Wellingtons was considered by the Tactical Air Force and the Air Command as a highly successful expression of Strategic participation, as it was generally believed (and Intelligence did not contradict this) that the bulk of the evacuation traffic would continue to proceed by night.

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- (1) 310th and 321st Bombardment Groups.
 - (2) 17th, 319th and 320th Bombardment Groups.
 - (4) Targets between 4 and 16 August were airfields and landing grounds at Crotone and Grazzanise, and communications at Angitola, Badjazzo, Gesso, Marine Di Paola, Catanzaro, Sapri, Sibari and Staletti (A.H.B.II.J.1/123 (J and K)).

The belief in the ability of the medium bombers, fighter/bombers and fighters of the Tactical Air Force to cope with the day traffic was based on an over-optimistic estimate of the efficacy of their number and armament in prohibitive "flak" conditions, on a reliance, proved unfounded, on material naval co-operation and on justified satisfaction with the results of the night attacks on a system believed to be predominantly nocturnal.

Progress of Allied Intelligence on the evacuation

On 8 August, the evacuation plan of the Hermann Goering Division (dated 2 August) was captured by the Army.(1)

Air information on the evacuation was augmented by visual observations of Allied airowebs and photographs taken after the attacks on Messina, Reggio and San Giovanni. It was severely limited by problems of visibility and the prohibitive enemy anti-aircraft defences, also by the fact that No. 326 Wing of the Tactical Bomber Force, which specialised in night reconnaissance, was in the process of moving from North Africa to Southern Sicily.

Official direction on the beginning of the evacuation first came to the Tactical Air Force at 1515 hours on 13 August, when the duty officer recorded in the operation log:-(2)

"A.O.C. directed that since fall of Randazzo and increase in shipping the evacuation is held to have begun. All fighter and fighter/bomber missions are to be stepped up and directed against ships, barges and beaches. T.B.F. are to be taken off land targets and put on to evacuation vessels and targets. Effort is to be maximum and a greater percentage of casualties are to be expected. All informed."

At 1530 hours, the following entry was made in the log:-

"Rang D.A.F. ops and asked if they had laid on anti-evacuation orders. He has 6 definite missions of B-25s and Balts. going and 2 probables. He has laid on maximum effort fighters and fighter/bombers."

At 1930 hours the following entry was made:-

"Passed Strat. ops to M.O.R.U.
25 Wellingtons San Giovanni.
25 Wellingtons Pizzo
20 Wellingtons possibly Lamezia."

and at 1940 hours:-

"T.B.F. night ops. 24 aircraft in same areas."

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- (1) Craven and Cate Vol. II; Air H.Q. M.E. Intelligence Summaries (O.R.Bs); History of U.S. Naval Operations Vol. IX.
(2) N.A.T.A.F. O.R.Bs/Operation log. (A.H.B. IIM/A.41/1B).

Photographic cover of evacuation area - 13 August.(1)

Photographs taken at 0915 hours on 13 August revealed to the Air Forces the presence of the following craft:-

Messina harbour:- 1 train ferry, 1 landing craft and 2 vessels.

Messina roads: - 1 train ferry, 1 E-boat, 1 Siebel ferry.

Beach Messina - Torre di Falco (2) 3 Siebel ferries, 3 F-boats.

Straits:- 3 Siebel ferries, 4 F-boats, 8 Leghorn units (3)

Cannitello:- 2 Siebel ferries, 2 F-boats, 2 Leghorn units (1 F-boat and 2 Leghorn units active on beach).

Beach north of Reggio harbour (4) - 3 Siebel ferries, 1 F-boat.

This includes a total 35 craft probably engaged in evacuation traffic. It did not cover beaches on the Calabrian shores, north of Cannitello and as far as Vibo Valentia and therefore was not complete coverage of the whole target system. It clarified the general situation without disclosing its essentials.

Evacuation proceeding

By 9 August, about 7,000 Italian troops had crossed. On that date, General A. Guzzoni, the Sixth Army Commander, received orders from Rome to speed up the movement and complete the evacuation of all Italian troops.

General Hube, estimating that it would take the Allies one week (from 2 to 8 August), to capture Regalbuto, Sant' Agata and Troina, and covered by Kesselring's authority to use his own judgement, ordered the German evacuation to begin on 11 August. Operation 'Lehrgang' therefore began on the night of 11 August. The Germans used their own craft, routes and beaches. They took out daily up to 7,000 troops or more, with vehicles, supplies and tanks.(5)

Appraisal of the situation by Air Forces on 11 August

By 11 August, the A.O.C. Tactical Air Force was convinced that a German evacuation was impending, although apparently unaware that the evacuation of redundant troops was already eight days old. There was no means of distinguishing visually between supply traffic from Italy into Sicily and the same machinery set in reverse. No photographs would reveal the decisions taken. What was sought and was not forthcoming was intelligence from primary sources.

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- (1) N.A.T.A.F. O.R.Bs/Operations.
 - (2) Probably intended for Torre di Faro at the north-eastern tip of Sicily.
 - (3) Probably Italian naval landing craft.
 - (4) Probably Gallico.
 - (5) Doenitz in Fuehrer Conferences: Liebenstein's war diary.

In his signal to Tedder on 11 August, (1) Coningham (A.O.C. Tactical Air Force) stated:-

"It now appears clear Hun has decided to evacuate. At same time there is as yet no large scale movement of shipping by day and there seems little doubt that are making "(taking?) and will continue to take full advantage of darkness. Even if withdrawal should develop on big scale now feel we can handle it with our own resources and naval assistance. Therefore suggest Strategic be released from possible day commitment in Messina area in order that they may be employed freely against Strategic subjectives and exploit situation in Italy proper. Recommend continuation maximum Wellington effort."

The main German evacuation began that evening.

Reliable information that it was in progress did not reach Allied Force Headquarters until some time on 14 August. At 2210 hours that day, Alexander signalled from H.Q., Fifteenth Army Group to Tedder:-

"From general information received it now appears that German evacuation has readily started." (2)

Three of the five days and three of the six nights were already beyond the Allied powers of recovery.

The release of the Strategic Air Force on 11 August

The suggestion of the A.O.C. Tactical Air Force on 11 August that the Strategic Air Force should be relieved of day commitments in the Messina area and its acceptance by the Air Commander-in-Chief, may have been ill-advised. They were delivered in good faith, but some of the assumptions which then seemed sound were later proved to be not so.

The assumptions proved sound were:- Firstly, that the maximum night Wellington effort would produce good results. It did, throwing the night traffic off balance and, to a serious extent on to the day passage, so offering an extension of opportunities of daylight attacks: secondly, that the employment of Strategic units against mainland Italian targets was of great urgency and importance: thirdly, that the Tactical Air Force aircrews would press home their attacks with the utmost vigour, although without rocket projectiles and in the face of prohibitive "flak"; fourthly, that they could not hope for the same measure of success as at Cape Bon: and fifthly, that naval assistance was a pre-requisite.

The less sound assumptions were, firstly, that the Germans would continue to take full advantage of darkness: Allied Intelligence did not perceive the change in emphasis from the third day of the German evacuation: secondly,

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- (1) Signal A.154 Serial 23/12 11 Aug.43 in File J.S.2026 (A.H.B.II. J.1/90/18).
 - (2) A.F.H.Q. 6893 'Operations in Sicily' (Cabinet Hist. Archives) (A.H.B. draft narrative on the Sicilian Campaign quotes).

although the Commander-in-Chief Mediterranean had said it it would be possible, as the coastal batteries were mopped up, for surface craft to operate further into the Strait, this did not come about until it was too late: thirdly, it was expected that Fifteenth Army Group would give good warning of the start of the evacuation. They had promised to watch the situation most carefully so as to give good notice of the right moment to strike. They watched the situation, but failed to give the notice. This did not arrive until late on 14 August, after three nights and two days of intensive ferry traffic. At the time, these last three assumptions seemed reasonable. Only after the event were they seen to have been ill-founded.

Two questions arise at this point. Firstly, how effective would the addition of the available Strategic Air Force heavy day bombers, medium bombers and fighters have been in preventing the evacuation? Secondly, why were heavy bombers of the Ninth Air Force in Cyrenaica and the Eighth Air Force and Bomber Command in the United Kingdom not diverted to the Messina area? It is not simple to answer these questions. It will be necessary first to digress and clarify the background of events.

Background of Mediterranean heavy bomber policy

Up to 1 August, heavy day bombers of the N.W. African Strategic Air Force, aided occasionally by the Liberators of the Ninth Air Force, had concentrated on all the railway and road centres in Italy essential to the supply and reinforcement of Sicily, and on the Axis air forces. On 19 July, the Ninth Air Force bombed the Rome marshalling yards, and, during the last week of that month, joined in the Sicilian land battle and attacked communications in Southern Italy. They planned and built up for a major attack by all five groups on Ploesti oil refineries, which was carried out on 1 August. It proved successful but crippling, 54 bombers being lost out of 177 despatched.

Three of the five Liberator groups were on loan from the U.K.-based Eighth Air Force. General Spaatz pressed for their immediate return, which was effective after the Wiener Neustadt mission of 13 August. All the pleas of Eisenhower and Tedder for their retention and for more Fortresses and Lightnings, all for the invasion of Italy, were turned down by the Combined Chiefs of Staff.(1)

The N.W. African Air Force especially needed more Lightnings. The loss rate(2) exceeded replacements and, on 5 September, less than 250 were on hand. But there were to be no more reinforcements of Lightnings until October.

The Ninth Air Force prepared to dissolve as a Mediterranean force. The heavy bombers moved back to the

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- (1) R.A.F. narrative (1st draft). The Italian Campaign Vol. I (A.H.B.).
 - (2) 60 in August and 24 in the week ending 5 Sept. 43.

United Kingdom, but on 22 August, XII Air Support Command inherited 3 groups of its Lightnings and XII Bomber Command 2 of its groups of Mitchells.(1).

To Allied Forces Headquarters and the Mediterranean Air Command the strategic air situation appeared critical.

Change in Mediterranean heavy bomber policy on 2 August(2)

On 1 August, Catania was taken and the Allies prepared for the final offensive. The naval Task Force 88 made ready to support a series of three amphibious landings designed to cut off the German retreat.

The A.O.C. Tactical Air Force explained to the Air Commander-in-Chief the air operations proceeding in the Toe of Italy. While the battle area held first priority, he had told his aircrews to regard the Strait as a "non-existent barrier" in their hunt for mechanical transport deep into enemy territory. Already he considered the Messina anti-aircraft defence as practically prohibitive for all aircraft except heavy bombers.(3)

Tedder replied the following day - 2 August - that the heavy bombers would not be supporting the Tactical Air Force in the Messina land operations. Tactical Air Force's medium light and fighter bombers were insufficient to deal with the land situation, with the possible exception of Messina itself, owing to the heavy "flak". Even Messina, he wrote, was not a particularly suitable target for heavy bombers. These were required for another purpose, namely to punch the Italian people with a view to forcing them to sue for peace. They would, therefore, be concentrated upon Rome and Naples for the next four or five days with this object in view, and bombers from the United Kingdom were to attack cities in Northern Italy with the same aim.(4) Tedder's decision conformed with policy on the highest level.

The air attack on Rome - 13 August

The preparations and briefing for the Rome mission were long and elaborate. An attack planned for 1 August was cancelled by Eisenhower, who felt that the endurance of the bomber and long-range fighter crews was just sufficient to complete the Sicilian campaign. The Rome marshalling yards were targets of the greatest importance. Their neutralisation at that date would be especially timely in preventing the movement of troops southward into the Salerno area.

The scale of the attack of 13 August on Rome was the best attainable.(5). The next Fortress operation was not

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- (1) Craven and Cate: N.A.A.F. O.R.B.'s.
 - (2) A.F.H.Q. Microfilm 92 (19) (Cabinet Hist. Archives) quoted in R.A.F. narrative - The Sicilian Campaign (A.H.B.).
 - (3) It is most important to bear this fact of the prohibitive nature of the enemy flak in mind throughout any study of the evacuation problem.
 - (4) A.F.H.Q. Microfilm 92(19) (Cabinet Hist. Archives):- Quoted in A.H.B. narrative 'The Sicilian Campaign'.
 - (5) 106 Fortresses, 102 Marauders, 66 Mitchells and 135 Lightnings.

until 17 August, when the evacuation had ended, and they participated in the Combined Bomber Offensive against airfields in occupied France.(1)

Tedder's ruling of 2 August demonstrates the extent of the commitment of his Strategic air forces to the tasks of completing the demoralisation of the Italians, of preparation for the landings in Italy and of the Combined Bomber Offensive. It may well be conjectured whether too much dispersal of effort was not being forced upon him from outside. These tasks led to certain profitable results, but the absence of those forces would certainly be prejudicial to any attempt to stop the enemy evacuating across the narrow Strait.

The full implications could not be seen on 2 August, for at that date it was hoped to cut off and defeat the main enemy ground forces in Sicily. The possibility of evacuation had always existed, but had not yet reached a degree of certainty or urgency great enough to compete with over-all strategic air plans or local conceptions of the right role for day heavy bombers and their escorts.

Attacks on Northern Italy from the United Kingdom(2)

The few attacks from the United Kingdom on Northern Italy in the early months of 1943 had been merely weather alternatives to German operations and on a low scale.

In June, La Spezia had been attacked by 49 aircraft from North Africa after shuttle operations against Friedrichshafen. On the nights 15/16 and 16/17 July, a few Lancasters bombed transformer stations in Northern Italy, proceeding to land in North Africa. On the return trip, 33 of these aircraft bombed Leghorn on 24/25 July, seven days later.

On 28 July, after a brief suspension, the British Cabinet authorised the inauguration of heavy attacks from the United Kingdom.(3) The C.A.S. stated:-

"A very heavy scale is not expected, in view of the need to land in Africa, but C.-in-C. (i.e. of Bomber Command) should do his best to heat up the fire".(4)

On the night of 7/8 August, 218 aircraft bombed Turin, Milan and Genoa.(5) On 12/13 August, 625 aircraft attacked Milan and Turin.(6) On 14/15 August, 134

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- (1) Bombed on the 2 preceding days by U.K.-based U.S. heavy bombers.
 - (2) R.A.F. narrative - The R.A.F. in the bombing offensive against Germany. Vol. V. Appendix 10.
 - (3) 2 J.11/14 28 Jly.43 (A.H.B.)
 - (4) S.46368/IV Encl.36A and 15E/D.B.Ops. 1 Aug.43 (quoted in the R.A.F. narrative. - The R.A.F. in the bombing offensive against Germany Vol.V. (A.H.B.))
 - (5) Turin 74 Aircraft 192.0 tons: Milan 72 aircraft 197.4 tons: Genoa 72 aircraft 166.3 tons.
 - (6) Milan 481 aircraft 1232.3 tons: Turin 144 aircraft 239.9 tons.

134 aircraft(1) and, on 15/16 August, 193 aircraft(2) bombed Milan. On 16/17 August, 137 aircraft bombed Turin.(3) These night bombers came from Nos. 1, 3, 5 and 8 R.A.F. Groups. All the participating groups were scheduled for a very heavy attack on Peenemunde on the night 17/18 August.

U.K. - North Africa shuttle bombing(4)

The idea of shuttle bombing between the United Kingdom and North Africa was not new, although such operations had only been three times attempted. The flight via Regensburg of 17 August was, therefore, an exceptional experiment and the difficulties involved were, as usual, formidable.

General Arnold, among others, had hoped that the flight of these heavy bombers to North Africa bases would inaugurate a regular system of bombing which would capitalise on the usually finer weather ruling in the Mediterranean area, and on the confusion into which the manoeuvre was expected to (and did) throw the enemy fighter controls. But Col. Curtis Le May, who had preceded the 3rd Bombardment Division to Africa to arrange for their maintenance and base facilities, reported unfavourably on the experiment.(5)

It was difficult, he affirmed, to operate heavy bombers without their ground crews, especially if maintenance and base facilities were insufficient, as in Africa, where the fluid nature of operations demanded the constant moving of supplies and equipment. Moreover, he continued, landing away from their bases put an additional strain on crews and affected their efficiency adversely.

The question arises here whether it could not have been arranged for U.K.-based heavy bombers to proceed to North Africa on the shuttle principle after operations over Europe and in sufficient strength to be diverted decisively on to the Messina traffic. From the above consideration of the material difficulties alone, the answer is that the idea would have been considered with misgiving. But to furnish a full answer, it will be first necessary to review the contemporary commitments of the heavy bombers of the Eighth Air Force and Bomber Command. If they could be spared for attacks on North Italy, would it not have been possible for them to proceed South, re-fuel and attack the Messina evacuation area?

Bomber Command and Eighth Air Force commitments in the first half of August.(6).

By 1 Aug. 43, the Combined Bomber Offensive was gathering momentum. U.S. day bombers had operated daily (with one exception) from 24 to 30 July inclusive. On 1 August, the long-awaited attack on Ploesti by U.S. forces

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- (1) 408.4 tons.
 - (2) 591.2 tons.
 - (3) 244.3 tons.
 - (4) Craven & Cate.
 - (5) Letter Col. Le May to C.G. VIII B.C. 29.8.43 quoted in (4)
 - (6) R.A.F. narrative. The bombing offensive against Germany. Vol.V.: Craven & Cate.

from Cyrenaica, reinforced from the U.K., was made at heavy cost of crews and aircraft. The U.S. day heavy bombers in the U.K. built up for the major attacks on Ruhr targets of 12 August and those on airfields in occupied France of 15 and 16 August.

A parallel situation ruled in Bomber Command. Quite apart from attacks on Germany under the Combined Bomber Offensive, it had been decided to take air counter-measures against the development of long-range weapons at Peenemunde. The whole future course of the war might well depend on their outcome. A directive was issued on 1 July to Bomber Command for the heaviest possible attack as soon as feasible. Preparations were close on completion when the evacuation of Sicily was imminent. It was a very complex operation, in which all groups of Bomber Command must operate. The diversion of bombers to North Italy at this period must have imposed severe strain on the organization.

Peenemunde was attacked on the night 17/18 August.

Five hundred and ninety-seven heavy bombers were engaged, including all the groups which had bombed Milan, Turin and Genoa.

The chances of shuttle-bombing operations against the evacuation

There can be no doubt that substantial heavy bomber forces borrowed from the United Kingdom and concentrated on the approaches, assembly areas, landing stages, berths, beaches and anti-aircraft batteries of the crucial area by day and night from the night of 11/12th to the night of 16/17 August would have devastated at least a considerable part of the enemy's land installations and hindered his task to a much greater extent than was found possible. There is, on the other hand, reasonable doubt whether the employment of strategic escort fighters unaccustomed to operations against small well-armed surface craft in prohibitive "flak" conditions would have improved matters.

Yet from our investigations into operations from the United Kingdom it is extremely difficult to visualise any terms under which the Combined Bomber Offensive would have been interrupted for what was, from the viewpoint of the Overlord planners, a fleeting tactical problem in a secondary theatre. The bombing for a brief spell, and for over-riding political motives, of three major industrial towns of Northern Italy was another matter and, even then, there were severe limits to the period and strength authorised. Furthermore, it must be borne in mind that during the course of the evacuation crisis, Eisenhower was being reminded by a series of blunt negatives that whatever he planned to accomplish in the Mediterranean must be with his own resources. This general context may go far to explain why outside aid was not appealed for by the theatre command or offered by the authorities in the United Kingdom.

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The Allied naval Messina Strait patrols and naval bombardment of North Calabria(1)

The Axis evacuation craft operated largely along routes which for the greater part ran north of Messina itself. The remote links in the chain ran up the Calabrian Coast as far as Vibo Valentia. The relatively small part the Allied Navies played in hindering this traffic will become understandable if the operations of the Messina Straits patrols and naval forces of the Western Task Force in the evacuation period are briefly outlined.

From 21 July until 17 August, a flotilla of Allied M.T.B.'s and M.G.B.'s maintained nightly patrols in the Strait of Messina. They were escorted by destroyers in the August period. The patrols had very few targets, only once firing torpedoes, but they experienced considerable opposition from shore batteries aided by searchlights. They thrust well up to Messina and on three occasions in the last fortnight penetrated to the north of that port. In the final stages, a continuous watch was kept on enemy traffic. Usually they were allowed to pass up the Straits unmolested, but were hotly attacked when returning.

On 1 August, they engaged a force of E-boats off Cape dell' Armi. On 6 August, they reported much activity at Messina. On 10 August, they were fired on from Messina and Cape dell' Armi. On 11 August, they fired torpedoes at a group of three medium merchant ships and some small craft steering for Messina. This was the only opportunity the light coastal forces had of attacking enemy evacuation traffic crossing the Straits.

The port of Marina di Vibo Valentia (near Pizzo), although well to the north of the hub of the mainland landing area, was involved in the traffic, and several of the craft engaged in it were sunk there by aircraft. On 16 August, at 0020 hours, Force Q, proceeding to the bombardment of Vibo Valentia opened fire on a coastal convoy in the area and claimed to have sunk two R-boats or M.L.'s of the escort. There is no confirmation of these sinkings from enemy sources. Shortly after 0200 hours, Force Q bombarded the town and harbour. No shipping was visible, but Italian sources admit the loss of one MZ boat there the next day which may have been caused on the 16th.(2) An Italian MZ motor landing craft had been sunk there on 14 August by aircraft.(3)

During the night 17/18 August, naval forces bombarded Gioia Tauro and Palmi, both of which had been used in support of the evacuation, but there is no confirmation from enemy sources of any resulting losses of evacuation craft.

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- (1) Battle Summary No. 35 (Admiralty Historical Section) (IIK/18/27 A.H.B.)
 - (2) The date given, no doubt in error, is 15 August.
 - (3) Lloyds reported the sinking of the Carlo Zeno, a steamship of 1,446 tons by surface craft on 15 August, but there is nothing to support this; it is most probably the ship reported in Navi Perdute as sunk on 14 August by aircraft.

Very early on 19 August, two cruisers and two destroyers on a routine sweep of the Gulf of Policastro claimed to have hit and set on fire two or three barges or landing craft about 2 miles off Scalea, well up the coast. The destroyers then claimed to have sunk five landing craft in the area, on being detached to finish off this and another group. Two barges were reported gravely damaged later and the crews seen jumping overboard. It was reported that more than seven barges were sunk in this engagement.(1) These events happened nearly two days after the end of the evacuation. These small craft were proceeding to Naples. The Berta, a German oil barge of 200 tons, was sunk at Scalea on 17 August by Allied surface craft. There are no admissions for 18 or 19 August in the list of merchant and fishing vessels lost. The craft may have been hit, salvaged and sailed again or were towed.

Allied night air operations 5/6 to 10/11 August(2)

Until the issue of special orders on 6 August by Tactical Air Force, the air offensive against enemy supply from the mainland to Sicily had been directed against shipping, roads, railways, ferry terminals and beaches on both sides of the Strait of Messina. The Strait, only just over 2 miles across at its narrowest point, was not a target in itself. The target was the traffic system within the transit area, viewed as a whole. Roughly in the centre of the traffic system was the heavily defended Messina Fortress Area. In addition to the main tasks of supporting the Army and driving back the enemy air forces from their bases, much damage had been done to enemy communications both sides of the Strait and to the terminal towns of Messina, San Giovanni and Reggio. Photographs showed that, as centres, these three towns were largely neutralised.(3) In spite of casualties, ferry craft continued to ply. The Italian evacuation of redundant troops and material began so cautiously that nothing abnormal was visible.

On the night 5/6 August, six nights before the German evacuation began, 85 Wellingtons(4) attacked beaches from Messina northwards to Cape Peloro(5) in low cloud and haze. Neither they nor the Germans considered the results significant. Three Bostons attacked Scaletta, Paradiso and Reggio. The next night, 6/7 August, 37 Wellingtons attacked Messina-Peloro beaches, also in bad weather, with unobserved results. Six Bostons attacked Reggio. No losses or evacuation craft can be traced on either night, probably because they were at sea.

On the night 7/8 August, 70 effective Wellington sorties were flown, covering the Messina-Cape Peloro, Palmi and

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- (1) Confirmation of these claims cannot yet be established.
 - (2) Full details of Allied air operations up to 7 August may be found in the A.H.B. narrative on the Sicilian Campaign (First draft).
 - (3) N.A.P.R.W. and M.E.I.U. reports (A.H.B. II J/1/200 and IIM/67).
 - (4) Aircraft participating in the operations against the evacuation system are given with their units in Appendix 15.
 - (5) A very active area.

Cape Barbi (between Palmi and Bagnara in the Toe) beaches and those south of Messina. Too much importance was attached to attacking areas with only refuelling and revictualling units, although there was much point in consistently bombing the Messina-Cape Peloro stretch. Scaletta beaches were not used. Fires were started at several points. One German naval ferry barge(1) was sunk by aircraft. One Wellington was shot down.

On the night 8/9 August, 82 Wellingtons spread their effort over the beaches between Messina and Cape Peloro, but results were obscured by haze. They met anti-aircraft defences which varied, more than usually, in density and accuracy and reported 12 to 15 searchlights. The same night, 11 Bostons attacked Reggio, which, though abandoned by most of the operational units, put up a barrage. Little movement was seen.

On the night 9/10, 86 Wellingtons returned to the Messina-Cape Peloro stretch, adding to the Germans' apprehensions, starting fires, cutting roads and railway lines, wrecking yards and causing explosions at Torre di Faro and Paradiso, and bursts among small craft at Ganzirri.

On the night 10/11 August, 88 Wellingtons continued attacks on the Messina-Cape Peloro stretch. Fires were reported between Sant' Agata and Ganzirri. Photographs suggested good coverage. A few craft were hit, actual sinkings were low. These craft were quickly filled and never stayed long in obvious anchorages. In spite of all hazards, the Germans proceeded with the evacuation and all attacks were persistently fought by the anti-aircraft gun and searchlight crews.

Day attacks by U.S. heavy bombers

Although Messina, Reggio and San Giovanni towns and ferry terminals had been already bombed occasionally from high altitudes by U.S. bombers before and during the campaign, the wide commitments of those aircraft had usually engaged them elsewhere. By the time the Italian evacuation began on 3 August, they were engaged in attacks on other targets as far apart as Rome and Ploesti. Furthermore, their gross effort was declining. After the fall of Palermo and until 17 August, the Strategic Air Force's effort was on a somewhat reduced scale. It never equalled its effort of the period 10 to 24 July until later days at Foggia. The main reason for this was combat fatigue, which developed quickly in the Mediterranean theatre during the summer months when the weather seldom prevented flying or hindered maintenance. Any effort to increase the frequency of operations was certain to result in lower efficiency and higher losses; the only satisfactory solution was a higher replacement rate for aircrews, which was not possible at the time.(2)

Although they certainly increased the enemy's material difficulties, the three Fortress attacks of 5, 6 and 9 August

(1) M.F.P.434.
(2) Craven and Cate. Vol. II.

on Messina and the area round it(1) did virtually nothing to stop the evacuation. Von Liebenstein's comment on these high altitude attacks was that they were practically non-existent.(2) Barone states that the ferry boats continued to use the harbour. There was no plan for heavy attacks on the Straits artillery complex, either by heavy bombers or naval surface units.

Progressive effects of night and day attacks on the evacuation

The best sources for evaluating the effects of the Allied night and day air attacks from the night 11/12 August onwards are the local Axis records. Scrutiny of the war diary and report of the Sea Transport Fuehrer Messina Strait, of the logs of the three German landing flotillas engaged(3) and Admiral Barone's report(4) indicate that the Allied air attacks forced the plan out of its mould, subjected to it severe strain, sank and damaged a number of craft, destroyed installations and led to a drain on the resources of craft and a crisis in anti-aircraft ammunition stocks. Some records written long after the event suggest that the air forces' effort was sometimes marked with futility and that they were out-maneuvred throughout. This was not so. For example, it is stated in Volume IX of the "History of United States Naval Operations in World War II" that the Wellingtons bombed the wrong beaches and the wrong ports. The Germans did not think so at the time. The six nights and five days of Operation "Lehrgang" were for them a chastening experience, the outcome of which was by no means certain until the end.

The Wellington night attacks of the first ten days in August acted as a danger signal to Captain von Liebenstein. Although the Allied air units concentrated on the two northerly crossings until the night 11/12 August, their choice of targets could not be predicted: the long duration of their attacks suggested that they might hold up movement altogether. He was ordered against his better judgement to operate by night, so he began in that fashion.

Although loading on the 11 August was hampered by fighters, only two German craft were damaged and the German ferries took over 3631 troops, 801 vehicles, 35 tons of ammunition, 48 tons of fuel and 1128 tons of equipment. The night air attacks lasted from 2100 hours to 0500 hours on 12 August, falling most heavily on Faro (Route I) and Ganzirri (Route II) (as well as San Giovanni) and no craft could return to Sicily after 2100 hours; although the loaded craft were not caught, the beaches suffered. Army transport was slow coming in. Air raids scared the lorry

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- (1) August 5, 69 Fortresses on Messina harbour: August 6, 52 Fortresses on Messina road junction: August 9, 54 Fortresses on area communications. (War Room Summary).
 - (2) Von Liebenstein's war diary 15 August 1943. (See Appendix 16.)
 - (3) The 2nd, 4th and 10th Landing Flotillas
 - (4) L'opera svolta della R. Marina durante la battaglia di Sicilia (by courtesy of Italian Naval Historical Office, Rome, and A.H.S.) (A.H.B.II J.5/144).

drivers, who sat out the attacks in shelters. The two southerly routes, therefore, carried only a low volume of traffic that night. Routes I to IV had been detailed for the evacuation. He thought of substituting Route V for Route IV, asked for the ferry barges ordered North to be returned to replace losses and was promised them with reserves in addition. He still tried to make the night ferry work, but proposed individual trips by day. He had to see to the escort of craft from Giora Tauro down to Catona. A tanker barge and a ferry barge were escorted down by a flak ferry barge. The fuel position was satisfactory, with enough for five more days and nights and some in reserve. As a result of night attacks, it was decided to send no more R-boats south of Vibo Valentia at night.

The night air attack of 12/13 August was so severe that German operations were postponed until 0500 hours on 13 August. Messina, Ganzirri and Faro were again the main targets. Routes I and II had to be closed. Returning craft were staggered so as to prevent concentrations which would offer easier targets by day to aircraft. The night attacks did considerable damage to North Sicilian roads. It seemed that the service must slow down. But so strenuously did the day ferries work and so fortunate were they in avoiding loss to the frequent day fighter attacks that a record transfer was made that day - 13 August.(1) Continuous air attacks were eating into the dwindling stocks of anti-aircraft ammunition. But the flak was clearly most discouraging in its effects on the Allied aircraft. At last Sea Transport H.Q. Rome agreed to send von Liebenstein fifteen naval ferry barges; but time was running out.

The night air attacks on Routes I and II, (i.e. all three Faro stations and the two Ganzirri stations), forced a change of tactics on the Germans. On the night 13/14th, only Route III (Paradisi to Catona) and Route IV (San Salvatore to Gallico) were operating. The bulk of the traffic crossed by day on 14 August. Only four Siebel ferries and three M.F.P.s. stood by on Routes I and II. There were no night attacks.(2) It was a bright moonlit night and great numbers of lorries ran into Messina.

11 August was an unfortunate day for the Italians. The small ferry steamers Baiamonte, Viotti and Rizzo and the large ferry Cariddi were all damaged by aircraft. The ferry S.S. Villa came into service on 12 August. She caught fire at 1900 hours the same day, was out of action for about 48 hours, but returned to service on the morning of 15 August and ran until 1200 hours on 16 August from No. 3 ferry berth in Messina harbour.

14 August proved a record day for operations. They were hardly hampered at all by the fighter operations: but the road West of Messina was cut and that hindered the passage of vehicles to the stages of Routes I and II. 7,424 troops, 600 wounded and 39 tanks were transported to

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- (1) 6,142 troops, 440 wounded, 1,131 vehicles, 36 guns, 7 tanks, 97 tons ammunition, 53 tons fuel and 1,673 tons equipment.
 - (2) In spite of A.V.M. Coningham's plea for their continuation. Refer to signal to Tedder A.154 23/12 - 11 Aug. 43. (in A.H.B. II J.1/90/18).

Italy.(1) There were several engagements. M.F.P. 503 was attacked by eight aircraft and ten of her crew badly wounded.(2)

In reply to von Liebenstein's call for immediate supplies of ammunition, Luftflotte 2 promised 20,000 rounds of 20 mm Flak 38. But it was too late to reach them in time. Economy would be the solution, but engagements were too hot for economy.

Although Allied night air operations(3) had thrown the bulk of the evacuation traffic on to the day run, the augmented day fighter and fighter bomber forces were insufficient in numbers to operate in any great volume without cessation from daybreak to dusk, owing to heavy commitments to the land battle, escort and anti-communication tasks. Von Liebenstein commented on 15 August, after four days of day ferrying to Calabria:-

"It is astonishing that in all these days the enemy has not put in sharper attacks. There are often one to two hours pauses between the attacks. High altitude attacks are practically fruitless. Only at night the air attacks are often continuous".

There were only two more nights and one more day to go. The position was more hopeful, but still not secure.

On the two previous days - 13 and 14 August - our reconnaissance had reported the pattern of activity in the Strait and Warhawks, Kittyhawks and Spitfires operated throughout the day at intervals. There were many engagements with ferry craft: and casualties were caused.

On 13 August, there was air opposition by some ten Me.109s and F.W.190s and on 14 August by some thirty M.C. 202s and Me.109s, probably on their way to bomb Allied shipping. In spite of all the air attacks, the Germans fought their ships through. They knew that the whole operation would soon come to an end. There seems to have been a quiet period on at least one afternoon, for on 14 August, thirty-nine Mitchells despatched to attack Straits shipping could find no targets, although the weather was clear. As an alternative they dropped ninety-three tons of bombs on railway bridges north of Scalette, on the crowded coast road. Von Liebenstein knew only some of the facts about the air attacks on the roads. They were severe and frequent and made with all the strength available at the period. But they did not, according to one secondary source,(4) ever interrupt the roads for more than two hours. The local German repair organization was characteristically expert.

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- (1) Plus 1380 vehicles, 42 guns, 214 tons ammunition, 155 tons fuel and 1728 tons equipment.
 - (2) Examples will be given of the intensity of such engagements between ferry craft and aircraft, which were often fought out to the end with loss on both sides.
 - (3) Total Wellington losses 3-16 August in the evacuation area were 16.
 - (4) History of U.S. Naval Operations in World War II, Vol. IX, probably quoting from Admiral Ruge's report written in 1946.

Aircrews reported that only aircraft developing aggressive action were fired at.(1) This suggested to them what in fact was happening, that the Germans were husbanding their ammunition.

By 15 August, Allied Headquarters in Sicily had come to the conclusion that not more than 10,000 Germans were still in Sicily and that these could easily be evacuated in the next two days. It would surprise them if more than a thousand or so Germans were caught.(2)

In the meantime, the Italian motor landing craft, probably six or seven in number, filled the gap caused by the fire on the Villa. On 14 or 15 August, it was clear to Admiral Barone that Rome would not send him the relief tug requested to tow the Cariddi, now filled with heavy equipment, to the mainland. She was scuttled outside Messina on the 16 August, already damaged by aircraft.(3)

On 16 August, the Baiamonte and Viotti, too badly damaged by aircraft to risk the crossing, were destroyed by the Italians. Only the Rizzo escaped but she was soon wrecked. The Villa was scuttled outside San Giovanni on 15 August.(4)

Admiral Barone writes as though there were only two M.Z. boats engaged, but the time and positions of the sinkings by aircraft prove that there were several more and that the Italian Navy dispatched reinforcements. For example, the M.Z. 701 and 790 were attacked and the former sunk by aircraft at Vibo Valentia on 11 August. At dawn on 15 August, M.Z. 746 and 774 left Crotone for Messina, were damaged by aircraft at Siderno and had to be beached, useless. On 14 August, M.Z. 711 and 757 left Castellammare di Stabia (near Naples) for Messina, but were beached, out of action.(5)

Effect on the Navy of withdrawal of night bombers from Strait operations

On 15 August, the Flag Officer Sicily signalled to the C.-in-C. Mediterranean:-

"No activity by our air forces round Straits during last two nights. As a result there has been greatly increased activity by guns and searchlights against our surface forces. Can air force make special effort tonight (R) tonight to help our patrols and the landing at CAPE DALI by diverting attention".

The signal was relayed to Mediterranean Air Command Post. That night and the next, Wellingtons and a few Bostons returned to attack the beaches. The events in

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- (1) "The Sicilian Campaign". A.H.B. narrative (first draft).
 - (2) Ibid.
 - (3) Barone.
 - (4) Ibid.
 - (5) Navi Perdute (Italian Naval Historical Office).
(A.H.B.6)

the Strait which gave rise to the above signal occurred during the night of 14/15 August and throw light on the conditions facing the Allied night Messina Strait Patrols.(1)

At 0124 hours, a formation of three M.T.B's was illuminated by a searchlight in the position $38^{\circ} 11\frac{1}{2}'$ N, $15^{\circ} 36\frac{1}{2}'$ E. The patrol made smoke while batteries on both coasts opened fire, hitting M.T.B.665 and setting her on fire. As the shelling was intense and accurate, her two companions were unable to assist. An attempt by M.T.B.76 to go to her rescue was rendered abortive by gunfire. M.T.B's 315 and 85, under constant shell-fire, then attempted to reach her, but she was last seen burning fiercely, with occasional explosions, drifting towards the Sicilian coast. No survivors were recovered.

The intensive character of operations in the Strait(2)

The nature of the fighting in the Messina Strait area may be illustrated best if three specimen operations are examined. This will dispose of any idea that the air attacks were haphazard or that the evacuation was an easy exercise. The facts are taken from the log book of the 4th Landing Flotilla, a record crammed with incident.

At 0845 hours on 6 August, before the mass evacuation began, the naval ferry lighter F.429 on its way from Vibo Valentia to Catona, was attacked several times by fighters 1 mile S.W. of Nicotera. Although bombs fell harmlessly on the steel plating of the gun turret, others pierced the hold and set the cargo on fire. The crew jumped overboard. The captain, although he knew the ammunition below might explode at any moment, steered his craft with the swimming crew to shore. The wounded were landed first: the captain landed last. Twelve fighters returned down sun to attack the beached boat and started new fires. The boat blew up.

On 14 August, six naval ferry barges were lying in Vibo Valentia harbour. At 2100 hours, they were attacked without warning by some thirty fighters and an unrecorded number of bombers. On the last of three attacks, the fighters hit F.462, which was full of fuel oil, in the hold and on the midship gun. The whole sky was lit up with the flames. F.462 was burnt out. F.615 was hit in the ammunition hold and sprang a leak, but it was unloaded in time and the two craft towed under escort to Naples, of no further use in the evacuation.

On 16 August, F.607 was attacked in the afternoon with a 'hail of bombs' in Faro North Station. Although five men were wounded and the engine room was half under water, the captain ordered his boat to be sailed for Italy. The crew used their 75 mm gun, but made no claims. The boat reached Cannitello, was beached and blown up.

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- (1) Battle Summary No. 35 Admiralty Hist. Sec.
B.R.1736(27) (A.H.B. II K/18/27).
 - (2) Log of 4th Landing Flotilla (Admly. F.D.S.)

The ferry craft brought down several aircraft, some of them with their 20 mm guns.

The German records of air attacks(1)

The 2nd Landing Flotilla was, during July and August, engaged in seventy-three combats at sea with aircraft and suffered forty air attacks in port, while carrying out one hundred and twenty trips. It lost five boats, two dead and twenty wounded to aircraft. The 4th Landing Flotilla, while engaged in its four hundred and seventy-six trips between 1 and 17 August inclusive, suffered one hundred and fifty-seven air attacks, fifty-seven of them gun and one hundred bomb attacks. They lost eight dead and twenty-seven seriously wounded. They recorded having spent 22,977 rounds of 20 mm ammunition, but do not record the 75 mm. expenditure. They lost six boats, four at least to aircraft. The duration and spacing of air attacks may be illustrated in a single quotation from one of the flotillas' logs. On 12 August, on the Paradiso-Gatona run, there were eight day and one night air raid warnings.(2)

Increased air effort on 16 August unavailing

On 16 August, the ground situation permitted the release of a number of Desert Air Force fighter bombers. As a result, the day's effort against the evacuation system reached a total of 270 effective fighter bomber and 47 medium bomber sorties. Two of the medium bombers were destroyed and 44 hit by flak. That night, the total effort against points in the evacuation area was 40 Wellingtons, 22 Bostons and 4 Baltimores.(3)

Although many craft were damaged and the Siebel ferries were running on one engine at 4 knots, the only craft sunk, according to German records, were two M.F.P.'s and one Siebel ferry.(4) This disappointing result of a stepped-up effort points to resistant factors inherent in the target system itself. Clearly the best the Allies could achieve in twenty-four hours was insufficient to meet the combined timing, shortness of distance, nature of the craft and anti-aircraft defences.

That night, the last troops and material crossed. The last German ferry left Messina at 0600 hours on 17 August. British artillery had been firing weakly into the Messina area since 1200 hours on 16 August. The crews and shore staff were at the end of their tether.

Captain von Liebenstein left at 1700 hours on the 18th. His order of the day thanked the boat crews, works battalions, harbour companies, Pioneer companies, supply and station staff. They had succeeded in transferring their comrades from Sicily with far more material than expected. It had been an operation, he wrote, of historical significance.

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- (1) Landing flotilla logs (Admiralty F.D.S.)
 - (2) The eight day periods ran 0125 to 0515, 0715 to 0738, 0830 to 0838, 0936 to 0945, 1155 to 1159, 1233 to 1248, 1527 to 1535 and 1620 to 1633 hours. The night period of alert ran from 2055 to 0513 hours.
 - (3) N.A.A.F. table of operations.
 - (4) German flotilla logs. (F.D.S. Admiralty).

ResultsThe Italian evacuation(1)

As July drew towards its end, elements of the Italian Sixth Army not engaged in operations concentrated in the north-eastern tip of Sicily. On 31 July, General Guzzoni called Admiral Barone to a conference, the aim of which was to plan execution of an order from the Army High Command to evacuate to Italy units and troops which could be dispensed with. Admiral Barone was instructed to begin the evacuation on 3 August of some 6000-7000 men.

For the first few days from 3 August, the two small steamers Ammiraglio Viotto(2) and Luigi Rizzo(3) sailed at dawn from the Bianchina Littorio quay and the Masotto mole in the inner harbour of Messina across to Scilla. They were joined on this run(4) by the steamer Baiamonte(5). They made many trips, although all three were damaged at least once by aircraft.(6) They carried the troops arriving down the Peloritana road. Troops in the northern Sparta area embarked at Mortelle in naval landing craft (M.Z. boats). Admiral Barone reports that there were only two of these on operations, although ten had been allowed for. The others, he said, were engaged in supply operations in the Toe of Italy. It has, however, been established that about ten were actually involved in the evacuation and that reinforcements were sent from Naples and Crotone.(7)

Of the regular ferry steamers which used to ply on the rail ferry service between Villa San Giovanni and the Messina ferry berths, only the Villa(8) and the old motor vessel Cariddi(9) were available. The latter was considered more suitable for heavy equipment.

Between 3 and 10 August, some 7,000 men and an unspecified number of vehicles were evacuated.

On 9 August, orders were received to evacuate the entire XVI Army Corps with certain tactical groups and the coastal defence units. The mass evacuation began in the afternoon of 10 August.

The naval craft were detailed and a route plan devised which would minimize risks of air attack. The troops in the Sparta area were evacuated early from Mortelle to Cannitello by two landing craft. These were then ordered to Messina. One of them was sunk by aircraft(10) off Scilla on 12 August.

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- (1) Admiral Barone "L'Opera svolta dalla R. Marina durante la battaglia di Sicilia. (A.H.B.II J.5/144).
 - (2) Ex-Topola (YS) 254 G.R.T.
 - (3) 382 G.R.T.
 - (4) Date cannot be determined.
 - (5) Ex-Sarajevo (YS) 479 G.R.T.
 - (6) Dates unspecified.
 - (7) Navi Perdute Italian Admiralty (Air Ministry Library No. 5531/14).
 - (8) 932 G.R.T.
 - (9) 2,809 G.R.T.
 - (10) M.Z. 732

The Villa ran from Messina to San Giovanni. On the evening of 12 August, she made her last nightly crossing, with about 3,000 troops on board. A fire broke out in her hold, which incapacitated her for about 48 hours. The Cariddi, working on only one engine, was the object of energetic repairs, but they failed to render her seaworthy enough for safe transport of troops. She returned to Paradiso and was filled with heavy artillery and equipment. A tug was ordered to tow her to the mainland.

The Baiamonte, Viotti and Rizzo ran to Scilla. The motor landing craft ran to Scilla, too, loading at the beach below the Reina Margherita Hospital on the fringe of Messina. All three were hit and damaged by aircraft, seriously, as their ultimate fate indicated.

While the Villa and Cariddi were unserviceable, the M.Z. boats bore the weight of traffic. On 13 and 14 August, about 20,000 troops were evacuated. Each M.Z. boat carried between 800 and 1000 troops. A few minesweepers of the Coastguard Service (Guardia di Finanza) were also engaged in transport tasks.

The evacuation ended at 1200 hours on 16 August. Between 3 and 16 August, states Admiral Barone, the approximate volume of men and materials evacuated was as follows:-

- 62,000 men
- 227 motor vehicles
- 48 motor cycles
- 30 motor tricycles
- 12 mules
- 38 47-mm guns
- 3 122-mm guns

No troops were lost, he states.

The Cariddi was scuttled at Paradiso; the Villa was scuttled at San Giovanni; the Viotti was destroyed in the Strait by the Italians; the Rizzo arrived damaged at Scilla on 16 August and was found a wreck at Pizzo by the Allies; the Baiamonte, badly damaged like the Viotti, was blown up by the Italians in Messina.

Comparison of the two evacuations

The Italian evacuation shipping, as the figures given below confirm, suffered even more serious loss and attrition than the Germans. Eight regular naval landing craft were sunk by aircraft. All of the five steamer ferries were so badly damaged by aircraft or other causes that it was decided to blow them up or scuttle them. The system was worn right down when the task was ended.

Losses of Italian evacuation shipping 1/16 August, 1943

Date	Vessel	Position	Cause
Aug. 6	<u>MZ.756</u>	Ganzirri	a/c
Aug. 6	<u>MZ.775</u>	"	a/c
Prev. Aug. 6	<u>Rizzo</u>	Scilla & Pizzo	Damaged by a/c: arrived Scilla 16/8: found wrecked in Pizzo by Allies.
Aug. 7	<u>MZ.787</u>	nr. Bagnara	a/c
Prev. Aug. 9	<u>Viotti</u>	Strait	damaged by a/c: destroyed 16/8 by Italians.
Aug. 10	<u>Villa</u>	Strait & San Giovanni	fire 10/8: scuttled in S. Giovanni 15/8 (?)
Aug. 12 or 14	<u>MZ.732</u>	off Scilla	a/c
" 14	<u>MZ.701</u>	Vibo Valentia	a/c
" 14	<u>MZ.755</u>	Messina	a/c
" 15	<u>MZ.746</u>	Siderno	a/c
" 15	<u>MZ.774</u>	"	a/c
" 16	<u>R.D.25</u>	Messina	abandoned
" 16	<u>Briamonte</u>	"	blown up: damaged by a/c.
" 17	Cariddi	"	Abandoned. damaged.

Total casualties to vessels identified with the evacuation

Sunk or put out of action by aircraft:- 8 motor landing craft.
3 steamers
(destroyed by Italians).
Damaged by aircraft and scuttled:- 2 ferry boats.
Damaged in collision and wrecked:- 1 steamer.
Abandoned:- 1 minesweeper

Note: On 17 August, when the evacuation was over, 3 more landing craft were sunk by aircraft.

Factors constant in both the Italian and the German evacuations were the anti-aircraft protection of the Strait defences, a short sea run, sound planning, the intermittent risks of day and night air attacks, a non-stop effort by the ferry crews in the minimum possible time and the favourable retirement terrain of the tapering north-eastern tip of Sicily. They both succeeded in transporting large numbers of men without noticeable loss.

Of the two commands, the Italians, whom the Germans affected to despise, took the greater risks. Their vessels were mostly steamships, much easier targets for aircraft than the German naval craft. The route from Messina to Scilla was several miles longer than the longest German route from Salvatore to Gallico. Whereas the Germans worked obscure beaches, the Italians used the harbours of bomb-shattered Messina and San Giovanni for the reason that these bases would serve their end better and bring about the desired result in time. While the Italian crews

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worked with no less determination than their German colleagues, some indiscipline was reported among the Italian troops conveyed. The Italians would, according to Barone, have evacuated more material, had it not been looted and dismantled by the Germans. The timing and staging of both evacuations could hardly be surpassed in excellence. Means were admirably adapted to ends. When the means showed signs of running to a standstill and Allied shells were falling in Messina, the task had been accomplished.

Losses of enemy craft to Allied aircraft

Admiral Ruge is quoted(1) as stating that the Axis naval ferry craft losses were six German boats and one Italian boat sunk or damaged beyond repair, and seven or eight others damaged. These figures fall short of the full totals admitted in Axis records. The confirmed German losses in evacuation craft from 11 to 17 August were seven naval craft plus one so badly damaged that it was towed to Naples for repairs.(2) The confirmed Italian losses, already given, were 14 vessels. The total craft destroyed or put out of action by Allied aircraft during the two official major evacuation operations totalled, therefore, to 22. Many others were badly damaged by hits or near misses.

It has been said that all Axis sources are unanimous in stating that not a single passenger was lost. Nothing has been found to prove this inaccurate, although at some time between 15 July and 18 August, the 4th Landing Flotilla lost one soldier from the Panzer Corps in addition to its own nine dead.

Statistics of troops and material evacuated

If one takes into account the first ten days of August, when a minor evacuation of redundant men (including wounded) and equipment was proceeding, the ferry service transported 38,846 German troops, 10,356 vehicles and 14,946 tons of supplies. To the troop figure should be added 13,500 wounded carried across in landing boats from 15 July until 17 August. These figures are recorded by the Sea Transport Fuehrer.(3) They vary from a report by Kesselring(4) which

(1) History of U.S. Naval Operations in World War II, Vol. IX.

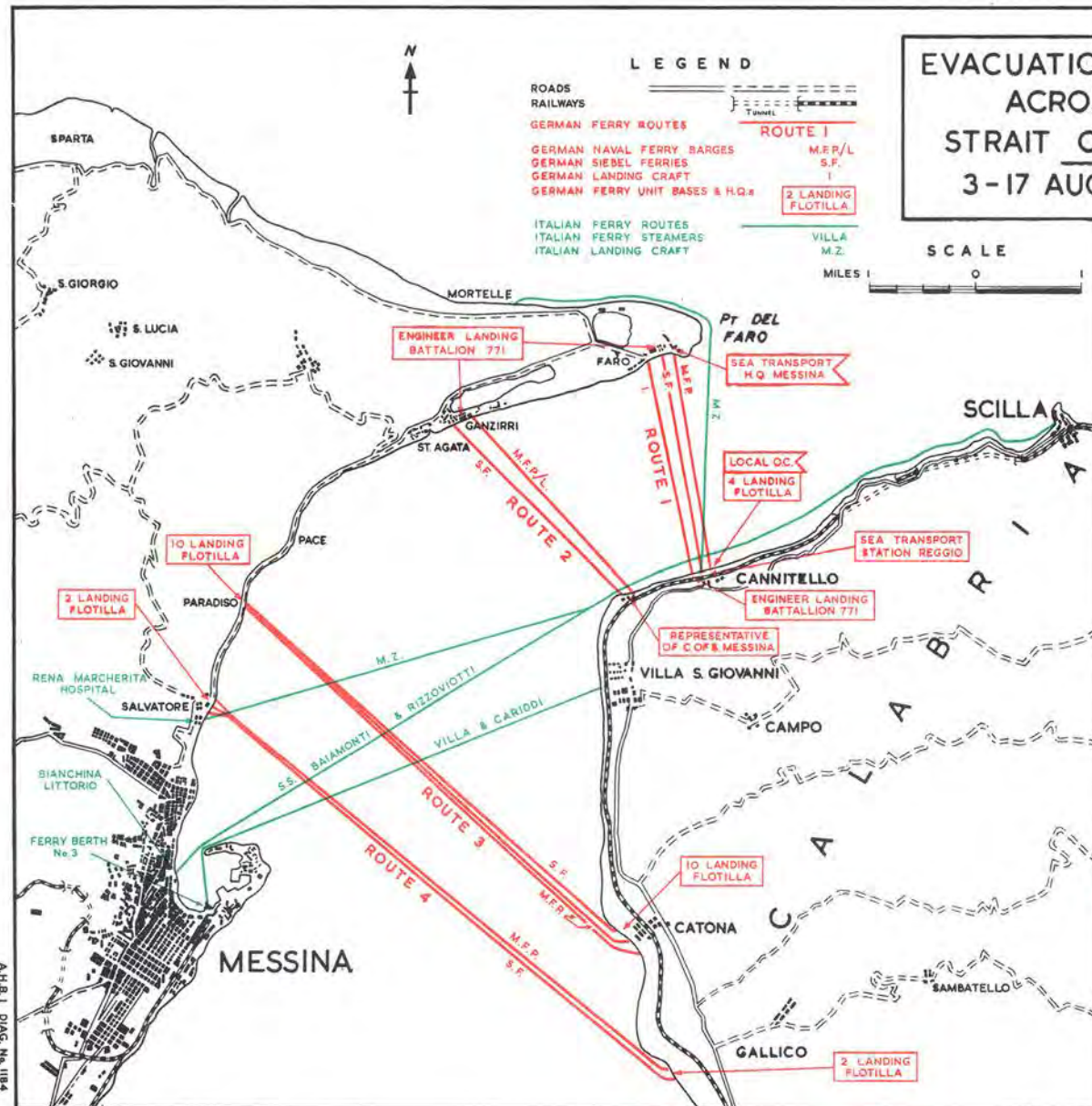
Date	Naval craft	Position	Number	Cause
Aug. 13	M.F.P. 435	Gioia Tauro	1	aircraft
" 14	M.F.P. 462	Vibo Valentia	1	"
" 16	M.F.P. 588	" "	1	"
	M.F.P. 607	Faro North	1	"
	S.F. 161, 232, 175	" "	3	"
		Total	7	

Note (1) On 14 August, M.F.P. 615 was so badly damaged by aircraft that she was towed to Naples for repair.

Note (2) From 1 to 10 August 6 German ferry craft and 3 tanker barges were sunk in the evacuation area. These were:- L.4, M.F.P. 430, 434, 429, 440, S.F. 86 and Frieda, Nicolaus and Bussard.

(3) Von Liebenstein's diary.

(4) Quoted by S. E. Morison.



EVACUATION OF SICILY ACROSS THE STRAIT OF MESSINA 3-17 AUGUST 1943

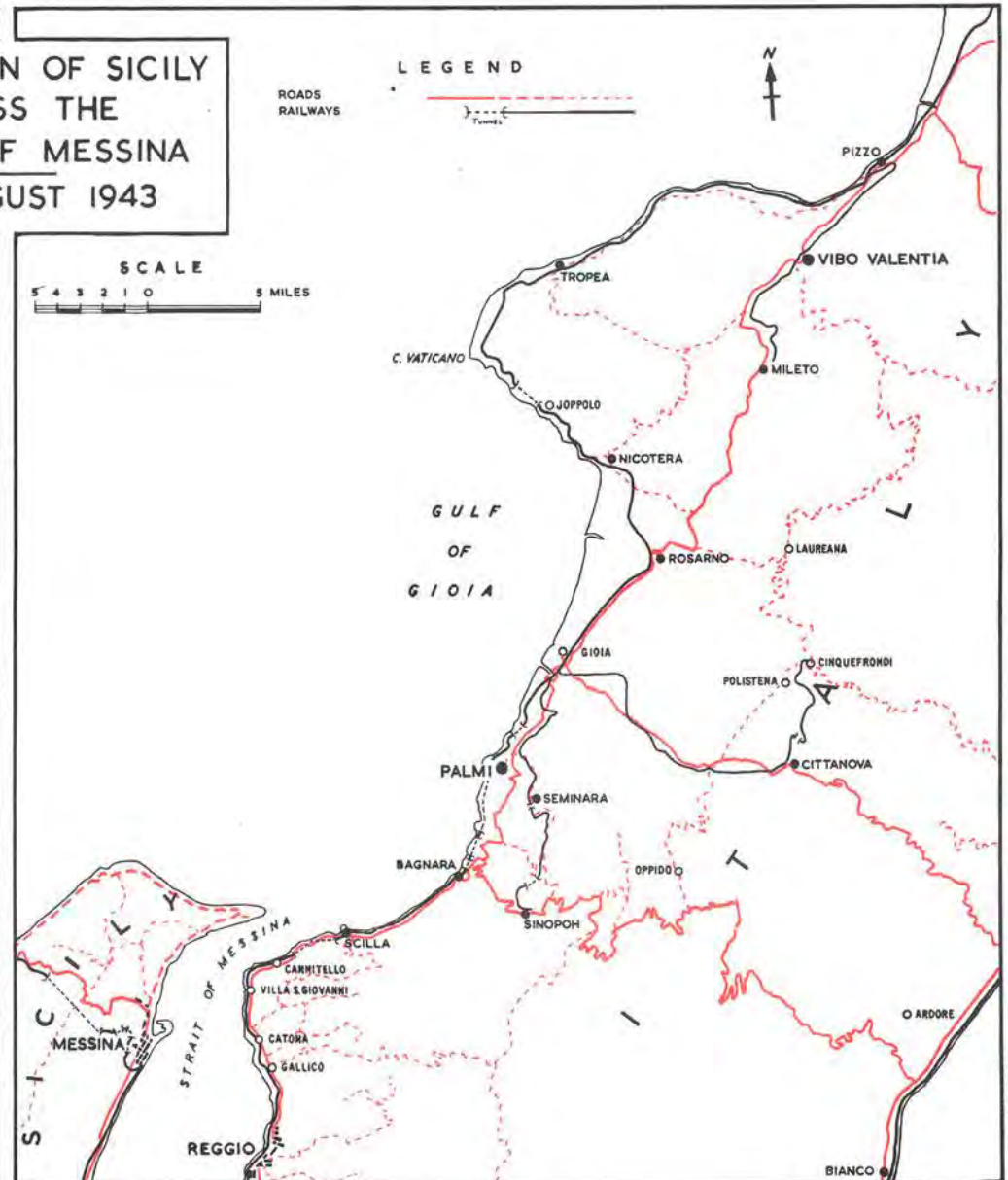


FIGURE 4

defines the figures for Operation "Lehrgang" itself - the operation of five days and six nights - as 39,569 troops (including 4,444 wounded), 9,605 vehicles, 47 tanks, 94 guns, over 2,000 tons of fuel and ammunition, and about 15,000 tons of gear and stores.

According to Admiral Barone, who supervised the Italian evacuation, about 62,000 Italian officers and men, 227 vehicles, 41 artillery pieces and 12 mules were transferred to the mainland.(1)

All three German divisions were briefly rested and brought up to strength and served to enable the Germans to meet the Allied landings in Italy with better results than they had hoped for.

The Air Forces employed

In view of the success of the evacuation, the general question arises as to whether the Allied air effort used against it was the best attainable with local resources.(2) To assist in a solution, the aircraft available will be first listed, with the units which participated.(3) Thereafter, the total sorties flown will be given under aircraft categories(4) and a comparison made with the sorties flown in tactical support of the ground forces in Sicily.

Midway during the period under review - 1 to 16/17 August - the following aircraft of the Northwest African Air Forces were operationally ready:-

	Aircraft	U.S.A.F.	R.A.F.	Total
<u>Strategic Air Force</u>	Heavy bombers	181		181
	Medium bombers	278	130	408
	Fighters/fighter bombers	280		280
<u>Tactical Air Force</u>	Medium bombers	112		112
	Light bombers	43	94	137
	Fighters/fighter bombers	377	344	721

Every one of the heavy, medium and light bomber units was engaged on one or more days between 1 and 16/17 August against the evacuation. The case is different with the fighter and fighter bomber units. The only fighters implicated were the Strategic Lightnings. The bulk of fighters were either engaged in ground attack or escort. Most fighter bomber units were implicated and their contribution rose steeply in the last two days.

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- (1) L'opera svolta della R Marina (A.H.B.II J.5/144)
 - (2) Viewed apart from the problem of co-operation by Strategic Air Force day-operational aircraft.
 - (3) See Appendix 14.
 - (4) See Appendix 15.

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Comparison of the air effort against the evacuation system with tactical support of the ground forces

The air effort against the evacuation system between 1 and 16/17 August was as follows, in sorties:--(1)

Heavy bombers	142
Medium bombers	945
Light bombers	125
Fighter bombers	2131
Fighters	117
<u>Total</u>	<u>3460</u>

The air effort in tactical support of the ground forces in Sicily, covering targets in Sicily and the western extremity of the Toe of Italy(2) in the same period was as follows, in sorties:--

Medium bombers	1313
Light bombers	1094
Fighter bombers	1922
Fighters	1084
<u>Total</u>	<u>5413</u>

It can be seen that the proportion of evacuation to tactical operations was roughly 9:13 for medium bombers, 1:9 for light bombers, 21:19 for fighter bombers and 1:9 for fighters. The only heavy bombers used in this period were on evacuation ports. The rates for medium and fighter bomber sorties suggest that the Tactical Air Force took the problem seriously and made a serious effort to solve it. The fighters were badly adapted to the tough conditions in the Fortress area and were wisely confined to the battle zone.

The example of operation "Retribution"

In the search for analogies one need turn back no further than the first half of May 43. The Allies had an integrated air/naval plan in readiness to prevent a major Axis evacuation from Tunisia; this plan was referred to unofficially as Operation "Retribution". In the event it was never put into effect. As a result of combined operations, the Axis armies were defeated in the field and large numbers were encircled and captured. Only about seven hundred left Tunisia by sea and they were practically all picked up by Allied naval surface patrols. The neutralization of the enemy air force ensured their relative freedom from enemy interference.

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- (1) See Appendix 15 for full details.
(2) Including attacks on 1 port, camps, bases, lines of communication in Sicily and the extreme Toe and ground strafing. Excluding mainland communications, offensive sweeps, escort, local defence, anti-shipping and shipping protection.

There was a good deal of debate as to the most suitable roles for the Navies and Air Forces at the time. In the Retribution plan, the Air Forces were made roughly responsible for preventing evacuation up to a line 5 miles from shore, and naval surface craft outside that limit.

Naval policy on the role of air forces

The recorded points of view of high-ranking Navy and Air Force officers in command at the time leave no doubt that there was not yet full agreement on the fundamental relations between air and sea power.(1)

The point of view of the C-in-C. Mediterranean concerning the situation in May 1943 may be best exemplified in his own words:-

"It must always be a more certain method of attack to employ warships for the destruction of shipping where circumstances admit, having in view the obstacle to aircraft of bad weather and fog at landing grounds and similar conditions at sea. Air support in reconnaissance and attack is of course invaluable as an adjunct but it is neither more efficient nor more economical(2)

While it is true that the (enemy) air threat to surface forces appeared to be materially less in the "(Sicilian)" Straits, I should not have allowed ships there unless cover had been available if required ... it was to be many months before we could say "the risk to shipping from air attack anywhere near the African coast was not very great" as a glance at the records of the North African convoys will testify(3) ... lack of fighter protection prevented our surface forces from operating against enemy supply routes by day ..(4)

..... this somewhat rigid dividing line between the responsibilities of the air and naval forces was necessitated by the fact that a large proportion of the pilots and air crews taking part had not hitherto been engaged in operations over the sea and were thus untrained in ship recognition ...(5). It may be that "newcomers became proficient after a few days," but that is long enough to do a lot of damage to our own ships during an operation that only lasted about six days. In the event, even though destroyers

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- (1) Commentary. There was insufficient factual evidence accumulated to that date to justify all the emphatic generalisations that were made.
- (2) Letter to Admiralty 11 Dec.46 (A.M. C.32026/46)
- (3) Ibid.
- (4) London Gazette Supplement No. 38423. 5 Oct.48.
- (5) Ibid.

had bridges and sides down to the waterline painted red this did not prevent them being attacked by our own aircraft.

..... the 5 miles line had little to do with shore defences.... There were, however, several obvious advantages in not operating close inshore on an enemy coast, which included mining hazards and enemy coast defence among them and the five mile line was therefore adopted."(1)

In 1941 he had written that:-

"There seemed to be an unwillingness to admit that R.A.F. personnel working over the sea required special training, though we, with our long and hardly-bought experience, knew otherwise."(2)

and this was still obviously his view.

So clear was the Navy's conviction that air cover was essential to its operations that for two years it had been advocating both the creation of a special land-based air force devoted entirely to naval requirements, on the lines of Coastal Command, and increases in the strength of the aircraft carrier force in the theatre.(3) This conviction was again expressed in August.

Dissatisfaction with air cover for Task Force 88(4)

Task Force 88 operated during July and August 1943 for a period of twenty-two days from an unprotected anchorage within bombing distance of enemy shore-based aircraft, rendering decisive support with its gunfire to a series of leapfrog amphibious landings on the coast of Northern Sicily. Palermo had been three times attacked by enemy bombers, twice with some success. There were good reasons for the failure of the Air Forces to provide continuous cover for all ships and harbours, among them their wide commitments to the ground forces, their attacks on enemy communications, the state of flux in air bases and shortages in certain categories of aircraft. Admiral Hewitt, commanding the Western Task Force, was not satisfied with either the weight or continuity of air cover.

Later considerations by the C.-in-C. Mediterranean

Amplification of the Navy's problem at the time has been furnished by the then C.-in-C. Mediterranean in print and interview. It is introduced at this point as of interest and relevant to any discussion of the evacuation.

In his autobiography(5) Admiral Viscount Cunningham of Hyndhope wrote:-

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- (1) Letter to Admiralty 11 Dec. 46 (A.M. C.32-26/46).
 - (2) A.H.B. Narrative 'The R.A.F. in Maritime War' Vol. VI (first draft).
 - (3) Ibid.
 - (4) Action report W.N.T.F. 'Husky' A.F.H.Q. 6066 (Cabinet Hist. Archives)
 - (5) A Sailor's Odyssey. Hutchinson. 1951.

"By the second week in August the Germans realized that the game was up and started to pull out. There was no effective way of stopping them, either by sea or air. The passage across the Straits of Messina, no more than three miles, could be made in less than one hour, and was covered by batteries and searchlights on both sides. The Germans sent their troops across by night, which ruled out serious interference by our aircraft. And though our M.T.Bs made almost nightly sallies well into the Straits at great risk to themselves, they could not really interrupt the enemy's traffic."

As a result of an interview with Admiral Cunningham, it is stated by the author of the History of United States Operations in World War II(1) that that is still the Admiral's belief. The Admiralty Historical Section has confirmed that this is the case. It is also stated that Rear Admiral Roger Dick, R.N.(2) confirmed this on 4 Dec.53 and that Admiral Hewitt(3) agreed. Samuel Eliot Morison goes on to state that these senior flag officers believe that naval gunfire, with such means of spotting and ranging as our ships then had, could only have temporarily silenced the shore batteries, which could have sunk any naval vessels or craft that ventured into the Strait.

Air Commanders' views on the role of aircraft in anti-shipping operations

The Air Officer Commanding North-west African Coastal Air Force at the time later made a comment on the above statement that the naval surface craft could not operate by day for lack of fighter protection in May 1943. This comment was that they were not required to operate - it would have been ridiculous to have provided them with fighter protection for their ships when those same fighters could (and did) accomplish the task unaided. He too, saw the point in planning a rigid dividing line so as to avoid accidents.(1)

The Air Officer Commanding Desert Air Force at the time later confirmed his view that the general air superiority the Allies had by then acquired was the essential background to the use of light Naval forces.(5)

The Air Officer then commanding North-west African Tactical Air Force confirmed later the point made by the Air Officer Commanding Coastal Air Force about the economy factor. It was, he said, obviously more economical to use a fighter bomber to sink the small ships in the open sea than to use up many more fighters escorting surface

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- (1) Oxford University Press 1954 Vol. IX.
 - (2) C.O.S. to C.-in-C. Med. in August 1943 (A.H.S.).
 - (3) Commanding Western Task Force in August 1943.
 - (4) Letter from A.V.M. Sir Hugh P. Lloyd to D.S.D. 23 Oct.46 (A.M. C.32026/46).
 - (5) Letter from Air Cdre. Sir H. Broadhurst to D.S.D. 10 Oct. 46 (A.M. C.30226/46).

craft to do the same task. He said that the Desert Air Force fighter forces had been dealing with shipping off Cape Bon long before the end of April and had shown themselves skilled in ship recognition over the sea flank all the way up past Sfax and Sousse. On this same point of recognition, the A.O.C. Coastal Air Force later went so far as to say the Tactical Air Force became very proficient in ship recognition within a few days, for there was no mystery in it.

Report by North-west African Tactical Air Force(1)

The Tactical Air Force considered that the evacuation was made possible for four reasons. Their report begins "It is now apparent that the enemy had commenced to withdraw from Sicily early in August, thinning out his resources prior to his final exit. The whole process being organized and gradual." The introductory phrase "It is now apparent" tends to confirm that the full picture was not apparent during the operations.

The four reasons put forward for the Axis success were:-

- (i) Use of favourable ground for delaying tactics.
- (ii) Mining and demolitions.
- (iii) A tremendous concentration of flak on both sides of the narrow area of the Strait for protection of craft undertaking the evacuation.
- (iv) Narrowness of the Strait and intensive traffic by night.

The first two factors, states the report, prevented pressure by our ground forces, so eliminating any enemy concentrations or build-up on the beaches and offering no suitable targets for air power. The third factor was a counter to our air supremacy, prevented the full employment of tactical bombers and reduced the scale of employment of fighter bombers over the narrow area of the Strait. But enemy traffic was limited by day and at no time presented good targets. The Strait was so narrow, continued the report, that conditions resembled the crossing of a broad river. It was never possible for our naval craft to enter the Strait and stop the intensive night traffic.

The material for conclusions

In the preceding pages, all relevant facts concerning the German evacuation and many concerning the Italian evacuation, have been assembled in chronological order. They convey the essential pattern and meaning of the Axis operations and the Allied counter-measures and provide in themselves, without the aid of speculation, all the basic material for sound conclusions. It only remains to recapitulate the essence of those established facts relating in particular to the German evacuation, strategically the more important and upon which documentation is more complete.

(1) Report on operations by N.A.T.A.F. in the capture of Sicily (undated) (A.H.B. II J.5/92).

Military defeat in Sicily was forced upon the Germans by the combined superiority of the Allied navy, army and air forces. Evading attempts to cut off their retreat, they carried out a plan for the evacuation of an important complement of three first-class divisions and a great volume of material and equipment in face of important air opposition without traceable loss of a single passenger. These troops figured later in the fighting in Central Italy and enabled the Germans to fight a longer defensive campaign in that area than would otherwise have been possible. The plan and its execution considered as a whole must be recognised as a masterpiece.

Not only were the Axis plans flexible and conducive to smooth running, but most of the craft (the German in particular) were expressly designed for, and admirably suited to, their purpose. Crews, confident in their own armament and low freeboard and the protection afforded by so much intense, heavy and accurate "flak", and with the preservation of an army at stake, fought their ships across with great gallantry and good navigation in notoriously difficult waters. The Italian evacuation, of much lower strategic import, was interwoven with the German. The same material conditions ruled; the methods, though not identical, met with parallel success. The fact that the Italians used different crossing and surface craft only accentuated the complexity of the target system for the Allied air forces.

Geographically, the evacuation target which the air force endeavoured to neutralize began in Sicily on the five-stage defence lines. It continued by road to the landing stages and beaches, on to the ferry craft, across a stretch of water no wider than a broad rivermouth, through a zone of very heavy anti-aircraft defences to the mainland terminals, by road to the troops assembly areas and by sea up the Toe of Italy through several small ports as far as Marina di Vibo Valentia; then after refuelling and revictualling operations, back by sea in terms of empty craft to Sicily. There were no bottlenecks, its components were very small. It was half over before the Allies realised it. It was a very unprofitable target system for the air forces.

The crux of the problem was the short maritime crossings. These, fed from a variety of beaches and quays and protected by an extremely powerful concentration of anti-aircraft batteries, presented an unusual and serious problem for aircrews. They were forced up by "flak" when within range, so losing both accuracy and a large part of the opportunities afforded by the brief span of time it took a ferry craft to cross. If they evaded land-based anti-aircraft and coastal batteries, they were met with aggressive action from the craft, many of which carried 75 mm. guns, and many of their bombs and shells failed to penetrate the armoured hulls. In periods of twilight and darkness, every difficulty was intensified, in spite of intermittent flare-dropping. At night, the bombing altitude precluded precision bombing by the medium bombers and by day this applied with equal force to the heavy bombers.

Throughout the vital period, Allied Intelligence was easily outstripped by the Axis manoeuvres. At no time was the whole pattern apparent to any of the three services or to Allied Force Headquarters. The major Italian evacuation began on 10 August and the major German evacuation 11 August. Yet it was not until the afternoon of 13 August that the Air Command recognised this and the evening of 14 August that Allied Forces Headquarters and Fifteenth Army Group officially announced it.

When faced with the prospect of an enemy evacuation, the Naval authorities, pessimistic of the outcome of any attempt to stop it, strengthened the light night forces in Messina Strait and hoped to intervene to greater purpose later as the Sicilian coastal batteries were overrun. They operated only at night, without noteworthy success. The Air Force authorities, bearing in mind the recent comparable, although not identical, situation in Tunisian waters, underlined the need throughout of some form of effective Naval co-operation and the assumption that it would be forthcoming in good time was one of the bases of their operational policy.

The Air Command prepared in good time to deal with an evacuation and neutralise localities which might be used. Arrangements were made for co-operation by local U.S. heavy day bombers and fighters. Strategic night medium bombers carried out a series of operations throughout the preliminary period and the height of the evacuation. In the belief that the bulk of the traffic would continue to pass by night, that the night bombers would achieve the best possible results and that naval co-operation would be forthcoming, the Strategic day bombers were released by the Tactical Air Force on the very day the main German evacuation began. All the available fighter-bombers operated daily and their numbers were notably increased as soon as the ground situation called for less air support.

The air attacks during the first nights of the main evacuation had the then unrealised result of forcing the Germans to a considerable degree off the night crossings on to the day crossings. This suited the Germans, who operated by day without the loss of a soldier. The Wellingtons inflicted much damage on the two northern ferry crossings and loss and confusion at special points. But this did not solve the problem: it merely spread the time element and called for an apparently unattainable weight of air effort by day. Only newly arrived at Sicilian bases in some cases, the Tactical Air Force spread its inadequate numbers to the best advantage, using the approved tactics in a very high number of attacks with local successes. These days came before airborne 75 mm cannon and the perfection of an anti-shipping rocket.⁽¹⁾ There were not nearly enough suitable aircraft available to cover every moment of the long days or to match the combined factors of the exact chronometric timing, the great spirit of the enemy units, the narrow geographical limits and prohibitive defences of the target with any prospects of success. At the actual rates of craft destroyed they would have probably

(1) A few Hudson aircraft had been using rockets since May 1943.

brought a much longer evacuation to a standstill. But the evacuation was swiftly executed in massive lifts.

Two questions must be faced and answered. Was the air effort the best attainable with local resources and why was an emergency not declared and outside strategic air aid appealed for? It has been shown that the release of the day bombers on 11 August was based on some assumptions which did not materialise. If it is taken that they were fair assumptions to make at the time, then the release of strategic bombers by the N.W. African Strategic Air Force was unfortunate, but if it is taken that the intervention of some seventy heavy bombers and several groups of medium day bombers daily should have been declared an obvious necessity, then their release was ill-advised. Everything would have depended on the targets they bombed. Continued bombing of Messina itself has been shown to have failed to prevent the Italians using the inner harbour. The Germans did not use Messina, but they did use a strip several miles long north of it as far as Faro, a corresponding strip in Calabria from Gallico to Cannitello and small ports as far as Pizzo. Had Fortresses, Mitchells and Marauders continued the successful night bombing by the Wellingtons of the northern terminal added to targets observed by the fighter bombers, there can be no doubt that they would have greatly increased the devastation of the enemy's shore installations, and caused havoc among stationary craft and defences. They would be hardly likely to affect traffic in transit to any appreciable extent, for this ran in small craft all through the day and most nights like a continuously moving conveyor belt.

The employment of Strategic Lightnings in the Toe of Italy as arranged against targets implicated in the evacuation has been noted and the long-range activities of Strategic Warhawks against Sardinia pointed out. Study of the priority commitments of the five groups of Strategic medium bombers has shown that they were profitably employed preparing for the imminent amphibious landings in Italy. Had the situation been seen by the theatre commands as one over-riding all other considerations, these five groups could have been employed against the evacuation system. But the pressure of other commitments out-weighed this eventuality.

Turning to consideration of the possible employment of heavy bombers of the Ninth Air Force in Cyrenaica or of heavy shuttle bombers of the Eighth Air Force and Bomber Command in the U.K. and the material difficulties of shuttle bombing, it can only be concluded that their priority commitment to objectives such as Ploesti, Peenemunde, the Ruhr and airfields in France under the Combined Bomber Offensive ruled this out. The Combined Chiefs of Staff were adamant that whatever was planned in the Mediterranean theatre in this period must be executed with its own resources.

The Germans were completely successful in their object of saving their troops. They preserved the element of surprise long enough to be decisive, used the terrain and defences skilfully, applied consummate organization to the task, concentrated all their local resources on it and accepted every risk.

The Allies, on the other hand, handicapped by conflicting demands on their naval and air resources and inadequately

briefed by their information services, failed to realize the evacuation's mechanism and tempo and the serious influence on future operations that its success would have. They accordingly failed to bring to bear on it consistently the appropriate concentration of naval and air forces at the right times and places.

PART D THE SURRENDER OF THE ITALIAN FLEETS

Allied, Italian and German plans

The Short Instrument of Surrender(1)

On 3 September, the Short Instrument of Surrender was signed by the Italians at Cassibile in Sicily. The direction and reception of the Italian Fleet was planned under the codename of Operation "Gibbon". Italian warships were to sail after dark for Bone, Augusta or Malta, approaching these ports in full daylight.(2) Submarines were to proceed on the surface. Merchant vessels were to proceed in groups if possible, to Gibraltar, Algiers, Bone or Malta. At 2010(A) hours on 8 September, the news of the Armistice was conveyed to the Navy by the Admiralty.(3) Within the Mediterranean, action towards Italian forces was to be governed by the orders of the C.-in-C. Mediterranean. Outside it, attacks were to be made on submarines or other Italian units unless they gave unmistakable signs of surrender.

A little later,(4) the C.-in-C. Mediterranean instructed all Mediterranean and Levant Command units that all operations in progress were to proceed but that the Italian armed forces, including aircraft, were to be treated as friendly unless they took or threatened hostile action. Allied submarines were to continue their patrols, but to confine their attention to ships identified as German.

According to Admiral Bernotti,(5) the Italians construed the meaning of the first outline terms as implying that both major and minor warships should proceed to a line south of a line Naples - south of Sardinia. This preceded more specific orders, but influenced the initial orders given to the major units in La Spezia and Genoa, who were ordered to sail for La Maddalena and await instructions.

Italian preparations for escape observed by Allied aircraft

On 4 September, the German Admiral Commanding in Italy(6) submitted a report to Hitler's headquarters and O.K.M. recording his impression that the Italian Government was acting correctly and endeavouring to keep control and to crush all talk of peace. The Italian Navy consistently stressed its will to continue the fight and gave evidence of increasing efficiency.(7) He even suggested postponing Operation "Achse".

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- (1) Admiralty Historical Section.
 - (2) At a maximum speed of 12 knots.
 - (3) Admiralty General Message 565A (A.H.S.).
 - (4) 2048(B) hours in Message 138B (A.H.S.).
 - (5) La Guerra sui Mari (A.M. Library, Whitehall).
 - (6) Rear Admiral Meendsen-Bohlken.
 - (7) PG/39998/2, 39998/3, 39998/4 Befehlshaber des Deutschen Marinekdos Italien (F.D.S./Admty.).

Joint Italo-German plans for air/sea co-operation in case of an Allied landing proceeded. On the strength of them the Italian Fleet units topped up with fuel. On 14 August, the battleship Roma returned to La Spezia. On 26 August, battleships were moved by tugs to positions in the outer harbour. On 4 September, manoeuvres were still proceeding.(1) On 7 September, the Fleet was to carry out an exercise with the German Air Force.

In Taranto, the battleships Doria and Duilio began to top up with fuel. Between 7 and 21 August, they exercised in the Bay. On 8 September, all destroyers and torpedo boats there were ordered to fuel.

At 1630 hours on 8 September, aircraft of the Northwest African Photo Reconnaissance Wing took photographs of the harbours of La Spezia, Genoa and Taranto. No significant changes were apparent in the two latter cases, but there was activity at La Spezia. There, the battleships Roma, Littorio (formerly Italia) and Vittoria Veneto and two cruisers were about to leave port. Two of the battleships were in the bay near the harbour exit. The booms protecting the third battleships and the two cruisers were open. The battleships were being manoeuvred by tugs, but the cruisers had steam up.(2)

The main units in Genoa were the light cruisers Abruzzi, Aosta and Garibaldi and a few destroyers. In Taranto there were the two battleships Andrea Doria and Caio Duilio and the cruisers Scipione Africano, Cadorna and Pompeo. The battleship Giulio Cesare lay at Pola. The Italian Naval Academy, with its two training ships Vespucci and Colombo, was at Venice. There was a light squadron at Bastia, comprising 12 torpedo boats, 4 corvettes, some submarine chasers and other small vessels; the flagships was the torpedo boat Aliseo.(3)

German moves to take over the Fleet and the ports(4)

On instructions from O.K.W., the Commanders-in-Chief of the German Armed Forces in Italy proceeded with their plans to meet an Italian defection. The Germans had counted on 48 hours warning, but this was not vouchsafed them. The announcement of an armistice on the evening of 8 September came as a surprise.

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- (1) Captured enemy documents (A.H.B.6).
 - (2) N.A.A.F. O.R.Bs.
 - (3) A.H.S.; Bernotti; C.B.1815 (Apr. 44) Admiralty.
 - (4) German sources for details of preparations and air attacks on the Fleet at A.H.S./F.D.S. Admiralty:-
 PG/39998/2, 3 and 4, K.T.B., Befehlshaber des Marinekdos Italien:
 PG/17142b-KTB, I/SK1 Teil 'D' Funkspruch und Fernschreibsammlung:
 PG/32216 I/SK1 Teil C. XIV Deutsche Kriegführung in Mittelmeer:
 PG/31749 I/SK1 Teil Cc Anlagen Personlicher Art;
 PG/33833 I/SK1 I.C.i.
Italienische Streitkräfte und Wehrmacht = Angehörige:
 PG/32461, 32463.
Mittelmeer Akten II 16 and 17 "Achse" op und Org.

On 4 September, Admiral Meendsen-Bohlken had given a reassuring picture of Italian co-operation and felt that Operation "Achse" could be safely postponed.

On 7 September, he conferred with Kesselring and Von Richthofen(1) and discussed measures against an Allied landing, support from the Italian Armed Forces and the German line of action should the Italian Army refuse it.

The Admiral confirmed naval preparations in case of the Italian Navy refusing to act, but made it very clear that, with the small forces at his disposal, it was impossible to prevent the Italian Fleet(2) breaking out unless he had the assistance of the German Army and Air Force. Forty-eight hours warning were mandatory.

Richthofen said his forces were too weak to carry through all the tasks assigned to them under Operation "Achse". Luftflotte 2 lacked the materials for minelaying off La Spezia and Taranto.

When the news of the Armistice broke, and O.K.W. issued the codeword "Achse" at 1950 hours on 8 September, the Germans were awkwardly placed. They had had no warning. Owing to the extremely strict secrecy imposed on their own plans, only a few commanding officers were in the secret and they now had no chance of completing their preparations. The Army units were tied down, some of them far from the naval bases. The nearest units were held at a 40 kilometre perimeter round the land area of the big naval ports and without immediate and effective aid. The Navy was not strong enough for the "Achse" tasks. As it was night, the German Air Force was not in a position to operate in harbour and coastal defence areas.

The major part of the Fleet lay at La Spezia. The Germans were totally unprepared to take effective measures against them. An agreement had been signed between O.K.W. and the Commando Supremo stipulating that no German Army troops were to be positioned within 40 kilometres of the port. The Luftwaffe could not mine the harbour. The

(1) General Field Marshal, C.-in-C. Luftflotte 2.

(2) Major Italian Naval Units
Strength 7 September, 1943

Type	Number	Tonnage
Battleships	6	176,224
Cruisers, heavy	2	20,000
Cruisers, light	12	65,906
Destroyers & torpedo boats	79	77,650
Submarines	66	40,635

Serviceability 1 August, 1943

Type	Number
Battleships	5
Cruisers	7
Destroyers	11
Submarines	30
Torpedo boats	?

Navy, with a strength of only 350 men, were fully employed in the protection of their own vessels and bases against the far superior numbers of the Italian garrison. Meanwhile, the general orders still stood. Italian warships which broke out and attempted to go over to the enemy were to be compelled to return to harbour or to be destroyed.

The only available mobile air force was the two gruppen of Do.217s, formerly based at Foggia and now at Istres in Southern France.

Allied air patrols in the Ligurian and Tyrrhenian Seas

The long-standing air watch on the Italian Fleet now entered its final phase. The main object of the patrols of the night 8/9 September was to be the detection of the Battle Fleet should it put to sea to interfere with Operation "Avalanche", which was being launched that night. All but a few in the secret of the Armistice negotiations assumed that this was all. There was of course, no absolute certainty that the Italians would comply to the letter: the patrols, therefore, served a double purpose. Six Wellingtons of No. 458 Squadron were detailed, one to each of the following patrols:-

- (1) Cap Corse - Capraia- La Spezia.
- (2) Cross-over patrol Asinara Island - Cape Sanitosa - Sanguinaires Islands, covering the western extreme of the Strait of Bonifacio.
- (3) Cap Corse - Nice - Levant Island.
- (4) Elba Island - Alistro (E. Corsica) - Bastia.
- (5) Naval co-operation south of Sardinia.
- (6) Cap Corse - Nice - Cap Corse.

These patrols were carried out, without any important incidents, from 1800 to 2227 hours. Five of the aircraft returned to base. One aircraft (c) force-landed in the sea west of the Gulf of Asinara.(1)

Nos. 14 and 52 Squadrons were also involved in the pattern of air patrol, shadowing and escorting the Italian Fleet. Three Marauders of No. 14 Squadron(2) and three Baltimores of No. 52 Squadron on 9, 10 and 11 September patrolled the sea areas, contacted, shadowed and escorted to Bone.(3)

On 9 September, at 1026 hours, Marauder D of No. 14 Squadron sighted the La Spezia force - three battleships, six cruisers and seven destroyers. They continued to shadow the force, sending sighting reports every 30 minutes. At 1405 hours, Marauder S sighted a small convoy. At 1510 hours, Marauder M sighted the Fleet in the Gulf of Asinara. The crew identified themselves by flashing the

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- (1) No. 458 Squadron O.R.Bs.
 - (2) D, M, and S aircraft.
 - (3) See Figure 6 for Allied air patrols on 9 Sept. 43, also Nos. 14 and 52 Squadron O.R.Bs.

letter of the day and were acknowledged by a single white flash. The aircraft escorted the Fleet from that point and was present at the action between German Do.217 aircraft and the Fleet. Marauder M, when it returned to base, had accomplished a flight of 10 hours, 29 minutes, a record of endurance to that date in the theatre.

Three Baltimores of No. 52 Squadron were despatched early on 9 September and, from 0935 to 1550 hours, covered between them the East and West coasts of Sardinia and Corsica and the approaches to La Spezia and Leghorn. One reported sighting the La Spezia force and another four destroyers.

Air H.Q. Malta and the Italian Fleet(1)

For many months, Malta-based reconnaissance Spitfires, Baltimores and Wellingtons had maintained watch by day and night on the movements of Italian Naval units. The period just prior to the surrender and just after it called for a special effort, but so much happened at such short notice in so many places that only a very large air force could have covered all the events concentrated in those few days.

The A.S.V. Wellingtons of No. 221 (G.R.) Squadron carried out their by now habitual Taranto Block patrol on 8 and 9 September, but reported no sightings. On 10 September, aircraft HZ.397 sighted the two battleships and three cruisers proceeding to Malta.(2) The crew reported the position, shadowed the ships and directed Allied destroyers to the force, which they escorted to Malta. The block patrols across the Bay of Taranto had been vital for some months past to the safeguarding of all important Allied convoys from North Africa to Sicily.(3)

On 10 September, eight Baltimores of No. 69 Squadron provided anti-submarine escort to the Italian Taranto units proceeding south-east of Malta.(4) On 11 September, six Baltimores of the same squadron searched for escaping Italian merchant vessels in the Ionian Sea, but found nothing. One aircraft was fired on without damage by a German Arado 196 seaplane. The search for Italian merchant vessels met with some success on 12 September, when eight were sighted East of Malta; also on 13 September, when contact was maintained with them and with two submarines. On 14 September, the same squadron escorted an Allied convoy which included five Italian destroyers. South and South-east of Malta,(5) on the last day of September, a search for an Italian hospital ship was successful. There were no incidents apart from the Arado attack mentioned above.

Spitfires of No. 683 Photographic Reconnaissance Squadron based at Luqa photographed Taranto twice on 8 September, six times on the 9th and three times on the 10th. They saw the British naval squadron and landing

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- (1) A.H.Q. Malta, Nos. 683, 221 and 69 Squadrons O.R.Bs and appendices.
 - (2) Position not recorded.
 - (3) See Figure 6.
 - (4) Ibid.
 - (5) See Figure 6 for all Malta air patrols.

party steaming into Taranto and the Italian units making for Malta and furnished much valuable information on both naval and merchant shipping movements. On 7 and 11 September, they carried out reconnaissances between Corfu and Durazzo (Albania).⁽¹⁾

There is no mention of any escort for the Venice and Pola formation in Malta's record of patrols apart from the arrival on 13 September in Malta of the Giulio Cesare, which had been escorted down the Adriatic by the cruiser Scipione Africano.

Operations

The break-out of the La Spezia and Genoa units⁽²⁾

On the evening of 8 September, Admiral Sansonetti, chief of Supermarina in Rome, ordered Admiral Bergamini, commanding the Tyrrhenian Sea forces, to proceed to La Maddalena and await further orders. Admiral Bergamini accepted the changed situation, explained the course of duty to his sailors and prepared to break out. At 0300 hours on 9 September, the La Spezia Squadra put to sea with Bergamini on board the flagship Roma. At 0945 hours, they reported an Allied aircraft.⁽³⁾ Off Calvi, they rendezvoused with the three cruisers and two destroyers from Genoa and the whole force steamed down the West coast of Corsica. At 1030 hours, a German reconnaissance Ju.88 aircraft was sighted. At 1445 hours, according to Bernotti, a signal was received from Supermarina stating that La Maddalena was occupied by the Germans. The Fleet reversed the course they had set for the Strait of Bonifacio and steamed westward into the Gulf of Asinara.

German air attacks on the Italian Battle Fleet⁽⁴⁾

On 9 September, Gruppen II and III of Geschwader K.G.100 were at Istres in Southern France.⁽⁵⁾ At 0941 hours, a Ju.88 sighted the Italian Fleet proceeding towards

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- (1) No. 683 (P.R.U.) Sqdn. O.R.B's.
 - (2) Bernotti: Bragadin.
 - (3) Almost certainly a German Ju.88.
 - (4) Details from the Luftflotte 3 report to O.K.M. in PG/32461 to 32463., (F.D.S./Admty.)
 - (5) Notes on K.G.100.
The strengths on 10.7.43 of Stab and II and III/KG.100 at Morin (Foggia) were:-
Stab = 12, II = 42, III = 37; total 91. All were then under Luftflotte 2 (S. Italy). At the end of July, 1943, Stab and II Gruppe were transferred to Luftflotte 3, returning again to Luftflotte 2 by 20th September. At the end of July 1943, all Med. units of KG.100 were stationed in S. France. Since by 20 September they were all again under Luftflotte 2, some may have been stationed at Foggia for a short while, although some reports showed them still in S. France; they were certainly there on 20.10.43, once more under Luftflotte 3. At the beginning of November 1943, the greater part of these units moved to Germany, certain Staffeln being transferred to Luftflotte Sud - Ost., but parts had again returned to the Mediterranean by the end of the year. From July to October 1943, whilst with the Mediterranean, all these units were equipped with Do.217s. From October onwards, certain Staffeln were being refitted with He.177s, but by the middle of 1944, a large proportion of Do.217s still remained. Before 10.7.43, they were being refitted in Germany, but during 1942 both II/KG.100 with He.111s and III KG.100 (coastal flying as KFL Gr.126) with He.111 and Ar.196 saw service in the Eastern Mediterranean. (Captured German documents A.H.B.6.).

La Maddalena. Twenty-eight Do.217's were airborne in three formations and came on the Fleet in the afternoon in the Gulf of Asinara. Four aircraft failed to locate the target. Twenty-four made three attacks, with the new P.C.1400X and Hs.293 radio-controlled bombs. This occasion marked the first use of, and the first success with, the new weapon in the theatre.

The first attack was made from 1535 to 1540 hours by 11 aircraft, (1) employing 11 PC.1400 bombs, about 15 miles S.W. of Bonifacio. Three bombs fell close to two battleships and a cruiser. Oil was observed round the battleships; the cruiser stopped. In addition, three direct hits were registered on two battleships and in one case (the Roma) there was a very heavy explosion with dense smoke and fire.

The second attack was launched between 1730 and 1734 hours. (2) A hit on one destroyer was claimed: a near miss on a cruiser caused an explosion in the fore part of the vessel. Seven Hs. 293s were used. There were several near misses.

The third attack was launched by six Do.217s in two formations between 1720 and 1740 hours (3) employing PC.1400 X bombs. The first formation failed to locate the battleship force and, from 7000 metres, attacked a cruiser force about 10 miles W.N.W. of Punta Caprara without scoring hit. The second formation attacked the battleship force about 20 miles N.W. of Alghero, (Sardinia). The whole force continued its course, taking evasive action. There were two lines of two to four destroyers in line ahead followed by two battleships in line ahead and more destroyers on the beam. One battleship was hit by a bomb and a fire was observed by several aircrews. The cruiser hit in the second attack was seen stopped at 1932 hours showing a slight list. German reconnaissance aircraft reported the Roma sunk and a cruiser heavily damaged. One Dornier crashed on landing at Istres - the only casualty.

The sinking of the Roma (4)

The first attack on the Fleet was witnessed by aircraft of Nos. 52, 458 and 14 Squadrons, who reported seeing bombs falling, but no aircraft. One experienced "tremendous" high flak at 10,000 feet, as the ships put up a heavy barrage. At 1551 hours, Marauder M of No. 14 Squadron saw a direct hit on the leading battleship, followed by a pall of white smoke 300 to 400 feet in height. The aircrew watched the battleship heel over and sink. The Italian Admiralty give the actual time of sinking as about 1600 hours in the position 41° 10' N, 08° 40' E. in the Gulf of Asinara. Sixty-six out of her seventy-one officers, (including Bergamini and another admiral), and over thirteen hundred men lost their lives. The Marauders had been observed throughout the day from the Fleet. (5)

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- (1) Altitude 6,500 metres. III/K.G.100 operating.
 - (2) Altitude 1300 - 1700 metres II/KG 100 operating.
 - (3) Altitude 7,000 metres. III/KG.100 operating.
 - (4) No. 242 Group and Nos. 14, 15, 52 and 458 Squadrons
O.R.Bs: Navi Perdute (A.H.B.6) (Italian Admiralty):
Brigadin: Bernotti.
 - (5) Report by naval rating on the Italian t.b. Orsa
20 Sept. 43 Madrid (captured documents F.D.S./Admly.
25/53).

While the main formation made for Bone, the cruiser Attilio Regolo, the three destroyers Mitragliere, Fuciliere and Carabinieri and the torpedo boat Pegaso, stayed to rescue survivors. Later, they were joined by the torpedo boats Orsa and Impetuoso and steamed for the Balearic Islands. The Pegaso and Impetuoso, which had been damaged by German aircraft, (1) scuttled themselves outside Pollensa in Majorca. The rest were held at Port Mahon by the Spaniards. They stayed there for about a year in semi-internment until authorised to sail for Gibraltar. (2)

Ineffectual Italian air cover for the Fleet(3)

During the morning of 9 September, Supermarina appealed to Superaereo to furnish, most urgently, fighter escort for the Roma, which was under German air attack. Superaereo telephoned to the Italian Air Command Sardinia. Four Me.202's were despatched, but it was too late. It may have been one of these aircraft which was reported shot down by the Italian destroyer Orsa, but believed to be a Me.109. (4)

The loss of the Da Noli and Vivaldi(5)

The volume of Allied air cover of the escape of the Italian Fleet was only slight in comparison with the magnitude of the occasion and its great significance to the Allies. It is therefore only natural that there were many dramatic events in which the Air Forces were not involved. To fill in the full account of the surrender, one must turn to the Italian and German records.

The destroyers Da Noli and Vivaldi were steaming on the morning of 9 September from La Spezia to Civitavecchia when they received orders to proceed to the Strait of Bonifacio to attack German traffic off Sardinia and Corsica and then to join the main Fleet units bound for Bone. In the Strait they were engaged by German motor launches and vedettes. German shore batteries joined action and drove the Da Noli on a mine while retiring. She broke in two and sank at 1720 hours about 5 miles west of the Pertusato lighthouse.

The Vivaldi was hit, stopped and set on fire. At about 1900 hours, she set course for the Balearics, but was hit by a bomb from an aircraft. During the morning of 10 September, she was abandoned: she sank at 1130 hours about 50 miles west of Asinara. The survivors were picked out of their boats by H.M. submarine Sportsman.

Rescue of a Wellington aircrew by an Italian destroyer(6)

The Wellington(7) of No. 458 Squadron patrolling the western extreme of the Bonifacio Strait had to be ditched. The aircraft went down 40 miles Northwest of Asinara Island

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- (1) Ibid.
 - (2) CB.1815 (Apl.44) Admty: Bragadin: Admiralty draft narrative.
 - (3) L'Aeronautica Italiana Nella Guerra Di Liberazione 1939 - 1945. Angelo Lodi, Ufficio Storico Aeronautica Militare, Ministero Difesa, Rome 1950 (A.H.B.6 copy).
 - (4) Report by survivor (F.D.S. 25/53 Admiralty).
 - (5) Navi Perdute (Italian Admiralty).
 - (6) Captained by Flight Sergeant D.O.W. Watson (R.A.A.F.).
 - (7) Aircraft C.

at 2300 hours on 8 September, when the engines failed in succession and sheets of flames came out of the exhausts. The wireless operator sent out the call sign once, signalled "ditching" and clamped the key down. The aircraft hit the water. Two of the crew removed the astro dome before the aircraft submerged and swam through. Two others escaped through the front and the gunner got out of his turret. They found the dinghy on the surface inflated and upside down, righted it and got in. An uneventful night passed.

At 0940 hours on 9 September, the crew sighted a Baltimore, waved a red flag and fired several cartridges. The Baltimore made several runs over. As it departed, a Ju.88, doubtless the aircraft reconnoitring the Italian Fleet, (1) made several runs, but only wagged his wings and departed. At 1230 hours, a Marauder passed over and dropped a container of rations, which unfortunately broke as it hit the water. At 1330 hours, an unidentified aircraft appeared about 10 miles away and remained in sight most of the afternoon. At 1400 hours, gunfire was heard to the East and continued all the afternoon. At 1800 hours, a Marauder passed at close quarters; several masts were sighted on the horizon to the East, which developed into two Italian battleships and four Italian destroyers. An Italian destroyer came alongside, with its seamen on deck waving and shouting "Armistice!", took them aboard and afforded them hospitality and comfortable quarters.

At 0100 hours on 10 September, the Commodore of the Italian destroyer flotilla, lacking information on the Allied minefields off the North African coast, requested the aircraft's wireless operator to signal by Aldis to the escorting Baltimore to relay a message to the Royal Navy asking for a pilot. This was done. About half an hour later, they were met by the British Fleet off Bone. The destroyer left the Fleet and arrived at Bizerta at 1600 hours on 10 September to land the aircrew and replenish its water supply.

Italian Fleet escorted by Allied aircraft to the rendezvous (2)

Three R.A.F. squadrons of No. 242 Group were engaged in the location, shadowing and protection of the Genoa and La Spezia units as they proceeded down the West coasts of Corsica and Sardinia to their rendezvous with the Allied Fleet off Bone.

Between 1800 and 2349 hours on 9 September, six Wellingtons of No. 458 Squadron were despatched from Protville I airfield with instructions to carry out armed reconnaissance around Corsica and Sardinia, to shadow the two battleships, six cruisers and seven destroyers now steaming southwards and to cover the approaches to La Spezia, Genoa and Nice. Convoy cover was provided as far as a point near Cape Serrat (Algeria), where the Fleet was left to rendezvous and proceed to Malta. Two of the aircraft landed at base between 0351 and 0921 hours and the sixth landed at Bone at 1015 hours on 10 September. Three Baltimores of No. 52 Squadron and one Marauder of No. 14 Squadron sighted the

(1) The unit of this aircraft cannot be established from ex-enemy records, but was probably one of the long range reconnaissance units 1(F)33 or 1(F)122, based in Southern France. It could also have come from I or III/K.G.26 (A.R.B.6).

(2) No. 242 Group and Nos. 14, 52 and 458 Squadrons O.R.B's. See Figure 6.

the Italian Fleet and shadowed it to Cape Serrat. Four surfaced submarines were sighted by this squadron. Escort proper(1) was provided by eight Hurricanes of No. 87 Squadron, eight Spitfires of No. 253 Squadron and twelve Spitfires of No. 73 Squadron.

The surrender of the Italian Fleet(2)

The main units, under the command of Admiral Romeo Liva in the cruiser Eugenio di Savoia, were met at about 0600 hours on 10 September by H.M.S. Warspite, H.M.S. Valiant and six destroyers, all detached for the purpose from Force H. Still at action stations, the Allied battleships led the Italian Fleet to Bizerta. There they were met by Sir Andrew Cunningham, General Eisenhower and Commodore Dick, (the naval Chief of Staff) in the destroyer Hambledon. The surrender was formalized. The combined fleets proceeded to Malta, where they arrived at 0700 hours on 11 September.

The C.-in-C. Mediterranean sent this signal to the Admiralty:-

" Be pleased to inform their Lordships that the Italian Battle Fleet now lies at anchor under the guns of the fortress of Malta".

The escape of the Bastia and La Maddalena units(3)

The meagre Allied air forces available for maritime patrols on 9 September and the few days following were quite inadequate to cover the Italian movements from other ports. The Allied Navies only came into operation from the point of rendezvous with the surrendered Italians. There is, therefore, no primary contemporary Allied source for much that transpired. The pattern of events must be filled in from ex-enemy sources.

On the night 8/9 September, the light squadron under command of Rear Admiral Pollone, comprising 12 torpedo boats 4 corvettes, some submarine chasers and some other small vessels, with the Duke of Aosta on board the flagship Aliseo, broke out of Bastia under fire from German shore batteries and German E-boats. They turned on their attackers and bombarded the shore installations to such effect that Bastia was soon in Italian hands. The squadron arrived on the morning of 11 September at Palermo.

A number of minor units in La Maddalena (Sardinia) transferred to Porto Ferrario in Elba after actions with Italian anti-submarine vessels and German m.t.b's, and from thence to Palermo.

The escape of the Taranto Squadron(4)

Force Z, on its way to the port of Taranto on 9 September, passed the battleships Andrea Doria and Caio Duilio, three cruisers and a destroyer steaming for Malta. The force arrived there safely at 1730 hours on 10 September.

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- (1) Convoy "Leicester".
 - (2) T.S.D. 4034/43 Appendix I Mediterranean War Diary (Admiralty): Admiralty preliminary draft narrative Vol. IV.
 - (3) Bernotti.
 - (4) Admiralty draft preliminary narrative Vol. IV.

The escape of the Pola units, the Naval Academy and the Miraglia(1)

The battleship Guilio Cesare(2) the Saturnia carrying the cadets and staff of the Venice Naval Academy, the training ships Vespucci and Colombo and the seaplane carrier Giuseppe Miraglia joined forces off Pola in the Northern Adriatic and proceeded South, the battleship reaching Malta on 13 September. The other vessels made for Brindisi. It was reported that the force was attacked by German aircraft during the passage.

The escape of King and Government from Pescara(3)

The King, the Royal Family, Marshal Badoglio and the leading numbers of the Government left Rome on the night of 8/9 September and proceeded by the Via Tiburtina to Pescara, where they were joined by other ministers and officers. The cruiser Scipione Africano and two corvettes had been ordered from Taranto to evacuate them, but in the event only the corvette Baionetta reported. They proceeded to Bari, where they found haven until the Allies arrived.

Air sightings of surrendered submarines

On 9, 10 and 11 September, aircraft of the Photo Reconnaissance wing submitted evidence of the progress of Italian submarines on their way to Bone, Palermo and Augusta. For example, on 9 September, their photographs revealed the departure of six submarines from La Spezia and four from Genoa. At 0957 hours on 10 September, they sighted a surfaced submarine 40 miles E.N.E. of Cape Comino. At 1623 hours on the same day, they sighted a surfaced submarine 30 miles E.S.E. of Cape Bella Vista. In the afternoon of 11 September, they sighted eight surfaced submarines, which identified themselves and they watched three of them into Allied ports. There were many other sightings.

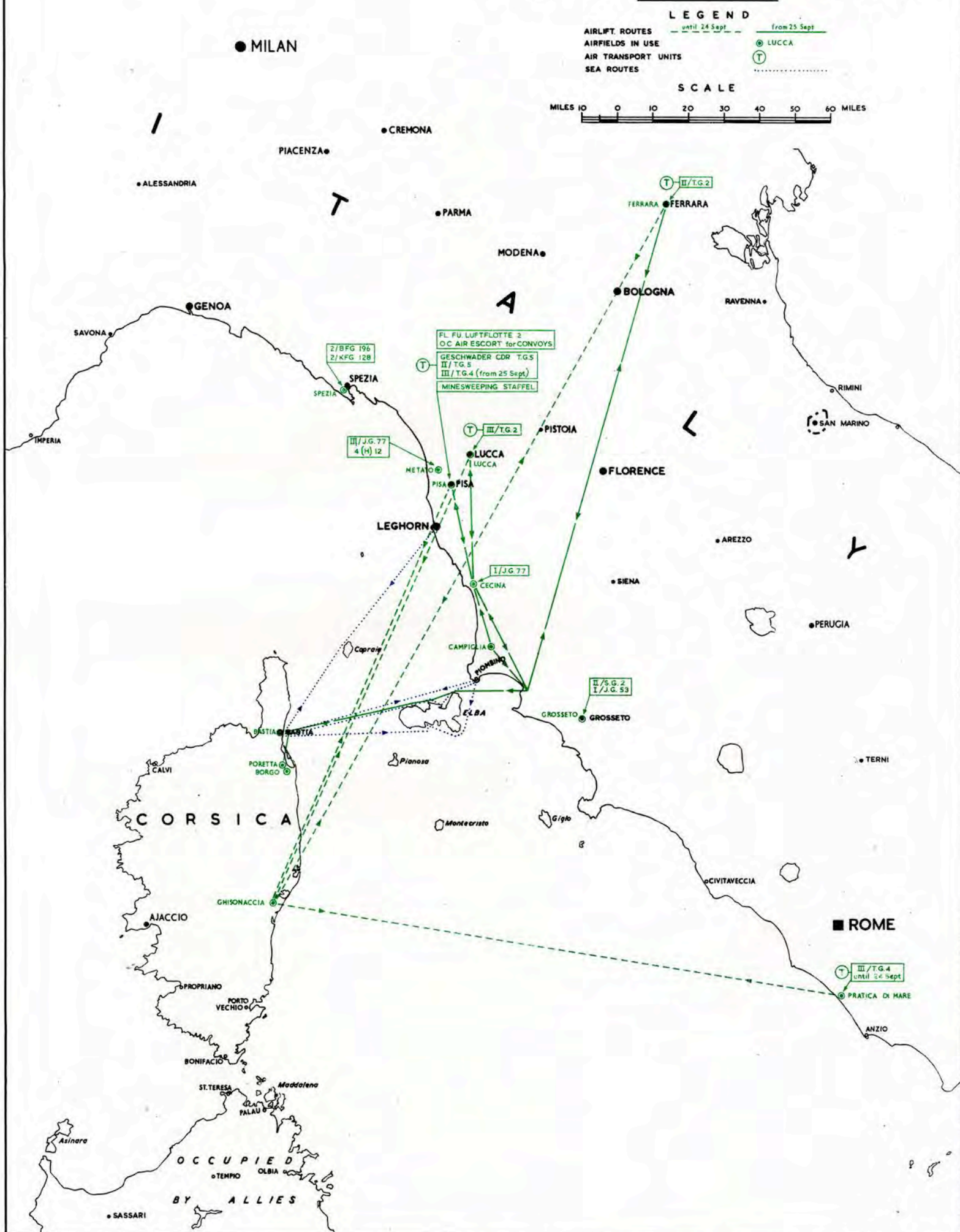
Taken as a whole, the surrender and identification of submarines ran smoothly. The only exception was in a case of mistaken identity on 12 September, when the Topazio was sunk by a Blenheim of No. 13 Squadron South-east of Sardinia. In all, twenty-eight first-line submarines and five midget submarines reached Allied ports. Ten submarines were scuttled, one left for the Atlantic, two were captured by the Germans and one is unaccounted for. One midget submarine was scuttled and five captured by the Germans.(5)

The success of Operation 'Achse' in the Central Mediterranean

Thwarted in their plans to take over the Italian Fleet, the German Army and Navy took speedy steps in all other directions to execute Operation "Achse". They were

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- (1) Bernotti and Bragadin.
 - (2) She had been refitting at Trieste after being partially sunk at Taranto in 1940 by the Fleet Air Arm.
 - (3) Badoglio. Italy in the Second World War. Oxford University Press 1948.
 - (4) N.A.A.F., N.A.C.A.F. and N.A.P.R.W. O.R.Bs and appendices.
 - (5) Navi Perdute; C.B.1815 (Apl.44) Admiralty.

GERMAN EVACUATION OF CORSICA BY AIR AND SEA 19 SEPTEMBER - 3 OCTOBER 1943



unsuccessful at Taranto, Brindisi and Bari. The first two of these ports remained in Italian hands and much of the shipping there fell to the Allies. At Bari, they only had time to blow up a few merchant vessels before withdrawing. The remaining eight vessels surrendered to a British submarine and were escorted by it to Malta. At Bastia there was the engagement already mentioned between Italian units and the Germans in which H.M. submarine Sportsman joined and as a result of which the town fell into Italian and French hands.

At the end of a few days, however, it became evident that the resolute actions of the Germans had brought achievement of most of the tasks they had set themselves in Italy, Corsica and the Riviera.

The count of surrendered Italian shipping in Malta

The records of Air Headquarters Malta give the total number of Italian naval units to arrive at the island during September as five battleships, six 6 inch cruisers, one 5.3 inch cruiser, seven destroyers, thirteen torpedo boats, six Mas. boats, twenty-three submarines, six escort vessels, one seaplane carrier, one fleet oiler and twenty-two naval craft.

Malta's photographic reconnaissance revealed a considerable decrease and dispersal of enemy shipping in Adriatic ports from some 198,000 tons at the beginning of September down to 117,400 tons on 8 September. Eleven thousand tons of merchant shipping was brought to Malta. With the capture of Taranto, Bari and Brindisi, 82,000 tons, it is recorded, (of which 7,000 tons had been scuttled in Bari) came into Allied hands.

Doubtless these figures were compiled after consultation of naval records at the time, but they are put forward here only as a matter of comparative interest and not as a final statement.

German air attacks on minor Italian Fleet units

The general directive issued by German Naval Command Italy on 9 September, 43(1) included orders to hinder warships, destroy ports threatened by an Allied landing and to attack freely any Italian units which broke out. Parallel orders were given Luftflotte 2, (2) Although Von Richthofen had declared his inability to fulfil all his tasks under Operation "Achse", various attempts were made to impede the breakout, apart from the major and successful attempt on the Battle Fleet units from La Spezia and Genoa.

In addition to the Roma, eight naval vessels were sunk by German aircraft. On 9 September, the motor landing craft MZ 704 was sunk off Anzio by German aircraft and shore guns, beached and considered as lost. On the same day, the tanker Nera (3) was seriously damaged at Portofino,

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- (1) Message by Dt. Markdo Italian Op.A.1 0218 hours 9 Sept. 43, in PG/32461 Admiralty/F.D.S.).
 - (2) These cannot be traced to date.
 - (3) 250 tons.

Leros. It was abandoned, probably unserviceable, when the Germans retook Leros. On 10 September, the torpedo boat T.8(1) which had left Dubrovnik the previous day to withdraw Italian personnel from the coast and the islands, was sunk off Punta Olipa in the Dalmatian Channel.

The five remaining warships were sunk in the Eastern Mediterranean. On 19 September, the two motor torpedo boats Ms.12(2) and Ms.23 proceeded to Stampalia Island to contest a reported German landing. They were sunk in two attacks on Port Vathi.

On 24 September, the torpedo boat Stocco, while attempting to rejoin an Allied convoy, was sunk 8 miles off Corfu. On 25 September, the naval tug Liscabianca, which had been captured by the Germans early in the month at Durazzo, attempted to escape from Corfu, but was sunk there by aircraft. On 26 September, the motor boat Mas.543 was sunk in an air attack on Leros.

In the face of the immense nature of the task of circumventing the transfer of the Italian Navy and merchant fleet, the effort of the German Air Force can only be labelled as feeble. The reason for this was that its weakened forces were already fully stretched in the contest for the Salerno beaches.

German air attacks during September and October on Italian merchant, and coastal shipping(3)

During September and October, German aircraft made a number of attacks on Italian merchant and harbour shipping and are believed to have sunk 14 vessels in September totalling to 62,906 tons and 8 in October totalling to 12,702 tons. Most of the September sinkings were in or off the Ligurian and Adriatic ports, while the October sinkings reflected the fighting in Corsica and the Dodecanese.

- (1) 224 tons. EX.T.8 (Yugoslav).
 (2) 60 tons.
 (3) Italian losses to German aircraft

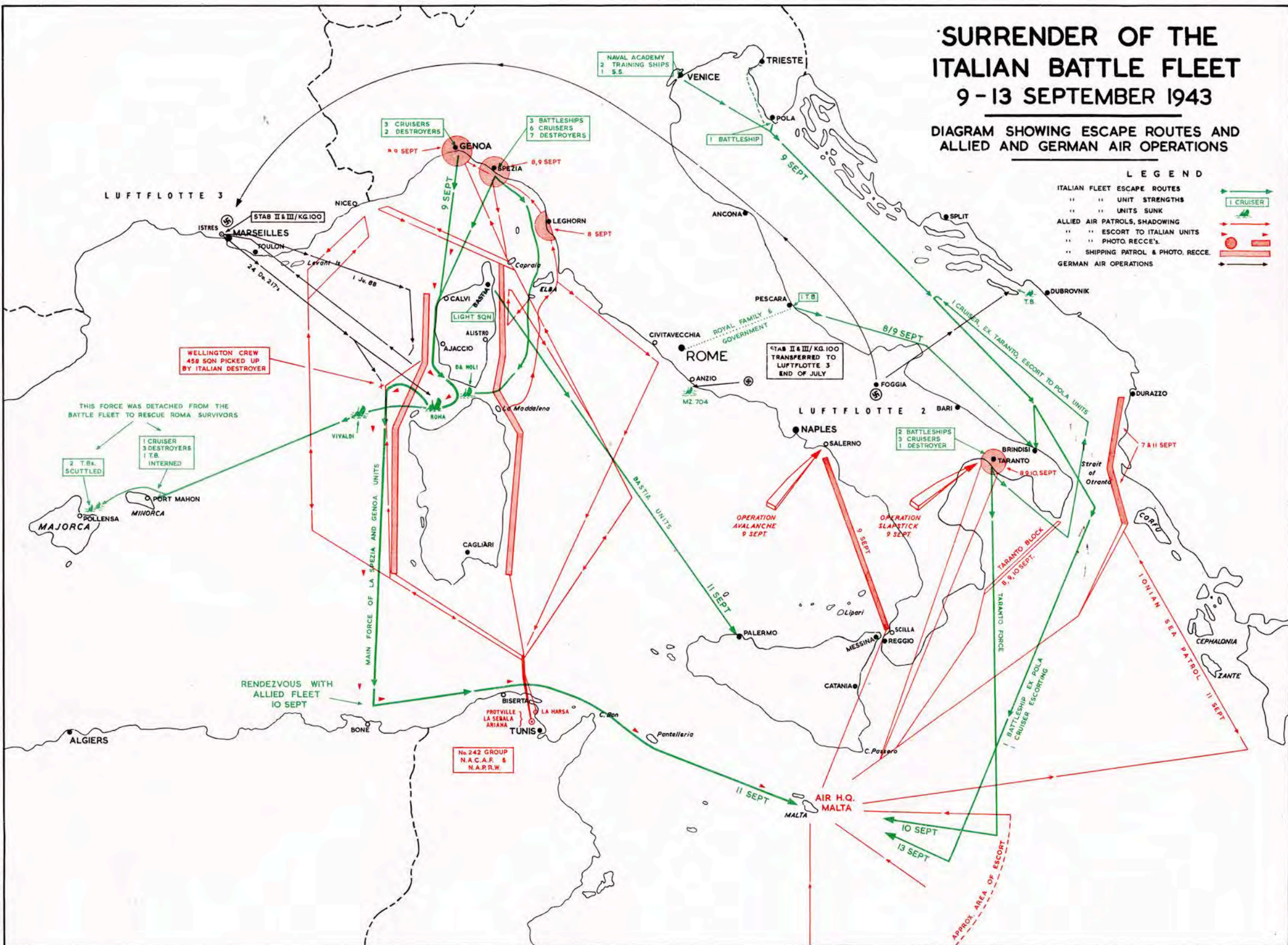
Date	Name	Class	Tonnage	Position
prob. 8 Sept.	Probitas	m.v.	5,084	Santi Quaranta
8 "	Gioannina Loscocco	s.v.	95	Leghorn
8 "	M. Di Capo Colonna	f.v.	25	Genoa
9 "	Nicolo Martini	s.s.	634	Split
9 "	Baciccia	tank	180	La Spezia
9 "	Pertinace	harbour)	449	3 m. off
		v.)		Leghorn
11 "	Dubrovnik	s.s.	1,036	Chioggia
11 "	Conte Di Savoia	s.s.	48,502	Gulf of
				Venice
13 "	Spartivento	s.s.	3,694	Kalamata
				Roads
13 "	Bucintoro	s.s.	1,273	Portolaga,
				Leros
16 "	Tergeste	s.s.	212	Corfu
22/23 "	Cherso	s.s.	550	Split
22/23 "	Enrico Barone	s.s.	840	Split
end "	Ellenico Horio (Gk)	s.s.	283	Gulf of
				Karpanthos
4 Oct.	Sassari	s.s.	3,883	Bastia
4 "	San Vito	f.v.	85	Termoli
5 "	Prode	s.s.	1,244	Leros
7 "	Ivoreia	s.s.	3,274	Leros or
				Parteni
15 "	Balcic	m.v.	3,600	Split
15 or 17 "	L'Ardito	s.v.	36	Castelrosso
24 "	Taganrog	s.s.	534	off Samos
29 "	Dominico	f.v.		Leros

SURRENDER OF THE ITALIAN BATTLE FLEET 9-13 SEPTEMBER 1943

DIAGRAM SHOWING ESCAPE ROUTES AND
ALLIED AND GERMAN AIR OPERATIONS

LEGEND

- | | |
|---|--|
| ITALIAN FLEET ESCAPE ROUTES | |
| " " " " UNIT STRENGTHS | |
| " " " " UNITS SUNK | |
| ALLIED AIR PATROLS, SHADOWING | |
| " " " " ESCORT TO ITALIAN UNITS | |
| " " " " PHOTO. RECCE'S. | |
| " " " " SHIPPING PATROL & PHOTO. RECCE. | |
| GERMAN AIR OPERATIONS | |



The progress of operation "Achse" in the Central Mediterranean

The Italians held the initiative everywhere, but rapidly lost it to the Germans. The latter had taken a census of Italian naval units on 6 September. On the face of it, the problem bordered on the impossible, for the Italians were dispersed in no less than 49 ports.(1) They identified 5 battleships, 8 cruisers, 13 destroyers, 26 torpedo boats, 16 corvettes, 52 Mas. boats and 29 submarines. The list, although incomplete, represented a force which could throw the balance of power decisively into Allied hands if all the vessels on it made good their escape.

Bitter fighting broke out everywhere. German forces continued to march into Italy. They seized the towns and islands, overran the ports, fired on or blew up ships, naval and merchant alike, in harbour or breaking out and attacked many at sea, with their S-boats, R-boats, naval ferry barges, U-boats, tugs and minelayers.

The high spirit shown by many Italian crews and port personnel can hardly be entirely explained by anxiety to fulfil the humiliating terms of a surrender, but at least equally by their distaste of the Germans and their invasion of their own homeland. Hundreds of vessels in Italian waters which could not escape were sunk or sabotaged by their crews or owners. It is now possible to trace the fate of many vessels with which the Allied air forces had been previously engaged and to follow the process of transfer, refitting, repairing, renaming or remanning at German hands. Many appear later in the augmented German naval commands in the Mediterranean, against which important Allied air elements fought for another one and one-half years.

When the situation became clearer, the German Naval Command Italy(2) took stock of results and reported the following successes against Italian shipping in the Central Mediterranean. In the Tyrrhenian, Ligurian and Adriatic Seas, S-boats had sunk one torpedo boat, two minesweepers, and one patrol vessel; they had captured, s.s. Leopardi,(3) three other steamships and two auxiliary sailing vessels.

- (1) A report in the files Mittelmeer Akten II. 16 Jly. to Oct. 43 (P.G./32461 F.D.S./Admiralty) locates ships in the following ports:-

Toulon	Baia	Crotone	Durazzo
Imperia	Civitavecchia	Taranto	Gravosa
Savona	Gaeta	Brindisi	Teodo
Varazzo	Pozzuoli	Bari	Lerici
Voltri	Castellamare	Ancona	Argostoli
Genoa	Naples	Venice	Samos
S.M. Ligure	Piombino	Monfalcone	Piraeus
La Spezia	Capri	Trieste	Rhodes
Bocca Di Magra	Dastia	Pola	Canea
Viareggio	Bonifacio	Fiume	Leros
Leghorn	S. Maddalena	Sebenik	Tremoli
Apunia	San Antioco	Split	Lindos
			Tinos.

- (2) PG/32216 (F.D.S./Admlty.).
 (3) 4572 G.R.T.

A U-boat damaged a large tanker (or auxiliary aircraft carrier). The mine-layers Brandenburg and Pommern destroyed a big unnamed steamship South of Leghorn, damaged three others and captured a minelayer South of Leghorn. Naval ferry barges sank the small minelayer Pelagosa 7 miles off Genoa. A tug from Bari captured s.s. Tunisio, (1) two motor tankers and a German naval ferry barge in Italian charge. In addition to these successes at sea, five Italian aircraft were shot down.

The lists of ships captured in harbour by the Germans are long ones and will not be analysed here: many names and tonnages are missing and the state of seaworthiness is often not stated. Some warships were operationally ready, but many were to spend varying periods under repair. A number of naval vessels under construction were carried to completion. Many scuttled vessels were salvaged and put into service: many others were salvaged and broken up.

Italian naval and merchant vessels scuttled(2)

The total of Italian naval vessels (including submarines) scuttled by the Italians and Germans or sabotaged during the events of September and October, 1943, while attempting escape, is at present computed at 86 vessels of a total tonnage of 62,544. The corresponding totals for merchant, harbour and fishing vessels are computed at 168 vessels of a total tonnage of 76,298.

German seizure of the Ionian Islands

As soon as the main objectives of Operation 'Achse' were seen to be well in hand, the Germans prepared to advance beyond their defence perimeter. On 22 September, with air support, they overcame the Italian garrison on Kephallonia Island and on 23 September occupied Corfu and the rest of the Ionian Islands. German policy and operations in Greece and the Aegean were shortly to come into conflict with Allied intentions. The resulting succession of important strategic moves, in which air ascendancy and the possession of airfields was to play a decisive role, will be dealt with in a later section.

PART E. MARITIME AIR ASPECTS OF THE ALLIED LANDINGS IN ITALY

Air Organization for mobile warfare

Allied landings in Calabria(3)

The Germans decided to oppose the impending Allied landing in the area of Salerno, correctly foreseen by them as the chosen sector, and to relinquish Southern Italy.

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- (1) 350 tons.
 - (2) These and parallel statistics are quoted from 'Enemy Shipping Losses in the Mediterranean' (A.H.B.), compiled from the most reliable sources such as N.I.D., Lloyds, the German naval logs and the publications of the Italian Naval Historical Office.
 - (3) Full details of air operations connected with these operations are given in the R.A.F. Narrative (first draft) on The Italian Campaign Vol. I. (A.H.B.).

The railways had, as Jodl had told Hube in Sicily, proved very susceptible to Allied air attack and they and all other communications were gravely impaired. For the last fortnight in August, the Tactical Air Force, (including the Tactical Bomber Force), and the Strategic Air Force did much to prepare the ground for the invasion. Eighth Army landed in Calabria on 3 September - Operation 'Baytown'. Opposition was slight and the air forces hastened the retreat of the Germans to the Naples area.

On 4 September, Allied commandoes landed at Bagnara - Operation 'Hooker'. On 8 September, Allied troops landed at Pizzo, near Vibo Valentia - Operation 'Ferdy'.

On 9 September, Force Z covered an Allied landing at Taranto - Operation 'Slapstick'.

As a result of these moves, the South was quickly cleared and the great complex of airfields at Foggia captured.

Fighter direction ships at Salerno

Escorted by aircraft, Allied convoys reached the Bay of Salerno on 8 September. The first troops landed in the early hours of 9 September. The operation bore the code-name of 'Avalanche'.⁽¹⁾ Among the interesting features of the enterprise was the system of headquarters and fighter control ships. The main headquarters ship was U.S.S. Ancon, which carried the Army, Navy and Air Force Commanders and the fighter direction for land-based aircraft. The standby ship for U.S.S. Ancon was H.M.S. Hilary, which was at the same time headquarters ship for X Corps. H.M.S. Ulster Queen carried the naval fighter directors for carrier-based aircraft. U.S.S. Ancon was her standby ship. There were four secondary standby ships, equipped for fighter control on a reduced scale, viz., H.M.S. Royal Ulsterman, U.S.S. Biscayne, U.S.S. Chase and U.S.S. Carroll. It was thus planned to provide continuity of fighter direction in case of casualties by enemy action. Casualties were, in the event, caused among them by enemy aircraft; overloaded as some of the craft were, the standby organization justified the system and provided a fruitful proving ground for similar operations elsewhere.⁽²⁾

The formation and structure of Coastal Air Force Command Post⁽³⁾

Coastal Air Force gave fresh evidence of its ability for adaptation to mobile warfare conditions by forming a special unit to act as an integral part of Operation 'Avalanche'. The Command Post was formed on 19 Aug. 43 in Algiers with a view to participation in the early phases of the landings and to the creation of a Combined Naval and General Reconnaissance Room. The post divided into parties.

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- (1) A complete record of Operation 'Avalanche' may be found in the R.A.F. Narrative (first draft) on the Italian Campaign Vol. I. (A.H.B.).
 - (2) All details from N.A.C.A.F. O.R.B.
 - (3) N.A.C.A.F. O.R.Bs.

One party was to join H.M.S. Hilary and operate as fighter control off Salerno if U.S.S. Ancon was disabled and to establish a shore-based radar control of night fighters: one party was to embark in a fast convoy to Salerno and two other parties in slow convoys. A nucleus staff remained at Bizerta.

The record of the air units in H.M.S. Hilary

On 5 September, Air Commodore Scarlett Streatfield, Acting Officer-in-Charge of the Command Post, (1) with two other officers, (2) proceeded by air from Maison Blanche to Castel Benito in Tripoli and joined H.M.S. Hilary. Their assignment was a dangerous one. They were to be stationed in the southern anchorage off Salerno for as long as operations demanded. H.M.S. Hilary, which also carried Maj. Gen. Sir A. McCreery, (3) weighed anchor at 1202 hours on 6 September. At 2207 hours on 7 September, a German aircraft dropped a torpedo on the convoy behind H.M.S. Royal Ulsterman, without inflicting any damage. By 0230 hours on 9 September, H.M.S. Hilary was in her assault position off Salerno. The troops landed at 0330 hours, and at 0500 the first heavy enemy air attack opened. At 2130 hours, German aircraft illuminated the Bay with flares. There were five enemy air attacks on the anchorage on 10 September. On 11 September, H.M.S. Hilary was a target for shore batteries, shells falling within 50 yards of her. Enemy air attacks continued intermittently by day and night to 25 September and the craft had several narrow escapes. On 12 September, she learned that U.S.S. Savannah had been hit on the 11th. U.S.S. Ancon put to sea on the night 11/12 September and H.M.S. Hilary became the fighter control ship for a period. On 12 September, the Air Signals Officer landed to visit 64th Fighter Wing and discuss a location for a G.C.I. station for control of night fighters. On the following day, he transferred to Capri; on 14 September, Air Commodore Streatfield followed him there and they sited the G.C.I. (4) station and planned a C.O.I. station. On 15 September, the Air Commodore, back on H.M. Hilary, was cut by shell splinters. On the afternoon of 16 September, they saw H.M.S. Warspite hit by a radio-controlled bomb and leave in tow for Malta for repairs.

In the meantime, local night fighter control was transferred by stages from Sicily to seaborne control units. One of the two craft engaged - L.S.T. 385 - which had taken up positions directed from H.M.S. Hilary, was put out of action by enemy shell fire, leaving L.S.T. 305 to carry on. She carried a heavy and vital load for some days until the G.C.I. stations were set up ashore. At night, she was positioned some 40 miles to seaward of the anchorage in a spot reasonably clear of echoes. By day, she moved into the anchorage and functioned as a reporting station. (5)

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- (1) In place of Gp. Capt. Clark, sick.
 - (2) Maj. Wilde (controller), U.S.A.A.F. and Sqn. Ldr. Fair (R.A.F. Signals).
 - (3) The future Commanding General of Eighth Army.
 - (4) Ground Control Interception.
 - (5) Report on Operation 'Avalanche' (A.H.B.IIM/A.45/91).

Night-flying Beaufighters were allowed to fly over the anchorage under her control(1) or freelance, a fact which enabled them to defeat the plans of several enemy air formations by shooting down their flare-droppers or pathfinders. The control effected from the L.S.T., in spite of shortage of personnel and reserve equipment, met with approval. The staff on the Hilary considered it would have been better if it had been invested in them, but they themselves suffered from overcrowding and their own communications, like those of all the headquarters ships, were overloaded with messages from both Army and Air Force sources.(2)

Between 17 and 25 September, H.M.S. Hilary survived a number of air attacks and periods of shelling. Sometimes German aircraft came in at 100 feet altitude out of the hills and on out to sea. Such attacks often offered no warning over the radio instruments owing to the hilly conformation of the coast. From 26 to 29 September, there were no air attacks on the anchorages. On 30 September, some Coastal Air Force personnel landed at Salerno, but the ship continued to Naples, where she functioned for a time as Convoy Control Ship.

In the meantime, a mixed unit had left Algiers with its transport and began to land at Salerno on 17 September. On 19 September, they sent a reconnaissance party to Montecorvino airfield to assess its serviceability. The main party prepared to camp near the beach, but, on discovering that the site chosen was a graveyard in current use, moved to a point between the Paestum air strip and Capaccio. Joined by the rear party from Bizerta, they opened a radio watch with Algiers and started A.M.E.S. units in the hills around the 'Texas' area.(3)

Coastal Command Post in Naples(4)

Allied troops entered Naples on 1 October 43; but it was some days before the harbour was serviceable. H.M.S. Hilary anchored off Naples on the evening of 3 October. An electric storm was in progress. Many fires were still burning in the dock area. Staff went ashore to reconnoitre for accommodation and to inspect the R.A.F. Section of the University of Economics, which had been allotted to Coastal Air Force and the Navy for a Combined Operations Control H.Q. No. 242 Group began to assemble.

On 5 October, H.M.S. Hilary was reported to be the first ship to enter the harbour, in water thickly surfaced with oil. There were sunken ships, about forty of them, at all the berths. When she anchored, hungry civilians, crowded in small boats, begged for food and collected the

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- (1) A.M.E.S. 15076 on board L.S.T.305
 - (2) Report on 'Avalanche' (A.H.B.IIM/A.45/191).
 - (3) Further details of the plan for control of night fighters and intruders, as well as such problems as air defence, air force zones of responsibility, protection of convoys and assault areas, and radar etc., may be found in the R.A.F. Narrative on the Italian Campaign Vol. I. Chapters 1 - 4 (A.H.B.).
 - (4) H.A.C.A.F. O.R.Bs. Oct. 43.

swill thrown over the side of the ships. The Allied bombing of the dock area was seen to have been very effective. There was not an undamaged building to be seen; most of them were demolished or gutted. There was evidence everywhere of German distaste of the Italian surrender and its consequences and of their policy of 'scorched earth' in practice. Nearly every wharf was blocked by sunken ships; some of these had been sunk in Allied air attacks, some scuttled by the Italians and many others by the Germans to block movement. American demolition parties had already done enough to enable four ships to berth alongside. The Germans had set fire to undamaged hotels before retreating. There was no water, drainage, electricity or gas. The Army was serving out water to the population.

It was at first intended that No. 242 Group was to take over General Reconnaissance Control, but the final decision, imparted on 9 October, was that No. 1 General Reconnaissance Operations was to become Coastal Air Force Command Post and to take over Anti-submarine Operations tasks from Naples. No. 242 Group was to move to Taranto.

On 18 October, operations commenced from the Combined Operations Room. The Coastal Air Force Command Post controlled operations of No. 323 Wing at Monte Corvino airfield. The Navy Operations Room Section was mounted the same day. German air attacks on Naples shipping began on 21 October in the evening and other aircraft were picked up by radar as the first flares dropped. The block of flats held for the staff of Coastal Air Force was demolished. The joint operations team was very soon fully occupied.

Responsibilities of Coastal Air Force during Operation 'Avalanche' (1)

Northwest African Coastal Air Force's commitments during Operation 'Avalanche' were very extensive for an air force engaged in a series of long-range movements of headquarters and units of all categories. It was responsible for the air defence of North Africa as far as the Tunis-Tripoli border, and Sicily; for the protection of shipping and all anti-submarine and air/sea rescue operations in the theatre of operations; for attacks on enemy surface forces and sea communications within striking range of North Africa; and for the taking over of all Fighter Sectors outside of 50 miles from the Italian battle front. The record of its various activities may be found elsewhere (2) and under various headings in this volume.

Air cover for the 'Avalanche' convoys on D minus 1 Day by the Palermo Sector (3)

As the converging convoys passed off Sicily northwards to Salerno on 8 September, i.e. D minus 1 Day, a very heavy commitment fell upon the Palermo Sector of Coastal Air

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- (1) H.Q. N.A.C.A.F. Operations Order No. 3 dated 3 Sept. 43 (N.A.C.A.F. and N.A.T.A.F. O.R.B. appendices).
 - (2) R.A.F. Narrative on the Italian Campaign Vol. I. (First draft) (A.H.B.)
 - (3) N.A.C.A.F. O.R.Bs. Refer to Appendix 18.

Force. The sector Spitfires(1) escorted all convoys as far North as 39° 20' N. North of that line, protection was taken over by Lightnings lent by Strategical Air Force, temporarily under command of Tactical Air Force. Those Lightnings, based for the purposes of Operation 'Avalanche' in the Catania area, were flown on 8 September to Termini airfield. They flew direct to Ustica Island, from whence they were vectored on to their convoys by a C.O.L. radio set. Thirty of the Lightning pilots were guaranteed to have been trained in night flying: they remained with their convoys until dark. On the night of D minus 1/D Day, Coastal Air Force provided a continuous patrol of two Beaufighters(2) until dawn on D Day under control of L.S.T.305.(3) In the event, L.S.T.305 was compelled to take over the additional control of Tactical Air Force's Mark IV Beaufighters when the latter's craft(4) was disabled. Until dawn on 9 September, Coastal Air Force protected convoys and shipping lying 15 miles off the beaches. It was the Mark IV Beaufighters which operated on the landward side and over the beaches. The Mark VIII Beaufighters stayed outside a line drawn from Point Carena to Point Licosa. Because of the new radar equipment they carried especial care was taken to see that these Mark VIII aircraft were not flown over enemy territory..

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- (1) U.S. Squadrons 2nd, 4th and 5th of the 52nd Wing.
 - (2) Mark VIII A.I.
 - (3) Refer to the sub-section on H.M.S. Hilary.
 - (4) L.S.T.385.

CHAPTER 5THE GERMANS ON THE DEFENSIVE/OFFENSIVEPART A - THE GERMAN EVACUATION OF SARDINIAPlans for the evacuation from Sardinia to Corsica

The transfer of German forces from Sardinia to Corsica began officially when the codeword 'Achse' became effective on 8 September, (1) although gradual withdrawal began while fighting in Sicily was still in progress. (2) In Sardinia and Corsica the Italian surrender caused the greatest embarrassment to the Germans. Operation 'Schwarz', the completion of the evacuation, came into operation as soon as the Armistice was made public.

The main evacuation routes ran from La Maddalena in Sardinia to Porto Vecchio and from Santa Teresa to Bonifacio. On 9 September, the Germans seized the harbour of La Maddalena and, on 11 September, reached a working agreement with the Italians controlling coastal batteries whereby the latter did not interfere with German ferry traffic. (3)

The German units in Sardinia were the 90th Panzer Grenadier Division, a Fortification Brigade, anti-aircraft units and some German Air Force units. There was a large Italian garrison and considerable quantities of equipment and material.

As soon as the evacuation of Sicily was completed on the night of 16/17 August, all effective Siebel ferries and landing craft (I-boats) of the 10th Landing Flotilla and the Combined Operations boats (4) of Engineer Landing Battalion 771 were switched to the Straits of Bonifacio. On 9 September, the evacuation forces were again notably strengthened by the despatching to La Maddalena of all naval ferry barges not required for the transport of fuel from Leghorn to the main front in Italy.

German Air Force moves from Sardinia to Corsica

There were at the time 26 German ground attack, (5) 6 short range reconnaissance (6) and 12 fighter aircraft (7) in Sardinia. On 10 September, Fliegerführer Sardinia transferred his Battle Headquarters to Ghisonaccia airfield in Corsica and aircraft and personnel followed on the 11th. By 15 September, the demolition of Sardinian airfields was complete. After operating from Corsica from 11 to 24 September inclusive, the air units were transferred to Italian bases to cover the air and sea evacuation.

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- (1) Fuehrer Directives (A.H.B.IIG.1/67 (B)).
 - (2) Codename Operation 'Alexander'.
 - (3) Details and plans from German Naval Command Italy and German Naval Staff/Operations war diaries (F.D.S/Admly).
 - (4) Sturmbooten.
 - (5) Elements of II/S.G.2.
 - (6) 4(H)12.
 - (7) III/J.G.77.

Allied air operations over Sardinia

Allied Strategic Warhawks⁽¹⁾ had operated from 5 to 8 September inclusive against Pabillonis, the only airfield then active, (reporting little or no activity) and on three days against important radar stations at Pula and Cape Carbonara. On 9, 11, 12 and 14 September, formations of about 40 aircraft swept Southern Sardinia in search of enemy aircraft, but all returned with nothing to report.⁽²⁾

Allied air watch on the Sardinian evacuation⁽³⁾

It had been correctly assumed by the Allies that Sardinia would fall of its own weight. Apart from Warhawk sweeps in a search of aircraft, nothing was done to prevent the evacuation. But there was no lack of interest displayed by the air Forces in what was happening, for while there was no immediate threat from forces bottled up in the island, it was certain that Allied plans for Corsica would lead to open conflict. Furthermore, the Sardinian airfields were urgently needed. They therefore kept a steady watch on the North of Sardinia from the 12th onwards.

A few Mosquitoes⁽⁴⁾ began on 12 September to cover the Sardinian ports and proceeded to detailed observation of the La Maddalena - Bonifacio evacuation area. On 15 September, the pattern was becoming clearer. Part cover of La Maddalena showed considerable activity. Six F-boats,⁽⁵⁾ two coasters and two ammunition carriers were at anchor. In Bonifacio there was F-boat, Siebel ferry and motor transport activity. On the 16th, activity at Bonifacio was again evident. At Santa Teresa, the photographs showed ammunition trucks and Siebel ferries. On 17 September, La Maddalena and Santa Teresa were again very busy. But on 18 September, photographs revealed greatly reduced activity. It was the end of the evacuation. On the Corsican side, Bonifacio was empty of shipping. The disembarkation of the last troops and equipment had been switched to Porto Vecchio. The number of naval ferry barges there had jumped from 15 to 22. New arrivals comprised Siebel ferries, a landing craft, motor boats (Italian), E-boats, Mas. boats and small landing craft.⁽⁶⁾

On 19 September, a Spitfire⁽⁷⁾ and a Mosquito⁽⁸⁾ photographed the area. Only 10 naval ferry barges (F. boats), 1 merchant vessel and 1 Mas. boat then remained.

The last Italian air operations in Sardinia

Dispirited and disorganized as the Italian forces in Sardinia were during the first few days after the Armistice, there was not much they could do to hinder the German evacuation.⁽⁹⁾ Italian aircraft in Sardinia on 9 September included

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- (1) Of 325th Fighter Group.
 - (2) N.A.A.F. O.R.Bs.
 - (3) N.A.A.F. C.R.Bs.
 - (4) Of 5th Photo. Sqdn. and No. 60 Sqdn.
 - (5) Naval ferry barges (MFPs.).
 - (6) N.A.A.F. O.R.Bs.
 - (7) No. 682 Sqdb.
 - (8) 23rd Photo. Sqdn.
 - (9) Angelo Lodi. L'Aeronautica Italiana nella Guerra di Liberazione Italian Air Historical Office, Rome (A.H.B.6 copy).

71 fighters, (of which 33 were operationally ready), based on Casa Zeppera, Milis, Venafiorita and Decimomannu airfields.(1) There were a few Italian-operated Ju.87s.(2) at Chilivani and a maritime reconnaissance squadriglia at Porto Conte and two Cant. Z.506/Ss for air/sea rescue. On 11 September, in accordance with the Armistice terms, a number of Italian aircraft were flown from Italy to Puglia, Sicily and Sardinia. Thirty Cant. Z.1007 bombers and four transport S.82s, with two hundred aircrew, flew from Perugia and landed at Alghero airfield in Sardinia.(3) Two of the transport aircraft were shot down over Bonifacio by German anti-aircraft fire.

On the same day, torpedo aircraft formations(4) began to transfer from Siena to Sardinia. The first formation of S.79s were intercepted by German fighters en route for Milis airfield. Two were shot down, three returned to Siena: two reached Decimomannu and the rest Milis. The second formation of eleven aircraft reached Decimomannu safely. Twenty-two of these aircraft eventually flew to Sicily and Tunisia to join the Allies. Several other units, including the Air Commander Upper Tyrrhenian, transferred to La Maddalena, Olbia and Elmas, but found conditions prohibitive. The Germans were in La Maddalena. Olbia had been set on fire and a squadriglia of seaplanes destroyed. At Elmas, the 84th Gruppo(5) was surprised by a German attack. From 18 to 20 September, Allied air units attacked the area. The Germans machine-gunned the Italian aircraft during the attacks, destroying three aircraft and damaging others.

La Maddalena was earmarked as an Italian naval base. Eight Ro.43s and an Ro.44 were despatched to that base for naval co-operation, but were forced to avoid it. On their route to the Balearics, two of them were shot down by German anti-aircraft fire.

In the South of Sardinia, the Germans forced the Italians to aid in transport tasks. These forces lost touch with their compatriots in the North, who were disposed to comply with the Armistice terms. Communications were deplorable, orders failed to come through; and to complicate matters, 1500 Italian parachutists of the Nembo Division joined the Germans and terrorised the population. In the North, the Germans, having mined all the airfields, blew up the Italian depots and commandeered their transport to aid their flight. The demolition of airfields was not opposed. On the night 8/9 September, the Germans blew up the airfield at Casa Zeppera and on 9 September, Villacidro. They took over Borore on the 10th, as well as Milis. There they damaged guns, fired on two escaping aircraft and blew up the airfield. Chilivani suffered the same fate on the 14th.

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- (1) 155th Gruppo (351st, 360th and 378th Squadriglie) at Casa Zeppera and Milis with Mc.205s and Mc.202s: Elements of 160th Autonomous Gruppo at Venafiorita, with Re.2001s: 82nd Squadriglia (of the 13th Gruppo) at Venafiorita, with Mc.202s: section of 304th Squadriglia at Decimomannu with Mc.205s.
 - (2) 121st Autonomous Gruppo (206th and 216th Squadriglie) at Chilivani.
 - (3) 132nd Autonomous Gruppo.
 - (4) These comprised the 28th, 86th, 88th and 106th Gruppe.
 - (5) 2 squadrons with 3 Cant. Z.506s and 9 Rs. 14s and 56 men.

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Venefiorita and Olbia were put out of action on the 15th. On about the 13th, the remaining German forces were concentrated between Olbia and Pallau.

On the night 13/14 September, an American mission with radio equipment was parachuted on to Decimommanu and communication with the Allied Command established.

The Cants. Z.1007 went into action in the early hours of 16 September, when five of them were airborne from Alghero to attack evacuation shipping in the Bay of Bonifacio. On 19 September, four Cants. from Decimommanu were reported to have hit motor launches in Porto Vecchio. On 17 and 18 September, a few Me.205 fighters covered Italian troop movements and carried out reconnaissance.

German air operations in Sardinia⁽¹⁾

On 17 September, two Me.109s attacked the buildings at Chilivani airfield causing damage. On 19 September, German bombers attacked Elmas, Decimommanu, Milis and Oristano airfields once and Alghero airfield twice, (causing casualties and damage), and Decimommanu and Elmas again on the 20th.

Preparations for reception of Allied air units⁽²⁾

The Italian Supreme Command attached great importance to the Sardinia-Corsica-Elba sector and on 17 September issued orders to the three armed services to the effect that, with the object of acquiring and maintaining control of those three islands, they were to impede the transit of the Germans to Corsica and eliminate them. If necessary, Italian troops were to cross from Sardinia to Corsica to fight the Germans there. Information on the state of airfields for Allied occupation was requested.

The Italian plans came to little. Plans to use fighters based in Sardinia to escort transport bearing Italian troops from Corsica failed to materialise when it was realised that there were only 12 fighters operational and the units lacked engines, propeller blades and spare parts. Venafiorita and Borore had been rendered unserviceable by heavy rain. The efficacy of the warning system at Alghero against enemy air attacks on the Corsica-Sardinia transfer was dubious: Allied assistance was requested. The Allies were advised on 17 September that they could occupy Venafiorita, Chilivani, Alghero, Monserrato, Elmas and Capoterra. Milis, Borore and Oristano were still in German hands.

The German evacuation from Sardinia - Progress of operations⁽³⁾

As the German move from Sardinia into Corsica was uncontested by the Allies, it must suffice if a bare outline of events is given. The successful evacuation of Corsica to the mainland with German air and naval cover was a much more important operation carried out against Allied air efforts to stop it. Its plan and progress will be the subject of detailed examination later.

(1) L'Aeronautica Italiana nella Guerra di Liberazione
(A.H.B.6 copy)

(2) Ibid.

(3) German Naval Command Italy war diaries: German Naval Staff Operations Division war diary (F.D.S./Admiralty).

The accelerated evacuation of Sardinia lasted from 9 to 17 September. By the latter date, all the troops and heavy arms and a high proportion of the vehicles and goods in short supply had been lifted. The Germans closed Bonifacio harbour on 9 September and had taken over Porto Vecchio, Santa Teresa, La Maddalena and Bonifacio by the 13th. On 21 September, they withdrew from Bonifacio and the whole area South of Porto Vecchio. Their progress northwards became increasingly difficult because of Italian and French opposition.

In Bastia (in the North of Corsica), the main port of assembly for the imminent evacuation to Leghorn and Elba, conditions were very difficult. Early on 9 September, two anti-submarine vessels(1) and five naval ferry barges overpowered the Italian ships in harbour; they were all claimed (incorrectly) as sunk later in the day by the Italian torpedo boats Aliseo and Ardito and Italian coastal batteries. Bastia was captured by the Italians:(2) and the German Sea Transport Office(3) left that port on 10 September. The Germans evacuated from Sardinia made strenuous efforts to force their way North to aid the feeble forces left there and reached Bastia on 13 September. The Sea Transport Office Bastia opened there again on 15 September. With these operations, German moves to secure their position after the Italian surrender came to an end.(4)

It is not intended to analyse the statistics of this operation, for its interest from the air point of view is only indirect. The material means have been shown by the account of Allied photographic reconnaissance to have been a mixed force of small naval craft and Italian steamers. The southern terminals were La Maddalena, Porto Torres and Olbia, Santa Teresa and the northern terminals Bonifacio and Porto Vecchio.(5) The system was elementary compared with the Sicilian and Corsican systems. The time element was spread to such an extent that there was no concentration of effort for long. There was no interference by the Allies.

Statistics of the Sardinian evacuation

It proved to be unexpectedly easy, Kesselring reported. Thanks to the complaisance of the Italian army commanders, he stated, all the German troops with their weapons and an Italian paratroop division - in all 25,800 men, 4,650 vehicles, 4,765 tons of supplies, 66 medium anti-tank guns, 78 heavy anti-tank guns, 62 tanks and 311 pieces of artillery were ferried to Corsica.(6)

More detailed figures from German documents(7) give totals for the 90th Panzer Grenadier Division and the

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- (1) U.J.2219 (ex Insuma) c.200 tons and U.J.2203(ex Australe - Fr.) 450 tons.
 - (2) Ibid and E. Fioravanzo. The Italian Navy's Struggle for the Country's Liberation. Ministry of Marine, Rome (Admly. Hist. Section) The sinkings of the 5 naval ferry barges cannot be confirmed from German sources.
 - (3) With the exception of the Senior Officer.
 - (4) Admly F.D.S. P.G./39998/20: captured documents (A.H.B.6)
 - (5) Ibid.
 - (6) Quoted in S.E. Morison. History of U.S. Naval Operations in World War II Vol.IX (A.M. Library).
 - (7) I.E. Kapitulation Italiens (P.G./33734. FDS/Admly).

3rd Panzer Grenadier Regiment as 19,300 men, 2,300 motor vehicles, 4,765 tons of supplies, 1,130 machine guns etc. and 6,500 men of the German Air Force with motor transport, ammunition and guns. These figures appear to omit the Italian paratroop unit.

PART B - THE GERMAN EVACUATION OF CORSICA

The general situation in mid-September 1943

The ground situation

The Allies began reinforcing Corsica on the night 12/13 September, when a small force of Commandoes was put ashore near Ajaccio from the French light cruisers Le Fantasque and Le Terrible. This force went at once into action and captured Ajaccio airfield. The intention was that this force should be augmented and, with the possible help of Italian elements, capture the island without assistance from the main forces engaged in the major task of consolidating the landings on the mainland of Europe. It was, in short, a small but important flank clearance movement. The general pattern, then, was one of the French reinforcing and contesting the island, with some Italian aid, from the South and the Germans from Sardinia retreating up the island into the north-eastern sector and evacuating from Bastia and the adjacent airfields to Elba and the Pisa-Leghorn-Lucca-Campiglia area on the mainland.

From 13 to 27 September, 6,400 troops, with stores and vehicles, were landed in Corsica by British, French and Italian warships.(1) Stiff fighting continued until 3 October, on which date the last German forces were evacuated.

During this critical period, the main Allied ground forces were engaged in very heavy fighting in the Salerno bridgehead and northward to Naples, endeavouring to secure the primary objectives of Operation "Avalanche". The Air Forces and the Navy were concentrating their maximum effort to this vital strategic end. Bearing in mind the methodical singlemindedness characteristic of Allied operations at the time and their anxiety not to be diverted from the task in hand to meet exterior emergencies, it will be understood that Corsican operations would be allowed to take their course.

The problem of evacuation

On 12 September, Hitler ordered the evacuation of all German troops from Corsica.(2) General von Senger was ordered to Bastia to take charge of operations. Under command was Captain von Liebenstein,(3) transferred from Sicily, appointed Sea Transport Fuehrer Corsica.

An important strategic move which turned the situation to the Germans' favour was their landing on Elba on

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- (1) Operation 'Norman'.
 - (2) German Naval Command Italy war diary. 1 Skl.2769/43 of 12.9.43 (Admlty./F.D.S. PG/32216).
 - (3) He arrived in Bastia on 17 Sept. 43. (Admlty. PG/45520 Sea Transport Officer Bastia war diary).

16 - 17 September. Its tenure forestalled an Allied seizure, secured their land flank, provided additional harbours and strengthened their control of the coastal area north of Gaeta. Above all, it shortened the distance of exposed sea transit from Corsica to the mainland.

The troops to be evacuated from Corsica were the 90th Panzer Grenadier Division,⁽¹⁾ a Fortification Brigade⁽²⁾ the German Air Force personnel and the Italian Nembo Parachute Division, totalling in all to some 26,000 men.⁽³⁾

The air situation

As the crisis in the Salerno bridgehead passed, Allied air operations and the ground advance were threatening the security of the German Air Force's forward bases in the Naples - Foggia and Rome areas; and they did in fact force their withdrawal towards the end of the month. While this deprived the front line German units of close air support, it fitted in neatly with the need of air cover for the planned evacuation of Corsica. Offensive operations for the fortnight of the evacuation were left in the main to the day and night operating bombers. The great air base of Foggia was lost, but the loss was accepted, for there was no lack of suitable bases further north. The German ability to react speedily to an emergency, to improvise and reorganize, was brilliantly exemplified in the plans for the air lift from Corsica and air escort for air and sea convoy. The ground situation in Italy was viewed with growing satisfaction. The fighter bomber forces, they correctly adjudged, could be temporarily lifted from the battle area and operate on the task of ensuring the transit of an extra first class division from Corsica to the Italian Front.

The Germans anticipated some interference from Allied air units, but do not seem to have correctly measured the depth of Allied apprehensions or their determination to make assurance doubly sure by employing every available aircraft, sometimes to the point of superfluity, on a single thrust aimed at Naples.

The orders for the evacuation stipulated that Transport Geschwader 5 of the German Air Force was to bring out some 30,000 troops. This called for rapid decisions. Airfields both sides of the Tyrrhenian Sea had to be stocked up, extra crews found, aircraft switched, and the whole air transport organization streamlined and marshalled. Especial difficulties would certainly arise in Corsica, where the perimeter was shrinking and a violent struggle proceeding. The attitude of the most of the Italians was, to say the least, dubious. The Nembo Parachute Division had come over to the Germans, but their depredations made them more of a liability than an asset. There were only a very few island airfields left which could be used and their number was shrinking daily.

From 10 to 24 September, Fliegerfuhrer Sardinia, from his headquarters at Ghisonaccia, controlled the few German air units transferred to that airfield from Sardinia.

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- (1) Admiralty PG/39998/3. (F.D.S.).
 - (2) Sturm Brigade Reichsfuhrer S.S.
 - (3) Admiralty PG/39998/3. (F.D.S.).

These were 4(H)12, (a short range reconnaissance unit) with six Me.109s, II/Schlacht Geschwader 2 (a ground attack Gruppe) with twenty-six mixed F.W.190s and Henschel 129s and, lastly, III/Jagd Geschwader 77 (a fighter Gruppe), with twelve Me.109s. The total number of operational aircraft on Corsica when the evacuation began was forty-four. But the pressure of Allied operations had already made their withdrawal a foregone conclusion. The German forces steadily withdrew, holding the perimeter round Bastia securely for as long as was needed for transport aircraft to land, fuel, load and return to Italy from Bastia/Borgo and Bastia/Poretta airfields. The operational units were available up to the 24th for the protection of loading operations in Bastia port, of the remaining Corsican airfields, for convoy escort, coastal reconnaissance and small low level attacks.

The maritime situation

On 19 September, the first day of the main German evacuation, the Allied Western Task Force had just finished its support of the Salerno bridgehead. Although naval gunfire support was greatly reduced after 17 September, a certain amount of it continued to be provided until 28 September. On 1 and 2 October, the Allies entered Naples and the minor ports around it, thus completing the major objective of Operation "Avalanche". The British supporting squadron remained in the northern assault area until 5 October, when H.M.S. Mauritius, H.M.S. Sheffield and the fleet destroyers sailed for Naples.(1)

On 9 and 10 September, H.M. submarines Sportsman and Seraph operated off Corsica and were joined later by H.M. submarine Unseen and three French submarines. From 13 to 27 September, four French cruisers, four French destroyers and two Italian destroyers were engaged in the transport of reinforcements for Corsica. The greater part of the surrendered Italian Fleet lay at Malta awaiting inspection and decisions as to its disposal.

It is beyond the scope of this narrative to examine the operations and policy of the Mediterranean Fleet during the period of the evacuation of Corsica. Full details of these may be found in the Admiralty Battle summary on the invasion of Italy(2) and Admiralty records. It is simply to be noted that there were no reports in the German naval records of any interference with the evacuation by Allied surface craft during the entire period of the evacuation. The Allied Navy (like the Allied Air Forces) was exercising the principle of concentration in support of Operation "Avalanche" and the moves indicated in the first two paragraphs above exemplify how this was being done.

German plans for the evacuation

Plans for the air lift(3)

The task of evacuation some 30,000 service men from Corsica was delegated by Transport Fliegerfuhrer 1 to Transport Flieger Geschwader 5. The Geschwader began

(1) Admiralty Battle Summary No. 37 (A.H.B.IIK/18/30).

(2) Ibid.

(3) A.H.B. Document No. 8A.640.

planning on the basis of 3,000 men a day and made the following moves. Of the eight Gruppen at its disposal, it selected four for the task, (1) pooling all surplus aircraft. Another Gruppe (2) also operated in the area and sustained losses, but does not figure in the evacuation order of battle. Three of the Gruppen flew Ju.52s. (3) The fourth flew the giant six-engined Merseburg 323s. (4) The total number of aircraft on the strength of the four Gruppen on 20 September was 135 Ju.52s and 25 Me.323s. Of these, 89 Ju.52s and 16 Me.323s were serviceable.

The operational bases in Italy of the four Gruppen were Pisa, Lucca, Pratica di Mare and Metato. The Corsican landing airfields were Ghisonaccia up to 25 September, and Bastia/Borgo and Bastia/Poretta from 26 September to 2 October. (5) Fighter escort for the transport formations was planned.

Plans for fighter cover and reconnaissance

From 19 to 21 September, Fliegerfuhrer Sardinia employed his three units based on Corsica in covering loading operations in port, their own airfields, sea convoys and in coastal reconnaissance. (6) On 22 September, his assigned tasks were expanded to cover:-

1. The supervision of air lifts from Corsica and the reception of air transport there.
2. Air support of the German bridgehead in Corsica.
3. Air reconnaissance of Corsica.
4. Anti-aircraft operations in Corsica.

In the meantime an Officer Commanding Air Escort for Convoys was subordinated to him and installed at Pisa. This officer was progressively allotted the two fighter units (7) and the short range army reconnaissance units (8) from Corsica, two fighter Gruppen from the front line (9) and two Staffeln of long range sea reconnaissance aircraft. (10) So prompt was the German reaction to the crisis that by the end of the month, after strenuous operations, the supporting air forces could muster 146 aircraft, of which number 81 were still serviceable. (11)

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- (1) II/T.G.2 Ju.52s: III/T.G.2 Ju.52s. III/T.G.4 Ju.52s. and II/T.G.5 Merseburg 323s.
 - (2) II/T.G.1.
 - (3) Range 500 miles. Useful load 3136 pounds.
 - (4) Its useful load was 21,500 pounds and could include lorries, tanks, A.A. guns and fuel. As an ambulance it could carry 60 men in beds. The ten-wheeled undercarriage was designed for landings on rough ground. The engines were Gnome et Rhone. Its range was 445 miles.
 - (5) Refer to Figure 5.
 - (6) A.H.B.6/C.934 30.5.56 and PG/45220 (FDS/Admlyt).
 - (7) III/J.G.77 and II/S.G.2.
 - (8) 4(H)/12.
 - (9) I/J.G.77 (Me.109s) and I/J.G.53 (Me.109s).
 - (10) 2/BFG.196 (Bord Flieger Gruppe, literally a ship-borne gruppe, but used on normal coastal reconnaissance) and 2/KFG.128 (Küsten Flieger Gruppe).
 - (11) Refer to Appendix 21 for a full statement of strengths, orders of battle and chain of command for supporting and transport air units.

The three Me.109 fighter Gruppen had a total strength of 93 Me.109s; the ground attack Gruppe had 25 mixed F.W.190s and Hs.129s. The two coastal reconnaissance units had 24 Arado 196s and the Army reconnaissance unit 4 Me.109s.

Command changes and concentration of covering air units ⁽¹⁾

On 24 September, Fliegerführer Sardinia transferred his headquarters from Ghisonaccia in Corsica to Pisa. His old title lapsed and he assumed the new one of Fliegerführer Luftflotte 2. He was ordered to carry out air transport from Corsica to the mainland (which had already begun) and to provide protection for sea and air transports. His task was hindered by fuel shortages and it was only after urgent appeals that sufficient fuel was allotted, and he was able to develop an all-out effort. Also subordinate to him was the Officer Commanding Air Escorts for Convoys, under whom the supporting forces were progressively concentrated. By 28 September, the forces had settled down roughly in the Pisa area. II/S.G.2 and I/J.G.53 were based at Grosseto, III/J.G.77 (2) and 4(H)12 at Metato, I/J.G.77 at Cecina, 2/B.F.G.196 and 2/K.F.G.128 at La Spezia and a mine-detecting staffel at Pisa. The fighter direction ship Kreta operated in the convoy sea area as escort. On 25 September, the air transport Gruppen were operationally subordinate to him.

Plans for sea lift - Routes ⁽³⁾

The Germans began their sea lift from Bastia harbour to Leghorn. This route was used throughout the evacuation, at first by both ships and naval craft and, after 22 September, only by ships. The Bastia - Piombino route was opened on 20 September and became almost uniquely the route for the small naval craft. The Bastia - Elba route was opened on 29 September and used until 2 October, almost entirely by naval craft. On three days, a beach at Sisco (just north of Bastia) was used: on 3 October, the day of the final mass lift, an emergency beach about one mile north of Bastia was used, as shells were falling in Bastia harbour and Allied reconnaissance aircraft had flown over the port.

The general intention was that the majority of the troops were to be lifted by the Air Force transport groups and the bulk of the stores, equipment, tanks and ammunition by surface craft. In the event over 6,000 men and over 1,000 prisoners of war were lifted by sea. Requirements were grossly overestimated and precise details of movements of troops never forthcoming from Army sources.

Plans for the sea lift - Shipping ⁽⁴⁾

On 19 September, the forces available to the German Naval Command Italy were small, consisting of three steamers, two K.T. war transport vessels, ten naval ferry barges,

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- (1) Refer to Figure 5 and Appendix 21.
 - (2) Although II/J.G.77 is recorded as being under command, it had, in fact, no aircraft and played no part in the evacuation.
 - (3) War diaries of Sea Transport Director Corsica, Port Officer Bastia and German Naval Command Italy (F.D.S./Admlty.).
 - (4) Ibid

five tugs and five freight barges. Reinforcements from Sardinia and Italy arrived steadily. There are conflicting reports on the strength at the height of the evacuation, but the following totals of shipping engaged for varying periods are recorded in the war diary of the Port Director Bastia and may be accepted as correct. There were 15 steamers, (1) 59 naval ferry barges, (2) 12 freight barges, (3) 9 Siebel ferries, (4) about 10 I-boats, 3 flak ferries, (5) 2 M-boats, (6) 2 Vp. boats, 5 anti-submarine vessels, (7) 4 mine-sweepers, (8) 2 or 3 tugs, (9) 5 or 6 minelayers, (10) 1 fighter direction vessel, (11) some 10 R-boats (motor minesweepers), a few S-boats for escort and a fleet escort vessel. (12)

The naval ferry craft came under command of the 2nd, 4th and 10th Landing Flotillas of the 2nd Landing Division and the Engineer Landing Battalion No. 771 (an Army Unit), all of whom had been engaged in the successful evacuation of Sicily.

The armament and quality of these craft and their crews are familiar from the record of the Sicilian evacuation and the results achieved in the transfer from Corsica plain to understand. If anything, they were less fortunately placed. There was no protection by massive anti-aircraft and coastal batteries and the sea voyage was long, instead of a brief channel crossing. They were exposed to attack by surface craft, submarines, aircraft, the artillery of the French ground forces in Corsica and to mines. They suffered for the whole period the gravest apprehensions for the security of the enterprise. The risks attendant on the fifteen merchant vessels engaged were greatest, for they represented easier targets for aircraft, submarines or surface craft.

Operations

Allied air reconnaissance

The interest of the Allied Air Forces in the Sardinia - Corsica - Elba - Leghorn area was maintained after the surrender of the Italian Fleet, but on a reduced scale.

- (1) S.S. Champagne, L.M. Russ, Nikolaus, Giglio, Tiberiade, Kraft, San Pedro, Nikolina Maersk, Gluckauf and Giorgio: K.T.2, K.T.8, K.T.14, K.T.19 and K.T.31.
- (2) Nos. F.77, F.150, 181, 183, 249, 291, 296, 303, 316, 356, 360, 420, 421, 422, 423, 424, 438, 450, 451, 454, 456, 458, 461, 479, 486, 488, 503, 509, 513, 514, 515, 518, 519, 522, 523, 542, 553, 554, 587, 596, 608, 609, 610, 611, 612, 613, 614, 616, 617, 619, 621, 622, 625, 703, 749, 759, 760, 777, 795.
- (3) Travemunde, Karl, Kurt, Stuttgart, Elbing, Gotha, Erfurt, Horst, Gotenhafen, Leipzig, Freiburg, Koln.
- (4) Nos. S.F. 109, 110, 113, 125, 166, 172, 179, 185, 231.
- (5) K.F.176, 179 and 224.
- (6) M.7605 and 7608.
- (7) U.J.2203, H.J.2209, U.J.2210, U.J.2218, U.J.2219.
- (8) S.S. Sassari and Wherries Nos. 7035, 7036 and 7037.
- (9) Including No. 588 and S.S. Vittorio Veneto.
- (10) Including S.S. Brandenburg, Pommerm, Gaspari (F.8) and two R-boats.
- (11) S.S. Kreta.
- (12) S.G.11.

Evacuation activity between the La Maddalena and Bonifacio - Port Vecchio areas was observed, but no offensive action followed. Beaufighters⁽¹⁾ were involved in inconclusive engagements with barges, a tanker and E-boats during the first fortnight, in the Corsica - Capraia Island - Leghorn area, and lost three aircraft to the vessels' defences. Sightings made before 19 September were of traffic engaged in the transfer of redundant troops, stores and equipment to the mainland. Apart from air raid warning at 2035 hours on 17 September, the Port Director Bastia reported no Allied aircraft over Bastia until the surprise attack on the 21st by 20 Liberators. During this time, the organisation gained momentum.

Corsican airfields were photographed on the 16th and 17th. On the 16th, no significant change was noted at Bastia, little on the 17th, but plenty of landing craft in the sea area. Bastia was not reported on again until the 19th, when some activity was observed. On the 20th, the first significant report was made. Evacuation was proceeding on an increased scale. Leghorn was covered on the same day and the continued activity revealed there led to the conclusion that it was the main disembarkation point for the Corsica lifts.

Action followed on the 21st, when day and night attacks on Bastia and Leghorn were carried out. As the sea area involved was far greater than at Messina, the general pattern tended to become increasingly apparent to air reconnaissance. It is curious, therefore, that while Bastia and Leghorn were attacked, Piombino and the Elban ports of Marina di Campo and Porto Ferraio, all extensively used, were never attacked in any weight.

Early transport aircraft losses to air attack

On 6 September, photographs taken of Praticcia di Mare airfield and its satellite revealed, in addition to an important collection of bomber and fighter aircraft, 36 transport aircraft. These belonged to Transport Gruppe III/T.G.4, earmarked for the evacuation of troops from Corsica. There were also 11 transport aircraft on Ciampino North and South. All three airfields were attacked the next day - the 17th - the Ciampino airfields by 26 and 29 Fortresses and Praticcia di Mare by 72 Marauders.⁽²⁾ The reports on the strike photographs taken at Ciampino do not convey any precise information, but those relating to Praticcia di Mare claim several transport aircraft destroyed. There were in fact 12 Ju.52s destroyed and three damaged as a result of the day's attacks.⁽³⁾

On 24 September, the transfer of the crippled Gruppe to Pisa was under way. On 20 September, it had 30 serviceable aircraft, but this figure had dropped to 15 by the last day of the month, worn down by the intensive operations. The early loss of 12 aircraft in a single attack suggests what might have been accomplished if the programme of counter-air

(1) Of Nos. 47 and 39 Squadrons.

(2) Of the 17th, 319th and 320th Bombardment Groups.

(3) A.H.B.6.

operations had been extended to cover the Transport Geschwader's Italian bases in the vicinity of Pisa. Unfortunately no time could be found to explore and photograph the area and no aircraft detached to bomb it.

Opening phase of the air lift⁽¹⁾

Transport aircraft flights to Corsica began on 19 September, 1943, the first day of the official evacuation, and continued without loss at high pressure until 22 September. Some aircrews flew as many as five sorties a day. On 19, 21 and 22 September, single aircraft of No. 328 wing of Coastal Air Force operated inconclusively in the area, making isolated contacts with superior forces and usually making their escape from small formation of Ju.88s in the coastal areas. They reported no fighter escorts for the Ju.52s. Although Marauders (No. 14 Squadron) reported the destruction of three transport aircraft, they only damaged them.

All the four Gruppen continued their day flights, carrying out ammunition, fuel, flying and other equipment, troops and wounded. The early Ju.88 protection appears to have been withdrawn after 21 September. On 23 September, a day of heavy attacks by Allied aircraft, fighter protection was urgently needed but not yet forthcoming. The Transport Fliegerführer thought the increasing attacks by Beaufighters could be overcome by better discipline in close formation, a suggestion of scant comfort to the poorly defended transport aircrews.

Attacks by Coastal Air Force on the air lift 19 to 24 September (2)

The choice of No. 328 Wing for the main effort against the air lift was well-advised, for it was a well-balanced force, small though it was, with considerable experience in maritime operations. It employed for interception Marauders of No. 14 Squadron, Baltimores of No. 52 Squadron and Beaufighters of Nos. 38 and 47 Squadrons. These aircraft were based at Protville airfields I and II in Tunisia. On 23, 25 and 27 September, 1943, Coastal Air Force sent in the two French Groupes de Chasse 1/3 and II/7 to Ajaccio airfield, where they went into action.

After the groping effort of the first four days, Coastal Air Force began to get to grips with the problem on the 23rd. Two formations of four Beaufighters, one of three, and three single Beaufighters all made attacks. All from No. 39 Squadron, they attacked formations of up to six transport aircraft and, in one case, two Arado 196s, claiming eight destroyed in all. A Marauder of No. 14 Squadron was unsuccessful in attacking three of a formation of fourteen Ju.52s. On the same day, French Spitfires claimed to have destroyed four out of seven Ju.52s encountered. The Germans admitted the loss of four Ju.52s and two S.M.82s in air combat and six S.M.82 and two 323s destroyed and four Ju.52s and two Me.323s damaged by the air attack on Pisa airfield.

The 24th was another day of serious loss for the Germans. Seventeen Beaufighters of Nos. 39 and 47 Squadrons

(1) A.H.B.6 Doc. No. 8A.640.

(2) N.A.C.A.F./Air Staff and No. 328 Wing O.R.Bs.

met four formations, three of them numbering from ten to fourteen aircraft flying close for defence and claimed to have shot down seven of them for the loss of four Beaufighters. One of the Beaufighters was lost in an attack by two escorting Me.109s. The Germans recorded the loss of fifteen Ju.52s and one S.M.82, all but one on operational flights. The Transport Geschwader records the loss of only six Ju.52s. The total losses since the air attack on Pratica di Mare on the 17th now stood at 46 transport aircraft.

Reorganisation of the air lift 24-25 September

While there was a shortage of fighter cover, the dangers of unescorted lifts over a straight route were manifest. At the same time, Luftflotte 2 was calling for an acceleration of the air lift. On the 24th, the two calls for more traffic and more security were reconciled by reducing the distance and changing the routes and airfields.

The transports flew down the mainland until in line with Elba Island, then made for the north-western tip of Elba and from thence direct to Borgo. The new Corsican airfields were Bastia/Borgo and Bastia/Poretta. Ghisonaccia airfield was abandoned and fell to the French on the 26th. German evidence indicates that the main transport unloading bases were temporarily abandoned and that loaded aircraft flew in to Campiglia to the 24th and on northward to Cecina from the 25th. On 26 September, the newly appointed Fliegerfuhrer Luftflotte 2 reported that stocks of aviation fuel were inadequate. Campiglia airfield was stocked up and motor transport detailed to bring fuel up from Orbetello.

On 27 September, the rapidly marshalled forces of the O.C. Close Support for Convoys were in evidence and the first sizeable fighter cover was recorded. III/JG.77 flew 24 sorties; 2/B.F.G.196 flew 8 sorties on anti-submarine patrols while 4(H)12 despatched 4 aircraft on reconnaissance of the coastal areas and the roads of Corsica. On the 28th, fighter sorties rose to 40, without loss. While the German organization was being tightened up and strengthened, the Allied Air effort against the air lift dwindled to zero, so that it is not possible to measure one against the other.

Decline of Allied air effort against the air lift

Single Beaufighters were proved to be at a disadvantage when their approaches to the transport formations were discouraged by two or more Me.109 escorts and there were not sufficient either of them or the Marauders to provide the strength more serious attacks would have warranted. The only Spitfires available were the French units now based at Ajaccio.

On the 25th, two Beaufighters were attacked by two Me.109s and lost one aircraft. On the 26th, no attacks against the airlift were recorded. On the 27th, a single Marauder claimed to have shot down one of two Arado 196s encountered and to have been attacked by two Me.109s. The Germans admit the loss of a Me.109 on an escort flight only. From 28 to 30 September, no attacks by No. 328 Wing were reported, but the Germans reported two Ju.52s and three Me.323s destroyed in air combat. The Me.323s were shot down, while leaving Bastia, by French Spitfires.

The interest of the Allied Forces in Corsica fell off sharply. Indeed, by 27 September, the main part of the German troops had been carried to the mainland. The balance were engaged in fighting and could be left to the French. There was still no intervention by Allied naval surface units. The only tactical emergency recognised by the Supreme Allied Commander existed in the Salerno-Naples area, where the Allies had just narrowly escaped being thrown back into the sea.

The night air lift in the storm ⁽¹⁾

Bad weather began to develop at sea on the 26th and lasted until the 29th. The air lift reached a new level on the 26th notwithstanding. At 1300 hours on the 27th, the Transport Fliegerfuhrer ⁽²⁾ ordered the cessation of day lifts. The bulk of the German troops was by that time, he said, on the mainland. From thenceforward, the air evacuation was to proceed only by night. On the 28th, accordingly, the only sorties, carrying a few troops, were made in the early morning and evening. This system continued over the 29th and 30th. The full blast of the bad weather had not yet been felt by the air units.

On the 26th, one Ju.52 was lost for reasons not given. On the 27th, one Me.109 was lost on an escort flight, no cause being given. On the 29th, two Ju.52s were shot down between Corsica and Elba by French Spitfires from Ajaccio.

The air transport position was still comfortable. Unlimited quantities of Italian fuel were being released at Leghorn and the prospect of a smooth finish was arising, when the temporary airfield at Poretta-Borgo was prematurely blown up while operations were still proceeding. Fortunately the 20 Ju.52s standing there were undamaged. Craters were hastily filled in and the field repaired. But barely had conditions been restored to near-normal when bad weather set in and departure was delayed until the weather improved. Over 700 service men were to be flown out and, simultaneously, other Ju.52s were to cross from Italy to collect more. The night flights began at 2300 hours. Operations from Pisa to Corsica were led by the Geschwader Commander through rain and thunder; the entire task was a complete success.

Final phase of the air lift

The transport units completed the last two days of operations without a hitch apart from some compression towards the end, as the problem of the final lift of front line troops became urgent. Nothing was left to chance. A group of heavy anti-aircraft batteries was moved into the mainland base area in case of any repetition of Allied attacks on Leghorn and the Pisa airfields.

The last air lift flights were made on the night of 1/2 October. The final lift of 3 October - Operation "Schlussakkord" was delegated to the naval surface units. On 3 October, orders were received that the air transport Gruppen were to be withdrawn, probably for service on the

(1) A.H.B.6 Document No. 8A.640.
(2) Major Fath.

eastern front, and that the Geschwader was to move to Germany. On 6 October, Kesselring sent a message to von Richthofen (A.O.C.-in-C. of Luftflotte 2) expressing his warm thanks to transport units and supporting air forces, whose efforts had "contributed decisively to the successful completion of the undertaking".

Final operations of the supporting air units

On 1 October a formation of 12 Me.109s reported an encounter with 51 Fortresses, probably part of the force despatched to attack Augsburg, claiming to have dispersed the formation and shot down one Fortress. The Fortress operation was abortive, in any case.

During the last intensified effort of the night 1/2 October, Luftflotte 2 ordered maximum fighter protection for both air and sea transports. Freelance patrols were carried out in the Bastia-Elba area and low level attacks screened the Bastia bridgehead. On 3 October, a number of Me.109s of I/J.G.53 joined in the Corsican land battle and attacked motor transport near Bastia with mortar bombs. On 4 October, although the evacuation was ended, 16 fighter sorties and 14 Arado 196 anti-submarine patrol and convoy escort sorties were made. Thereafter, the fighter force were re-deployed and pursued the tasks appropriate to the needs of front line close support and the interception of Allied bombing.

Allied air attacks on evacuation airfields⁽¹⁾

Only two effective attempts were made to neutralise evacuation airfields. Pisa/San Giusto airfield had been photographed at 1700 hours on 20 September, when it was occupied by seven transport aircraft, one He.111, three small aircraft and thirty-one Italian bombers. In the belief that the field was still a base for transport aircraft, 41 Wellingtons⁽²⁾ bombed it on the night of 23/24 September for 16 minutes without loss or encounters. Many aircraft were reported burning after the bomb pattern had thoroughly covered the dispersal areas. The Germans admitted the total loss of two Me.323s and six Savoias and damage to four Ju.52s, criticising their own anti-aircraft defences as being little in evidence.

On the nights 24/25 to 27/28, the Wellingtons switched to U-boat hunts. On the night 28/29, the heavy rain rendered their airfield unserviceable. They achieved nothing thereafter until the night 3/4 October, when four aircraft made a last attempt to hinder the evacuation by dropping thirty-five 250 pound bombs on Bastia harbour, causing, it was reported, considerable destruction. This was probable,⁽³⁾ although the final lifts were made from a point one mile to northwards.

(1) N.A.A.F. Ops. O.R.Bs.

(2) Of Nos. 236 and 331 Wings.

(3) No confirmation from German records is possible, as the report on the final operation is missing from the war diaries of Port Director Bastia and the German Naval Command Italy and the report by Capt. von Liebenstein does not refer. The war diary of the German Naval Command Italy for 1 to 14 Oct. 43, is also missing from Admiralty Foreign Documents Section's archives.

On 25 September, the Germans abandoned Ghisonaccia airfield and brought the Borgo and Poretta airfields at Bastia into full use. Photographs taken the previous day had showed six single-engined fighters, two Do.217s and four transport aircraft on Ghisonaccia and five transport aircraft, seven small aircraft and five Italian bombers on Borgo.

(1)

On the 25th, the day of the transfer, 36 U.S. Mitchells dropped 53.5 tons of bombs on Borgo airfield. Photographs showed the East and West sides well covered with scattered burst in the centre, but the airfield still serviceable. There is no evidence of losses from German records, indeed, no record of the attack. On 28 September, a formation of Fortresses, on their way to Bologna and back, passed over Bastia without bombing and, on their return reported the presence of one Me.323 and six to ten other aircraft. On 25 September, a mission of 55 Liberators planned to attack airfields at Pisa and Lucca proved abortive.

Summarising the air effort against evacuation airfields, its almost complete absence of systematic pattern stands out in relief against the organized operations by N.A.T.A.F., N.A.S.A.F. and the ground forces against the enemy air force in Southern and Central Italy and points once again to the complete absorption at the period in the most immediate tasks to the detriment of borderline operations. It must also be recalled that a considerable volume of air effort was being devoted to the situation in the Eastern Mediterranean, where the Allies were sensitive to the precarious balance in which their fortunes were weighed.

Sea ferry operations 16 to 21 September 1943 (2)

The Port Director of Bastia returned to his post on 15 September, when the port fell again into German hands: on the 16th, he despatched two ships - S.S. Champagne and K.T.8 - to Leghorn with men, vehicles, guns and material. The German Naval Staff Italy recorded at the end of that day that about 3,000 men and some material had already been ferried to the mainland, most of the troops by air. All this so far was the routine transfer of redundant men and supplies. The mass evacuation was to begin on the 19th. On 17 and 18 September, ships, (escorted by R-boats and M-boats), naval ferry barges, supply barges and landing craft ferried 366 men, 200 vehicles, 60 guns, 3 tanks and 587 tons of material to Leghorn.

On 19 September, the mass evacuation began officially. Luftflotte 2 and the German Naval Command Italy were responsible for the task. Conditions were still primitive. There were no reception centres in Leghorn and Piombino. In Bastia, loading units were getting drunk on pilfered alcohol. Patrol boats, minelayers and anti-submarine (U.J.) vessels were operating in the sea areas and some special Siebel ferries armed with 88 mm guns were being assembled as escorts to aid the R-boats.

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- (1) Of the 321st Bomb Gp.
 - (2) War diaries of Port Director Bastia, German Naval Command Italy, 2nd, 4th and 10th Landing Flotillas and German Naval Staff Operations Division (F.D.S. Admiralty).

On 21 September, the German minelayer Brandenburg⁽¹⁾ and the fighter direction ship Kreta,⁽²⁾ escorting her, were sunk by an Allied submarine Southwest of Leghorn. The former loss left the Germans with only one Fleet minelayer - S.S. Pommern.

Sea ferry operations 22 September to 2 October 1943⁽³⁾

This period was one of intensified operations in continuous bad weather. As many as 14 naval ferry barges left simultaneously for Piombino, sometimes escorted by an R-boat or a Flak Siebel Ferry. All five Kriegs Transport ships, some supply barges and a few Siebel ferries were also working on the run. Traffic was reorganized and accelerated from the 26th. On the 27th, Marina di Sisco, a small beach a few miles North of Bastia, came into use; and on the 27th, 29th and 30th a total of 15 ferry barges left for Piombino or Elba from there. Captain von Liebenstein was surprised and relieved at the scarcity of air attacks on Bastia, where the motor transport presented a unique target for aircraft.⁽⁴⁾

From the 29th, cargoes began to be despatched to Elba Island. Some of the men and material went to strengthen the island build-up, but most of both were ferried on to Piombino.

Coastal Mitchell attacks on evacuation shipping

The 321st and 325th U.S. Bombardment Group of Mitchell aircraft, now armed with 75 mm cannon, were attached to Coastal Air Force for anti-shipping strikes and it was hoped that their new armament would show quick results. A few formations which could be spared from the numerous priority commitments at the time were despatched on armed 'Rover' patrols during the evacuation, intermittently and usually in formations of four aircraft. They opened a series of sweeps on 15 September over the sea areas between Corsica and the mainland.

Three of them shelled a group of three Siebel ferries on their way empty to Bastia from Leghorn on the 7th. They damaged one of them but sank nothing. From time to time, these small formations operated up to 30 September. The numbers of their aircraft carrying 75 mm cannon were limited and the operations experimental, but the results reported were interesting. In the fortnight under review they made 33 sorties and 10 attacks, firing 107 shells and scoring (they claimed) 22 direct hits. They claimed to have sunk two barges and damaged ten ferry craft, a creditable performance in all, but of course not decisive. As at Messina, the armament of the enemy craft deflected most projectiles of the calibres in use.

The last air attack on evacuation ports - 24/25 September

On the night of 24/25 September, 80 Wellingtons⁽⁵⁾ dropped 107 tons of mixed bombs between 2157 and 2224 hours on Leghorn North basin, concentrating on the small craft and

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- (1) 3,894 G.R.T. (ex Kita - French).
 - (2) 2,600 G.R.T. (ex Ile de Beauté - French).
 - (3) Port Director Bastia war diary (F.D.S. Admiralty).
 - (4) PG/49605 (F.D.S./Admlty).
 - (5) Of Nos. 231, 236, 330 and 331 Wings.

medium merchant vessels. This attack put the electricity and watersystem out of action for several days. Without water, the merchant vessels could not operate. For some days thereafter, the weight of traffic was borne by the small craft. Water was ordered from La Spezia, but it was not till the 27th that a ship sailed for Leghorn and, thereafter, not until the 29th that two more were on the run.

The storm⁽¹⁾

Bad weather set in on 26 September and seriously impeded sea traffic. The S.S. Champagne and S.S. San Pedro could not leave Bastia. The two anti-submarine vessels⁽²⁾ were forced back to Leghorn, but some R-boats operated and the naval ferry barges ran through the storm. Again on the 28th and 29th, a gale blew up, but on both days barges and ships operated.

The effect of the bad weather on air operations in the affected area was naturally very prejudicial, but German plans for more air cover and air port defence continued and the small craft fought through the weather.

German apprehensions and improvements to the service⁽³⁾

Damage caused by the Allied air attacks of 21 September, the lack of craft and installations, bad weather and the presence of Allied submarines worried the Germans and increased their difficulties. Five ships and a minelayer had been already destroyed when S.S. Champagne, (of 10,000 G.R.T.), was torpedoed in the early hours of the 24th and beached. She was refloated, repaired and lay at anchor off Bastia in readiness for fresh operations until the 27th, when she was again torpedoed by an Allied submarine and finally went aground.⁽⁴⁾ A few ferry barges had also been sunk since submarine and air interference began on the 21st.

The German Naval Command Italy appealed for very strong anti-aircraft defences in ports, large surface escort forces, another minelayer, night air patrols and night air reconnaissance and for air defence of ports, convoys and escorts. Most of these were still not forthcoming to any adequate degree by the 27th, but special flak Siebel ferries with 88 mm guns were sent to Bastia and operated against aircraft and ground targets.

The absence of interference by Allied surface craft was a continued surprise to the Germans. They put this fact down to the German mines sown in the Bonifacio Strait and area to the Allied shortage of available minesweepers. They considered with concern the likelihood of operations by Allied aircraft from newly-acquired bases in Sardinia, which would perhaps force them on to night crossings. Luftflotte 2 was asked to anticipate this threat and either to destroy the airfields in question or render them unserviceable. This came to nothing. The chance of interference by Allied surface craft was, however, never

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- (1) Admiralty F.D.S. P.G/39998/3.
 - (2) U.J.2213 and U.J.2209.
 - (3) PG/39998/3 and PG/45220 (Admiralty F.D.S.).
 - (4) Von Liebenstein had protested on the 22nd against the use of big steamers, but had been snubbed.

lost sight of. German air reconnaissance of the Cape Corse - La Spezia - Ostia - Olbia - Bonifacio Strait sea area was organized thrice daily. Efforts were redoubled as the final phase approached.

The Allied operations in Corsica were regarded by the Allied Command as an all-French affair. It was hoped and expected that those forces would bring the episode to a successful conclusion without additional aid and the general tone of the period indicates a complete preoccupation with the fighting in Italy. The French were making good progress meanwhile, although von Senger skilfully kept open the road leading to Bastia as long as he needed it. But time was running out and, as the French pressure increased, the problem of one final transport operation became more urgent.

Allied air attacks on Bastia and Leghorn⁽¹⁾

On the third day of the planned evacuation, Allied air formations attacked the two main terminals. Between 1308 and 1310 hours on 21 September, 20 U.S. Liberators made a surprise attack on Bastia. Five merchant ships were sunk,⁽²⁾ ammunition dumps were exploded and about 100 vehicles and guns damaged. Some 60 people were killed and the harbour rendered temporarily unserviceable for the use of ships of large or medium tonnage. No departure of loaded craft was possible until 1800 hours. A few more left at 2100 hours, but loading was again suspended at 0330 hours when the harbour was again bombed.

Seventy-five Wellingtons attacked the harbour from 0330 to 0445 hours. They reported many fires among the shipping before the attack and hits among them. The day attack had dealt most of the fatal blows on the destroyed ships. The night attack made it certain that none of the vessels would re-enter service. Leghorn was attacked on the 21st by 32 Liberators.⁽³⁾ One M.F.P. and one supply barge were sunk. The next air attack on the ports was not until the night of the 24/25 and the last during the evacuation was on the night of 3/4 October - a very light operation. The final attack of 4 October by Mitchells was too late.

Coastal Wellington operations against evacuation shipping⁽⁴⁾

The activity of German U-boats during September and the great diminution of enemy shipping traffic in the Central Mediterranean following the Armistice compelled No. 458 Squadron to devote almost its entire effort during September and October to U-boat hunts. Although the Germans still controlled a great volume of shipping, it was no longer observed on the open sea; the loss of Sicily, Sardinia, Naples, Bari, Brindisi and Taranto and the advance of Allied surface, submarine and air forces northwards denied them their former mobility and restricted them to coast crawling

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- (1) Port Director Bastia war diary (F.D.S. Admiralty): N.A.A.F. and No. 205 Group O.R.Bs.
 - (2) S.S. Nikolaus (6,397 G.R.T.) Tiberiade (2,696 G.R.T.) Kraft, Giglio (1,339) G.R.T.) and Gabes.
 - (3) Part of the Liberator forces lent by the Eighth U.S.A.A.F. to the 9th U.S.A.A.F. The units which bombed Bastia were also from those groups.
 - (4) No. 458 Sqdn. O.R.Bs.

between Toulon, Marseilles, Genoa, La Spezia and Leghorn, on which routes they enjoyed the protection of shore-based aircraft. There were therefore, apart from the evacuation, no suitable targets for the long-range night operating Wellingtons, which were almost entirely concentrated on anti-submarine convoy escort submarine hunts.

Nevertheless the evident activity between Corsica and Italy was enough to warrant the employment of a few aircraft. These operated singly, up to four (and once six) in number on most nights from the night 17/18 to 29/30 September and on the nights 2/2 and 3/4 October, making a number of attacks without any apparent decisive results. Their difficulties were the perennial ones, universally recognized, of attacking small vessels in motion at night and in face of anti-aircraft fire.

On the nights 17/18, 18/19, 19/20, 20/21, 22/23, small groups of craft, occasionally escorted by E-boats, were sighted and attacked with as many as twelve bombs but although a number of near misses were scored it cannot be definitely traced that any merchant vessels, barges or E-boats were sunk as a result. Flak was usually experienced and night fighters frequently reported. On 23/24 September, two Wellingtons were chased by night fighters in the vicinity of four E-boats protecting a craft, but escaped. On the night 21/22, four Wellingtons cruised for one hour outside Leghorn but sighted no targets. On the night 22/23 September, the six aircraft operating ran into 10/10 cloud, rain and lightning. Returning over the mainland, they saw fires at Piombino and dropped 12 bombs on them.

The position of the sea lift on the morning of 3 October

By 0345 hours on 3 October, the Sea Transport Officer Corsica at Bastia had despatched, from 17 September, no less than 3,958 troops, 971 prisoners-of-war, 2,897 vehicles, 306 guns, 87 tanks and over 4,471 tons of stores and equipment to Leghorn, Piombino and Elba. A much greater volume of the troops had been flown over and its fortunes at the hands of Allied aircrews have been dealt with separately. Taken as a whole, it was considered a great success to that point, but the most difficult operation lay immediately ahead. With the French artillery almost within range of Bastia harbour, there still remained some 2,000 men, 300 vehicles, 50 guns and some stores to lift: the congestion in Bastia was phenomenal.

Operation 'Schlussakkord'⁽¹⁾

The first orders for the final lift by sea were issued on 30 September. It had to finish by twilight on 2 October. Bastia was the main base, but Sisco was to be used if Bastia fell. Round about midnight on the 2nd, men, vehicles and stores were still piling up in Bastia harbour in a state of confusion. Discipline was falling off fast and there were not enough left for surveillance. German officers were engaged in hand-to-hand struggles to get their personal effects on board and some threatened their comrades with revolvers to get past the traffic blocks.

(1) PG/39998/3, PG/32070, PG/49605 and PG/32216 - 6.10.43.
(F.D.S. Admiralty). Refer to Appendix 22 for the plan.

After 0400 hours, all arrivals of ferry barges, Siebel ferries, I-boats and landing craft were earmarked for the final lift - known as Operation 'Schlussakkord'. ⁽¹⁾ S.G.11, a fleet patrol vessel, cruised all day outside, with Captain von Liebenstein controlling operations on board. S.S. Sassari swept the channel for mines. Telephone communications with the Borgo airfields had been cut off since the 24th and land journeys were rendered extremely hazardous by French partisans. Flak Siebel ferries lay off the port ready to engage the French mountain batteries or Allied surface craft or aircraft if they fired on the port. Mine-laying was carried out by two large R-boats.

At 1600 hours, Operation 'Schlussakkord' ⁽²⁾ began. The K.T.19 and S.S. Giorgio were the first to leave. The balance of the 90th Panzer Grenadier Division was shipped in eight naval ferry barges. When French shells began to fall on the port, and the whole vicinity was ablaze, the craft transferred to the new port. The U.J. boats searched the channels for submarines. ⁽³⁾ Eight large and two small R-boats and one T.A. boat ⁽⁴⁾ operated as escorts or mine-sweepers. S.S. Krebs functioned as the minesweepers parent ship. ⁽⁵⁾ Some thirty ferry barges, seven Siebel ferries and ten I - and L-boats ⁽⁶⁾ filled and moved out in groups.

At 1615 hours, an Allied reconnaissance aircraft fired on the harbour from a low altitude. Captain von Liebenstein ordered the naval ferry barges to complete loading from off a beach 1 mile North of Bastia for safety: and this was done in shallow water by a cumbersome process in which smaller craft co-operated. At 2030 hours, the last loaded ferry craft left Bastia. At 2200 hours, R.212, with the staff of the Port Director Bastia on board, sailed for Piombino. The staff reported at Leghorn at 1315 hours on 4 October. R.162 and R.200 arrived at Leghorn at 0320 hours on 4 October, with Captain von Liebenstein and the Army Commander. The traffic from Elba to the mainland was covered from 0640 hours by six German fighters and six Arado 196's.

In Operation 'Schlussakkord' 2,282 troops, 222 prisoners, 328 vehicles, 51 guns and 77 tons of material were lifted by sea. ⁽⁷⁾

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- (1) 2,588 tons displacement (ex-Alice Robert).
 - (2) The account has been built up from the war diaries of Port Director Bastia, German Naval Command Italy, German Naval Staff Operations Division, the Landing Flotillas, the 7th Coastal Security Division PG/81147 and Capt. von Liebenstein's report PG/49605 (all at F.D.S./Admiralty).
 - (3) Including R.38, R.162, R.187, R.192 and R.200.
 - (4) T.A.9 (ex Pombarde - Fr.) torpedo boat.
 - (5) A few M-boats, (ex lobster trawlers), also swept.
 - (6) There is sometimes great difficulty in determining whether L-boat stands for the landing version of the M.F.P. or small landing craft.
 - (7) PG/45220 (F.D.S./Admlty). Capt. von Liebenstein's figures, given in his report on the evacuation, are obviously only a rough estimate, although his daily totals before 3 Oct. 43 follow those of the Port Director Bastia fairly closely.

Results and conclusionsMen and material lifted by air from Corsica⁽¹⁾

During September 1943, the four transport Gruppen flew back 19,196 fit men, 1,045 wounded men and 256.50 tons of material (including ammunition, fuel, flying and other equipment). During the first two days of October, the three Gruppen employed flew back 762 fit men, 104 wounded men and 89.575 tons of material. The totals carried by air lift are therefore, 19,958 fit men, 1,149 wounded and 346.075 tons of material.

It has not been possible to isolate the exact number of evacuation sorties from the figures shown for the over-all operations of the four Gruppen for September and October, which were 2,269, and there is no sound basis for an estimate. Simple calculations are enough to suggest an admirable effort accomplished in a relatively short space of time. From the beginning of the war, the Germans had always taken a just pride in their ability to lift large quantities of men and materials rapidly by air to desired points: and their air lift from Corsica, the last of its kind in Italy, was in keeping with their tradition of high mobility.

German evacuation aircraft losses - 17 September - 3 October⁽²⁾

On 17 and 18 September, 16 Ju.52s were destroyed (and 3 damaged) on Italian territory, 12 of them definitely by Allied aircraft.

The mass evacuation began officially on 19 September. From that date to 2 October, the transport groups lost 25 Ju.52s, 9 Savoia Macchi 82s, and 5 Merseburg 323s destroyed and 6 Ju.52s and 2 Me.323s were damaged. These figures provide a total of 55 destroyed and 11 damaged, most

(1) For full details of the transport work undertaken by Transport Geschwader 5 during September and October 1943 (including the lifts from Corsica), see Appendix 20.

(2) Details of losses sustained by Air units engaged in the evacuation of Corsica (Source A.H.B.6/C.934 - 30.5.56).				
Date	Aircraft type	Destroyed	Damaged	Remarks
17/9	Ju.52	12	3	All due to bombing of Italian airfields notably Practica di Mare. On own territory.
18/9	Ju.52	4	-	
20/9	Ju.52	-	1	
22/9	Ju.52	-	1	
23/9	Ju.52	4	-	In air combat
23/9	Ju.52	-	4	Bombing of Pisa A/F.
23/9	S.M.82	2	-	In air combat
23/9	S.M.82	6	-	Bombing of Pisa A/F.
23/9	Me.323	2	2	Bombing of Pisa A/F.
24/9	Ju.52	15	-)All but one on)operational flights.)
24/9	S.M.82	1	-	
25/9	Ju.52	1	-	
26/9	Ju.52	1	-	
27/9	Me.109	1	-	Lost on escort flight
29/9	Ju.52	2	-	In air combat
30/9	Me.323	3	-	In air combat
1/10	Ju.52	1	-	
1/10	Me.109	1	1	In air combat
2/10	Ju.52	1	-	
	Me.109	1	1	
Transport Total aircraft		55	11	
Total Fighter aircraft		3	2	

of them on operations and to air attacks. If placed against the strength on 20 September, the actual losses in aircraft destroyed represent a percentage of roughly 29 per cent. In spite of these heavy losses, the transport units were able to complete their task, for the Allied air attacks on formations and bases were too diffuse in time and place to make any really decisive inroads on their strength and facilities.

The total of fighter aircraft casualties over this period was only 3 destroyed and 2 damaged. This low figure is easily understandable when it is realised that the Allied forces pitted against the supporting German forces were not comparable in weight of effort or performance.

Men and materials lifted by sea from Corsica

The German naval authorities were never able to obtain from the Army precise figures or estimates as to the volume of traffic they were expected to handle. When the Port Director Bastia returned to the base of Bastia from which he had been ejected, some shipments of redundant men and stores estimated by the German Naval Staff Italy as about 3000 men and an unspecified tonnage of stores had been made by the close of 16 September. The Port Director recorded day by day arrivals, departures and loads from 16 September to 3 October inclusive. Totals of men and materials shipped between these last dates were:-

6240 troops.
1193 Ps/W.
3225 M/T.
357 guns.
87 tanks.
4528 plus tons of stores, equipment and fuel.(2)

German losses in ferry shipping during September and the two evacuations(3)

German documents give some interesting details on the operations in September and 1/3 October. The 4th Landing Flotilla reported 30 attacks by aircraft, 5 by torpedo (these were by submarine) and 1 by submarine (presumably a gun operation). They took part in 8 gun actions, in one of which they sank the Italian minelayer Pelagosa.(4) The 10th Landing Flotilla reported 7 attacks by aircraft and 1 by submarine.

The three flotillas lost about 16 craft in five weeks of operations. Serious as these losses were, the Germans

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- (1) PG/45220 (F.D.S./Admlty).
 - (2) The Director of Sea Transport Corsica (Capt. von Liebenstein) reported daily totals commencing on 17 Sept. but his estimate of men etc. shipped before that date is doubtful and his rough estimates for operation 'Schlussakkord' differ from the Port Director Bastia's figures.
 - (3) War diaries of 2nd, 4th and 10th Landing Flotillas, Port Director Bastia and German Naval Command Italy (all at F.D.S./Admiralty).
 - (4) On 9 September, off Genoa.

were able to bear them, for others were under construction in German and Italian shipyards and the shrinking operational perimeter made concentration commensurately easier.

The German Naval Command Italy recorded on 6 October the following statistics covering the combined operation of the evacuation Sardinia-Corsica-Italy.(1) They had lost by air, submarine and surface attack and by misadventure one I-boat, seven M.F.P's, two U.J. boats, one tug, three Siebel ferries, one peniche and three steamships(2) (of a total of 16,943 G.R.T.).

They had undergone eight attacks by Allied submarines, one of which they believed (incorrectly) they had sunk. They had been attacked on forty occasions by Allied aircraft (whether at sea or in port was not stated) and believed they had destroyed fifteen Allied aircraft. Naval casualties were 31 and 101 wounded.

Effects of Allied concentration of effort in Italy on the Corsican evacuation

When considering the nature of the evacuation system as an air target and the excellent results of the few and not very heavy air attacks on the terminal ports of Leghorn and Bastia and the air lift, it is difficult not to speculate on the probable results of a sustained, organized air campaign against the system, or not to feel the keenest regret that more could not be achieved. This sentiment may be brought to bear at least equally on the complete absence throughout of any interference by Allied naval surface craft. Criticism has sometimes been levelled at the Allies for their occasional inability to concentrate their forces on the primary object or for the permitted growth of a dispersal of forces, but if the records of operations proceeding at the time in Italy are studied, they may be seen as a major combined attempt under a Supreme Command to concentrate the forces of the three services on immediate objectives of overriding priority. If they are, then there is no profit in speculating on what might have been done against the Corsican evacuation. There were reasons of commitment which appeared valid to the Allied Command why the landings in Italy should be consolidated and these reasons were proved by the ultimate victory in May 1945 to have been reasonably well founded. The evacuation of Corsica came at a time when the first and highly critical phase of Operation 'Avalanche' was not concluded. This phase had to be concluded speedily. The escape of one enemy division was a risk considered acceptable, although it was hoped that the French forces would liquidate it.

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- (1) PG/32070 (F.D.S./Admiralty).
(2) Six were certainly sunk in air raids, and the Champagne and Kreta by submarine, but it is not possible to identify them all with the evacuation plan.

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PART C

THE SUBMARINE WAR
(9 SEPTEMBER TO 31 DECEMBER 1943)

German policy and reinforcements

Introductory

The Italian defection caused only a temporary check to German submarine operational policy. It had been clearly foreseen that the loss of Tunisia and Sicily, the opening of the through sea route and major amphibious operations would greatly extend the scope of small submarine forces operating in a spirit of offence: and as the opportunities envisaged in the Mediterranean came within the scope of the whole programme of U-boat Command, seasoned commanders were selected to continue to reinforce the Mediterranean in boats embodying the latest technical improvements.

Unfortunately for the Germans, their whole policy was bedevilled by an inability to keep pace with Allied technical progress. But work proceeded on a variety of devices. Some proved successful on occasions, when other circumstances assisted; other proved failures. Their hopes of intervention at Salerno failed owing to the saturation of the area with Allied aircraft and surface patrols and to unfavourable weather. The deterrent of continuous air cover over the assault and follow-up convoys made it impossible for submarines, surface craft or aircraft to prevent the enormous lifts of troops and arms from reaching Italy.

Reinforcements January to August 1943⁽¹⁾

When 1943 opened, the Germans had 23 U-boats in the Mediterranean. At the end of August, they had only 12. The history of 1943 reinforcements during that period was, briefly, as follows. One entered in January, none in February and March and two in April. Eight were sunk in those four months, reducing the number inside on 30 April to twenty.

On 5 May, in view of the serious situation developing from the defeats in North Africa, Doenitz detailed two boats already at sea to make the passage. These two were sunk, one en route to the Strait⁽²⁾ by a Hudson⁽³⁾ and one⁽⁴⁾ in collision with another U-boat. Three more were sunk⁽⁵⁾ inside the Mediterranean in May, one of them by a Hudson of No. 608 Squadron in the first successful kill with a rocket projectile in the Mediterranean. Only U.409 got through of the four detailed in May. Another was sunk en route to the Strait on 4 June by a Hudson.⁽⁶⁾ The total inside by 9 June was eighteen.

(1) Naval Staff History - The Defeat of the Enemy attack on Shipping Vol. I. (A.H.S./Admlty.).

(2) U.447.

(3) Of No. 233 Sqn.

(4) U.659.

(5) U.303, U.414, U.755.

(6) Of No. 48 Squadron.

The losses proved discouraging, especially as no effective counter to Allied detection methods had been found. No boats were sent in during the next three months, during which period another six were sunk inside.⁽¹⁾ At the end of August, only twelve U-boats remained inside.

Reinforcements from September to December 1943⁽²⁾

On 17 September, Doenitz ordered seven U-boats to enter the Mediterranean. Wellingtons equipped with Leigh Lights were instrumental in locating the first two aspirants. One boat⁽³⁾ escaped the air attacks of 23-25 September off the Strait and was clear inside by 28 September. The second⁽⁴⁾ was attacked off the Strait from 23-25 September by a Leigh Light Wellington,⁽⁵⁾ and, on 26 September, by aircraft of Nos. 233 and 48 Squadrons.

On receipt of the report signalled by U.667, Doenitz ordered the other boats, on the 26th, to abandon the attempt. On 27 Sept. 43, Doenitz recorded that unless boats were fitted with the new Naxos Search Receiver to detect the centimetric radar transmissions it was suspected that Allied aircraft were using, further attempts were useless. Another attempt was to be made in the October new moon period, using U-boats equipped with 'Naxos'.

Five U-boats were detailed in October for the Mediterranean and, equipped with 'Naxos' receivers, made the attempt in the new moon period. The C.-in-C. Mediterranean received a spate of reports from the Atlantic approaches to Gibraltar, leading to the assumption that some U-boats were awaiting a favourable opportunity to force the Strait.⁽⁶⁾ Increased aircraft and surface craft patrols were organised, and they brought about an almost complete failure of the project. Two only got through.⁽⁷⁾ One was sunk in the Strait by surface patrol on the night of 31 Oct./1 Nov. 43⁽⁸⁾ and one in the Strait⁽⁹⁾ by the combined efforts of two Leigh Light Wellingtons⁽¹⁰⁾ and H.M. ships. Another⁽¹¹⁾ was sunk en route by a Leigh Light Wellington of the same squadron on extended Strait defence patrol on the night of 23/24 October.

The loss of the co-operation of Italian submarines after the surrender compelled the Germans to spread their effort and extend their normal functions. For example,

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- (1) Refer to Appendices 7 and 8 for details of enemy submarine losses throughout the Mediterranean war.
 - (2) The Defeat of the Enemy Attack on Shipping, Vol. I. (A.H.S./Admiralty): The R.A.F. in Maritime War Vol. IV (A.H.B.).
 - (3) U.223.
 - (4) U.667.
 - (5) Of No. 179 Squadron.
 - (6) Submarine Tracker's Log. C.-in-C. Med. (A.H.S./Admlty.).
 - (7) U.450 and U.642.
 - (8) U.431.
 - (9) U.340.
 - (10) Of No. 179 Sqdn.
 - (11) U.566.

at one period in October 1943, there were four boats operating off the Algerian coast, one off Calabria, two in the Tyrrhenian Sea, one off Cyrenaica and one in the Adriatic.

Unusual radio activity in this latter area betrayed the presence of one or more U-boats on a succession of minelaying patrols in the Southern Adriatic. This policy of minelaying paid good dividends, for it led to temporary closure of ports and delayed the Allied build-up⁽¹⁾ for the armies in Italy.

Further efforts at reinforcement made in November met with greater success. On the 22nd, U.230 sailed and made the passage through the Strait on the night of 4/5 December. This made the total inside 15; but, for various reasons, the number of boats in operational readiness was insufficient to deal with more than a fraction of the targets offering, which included 963 Allied ships in main convoys. The weather was worsening, repairs urgent and Allied patrols in increasing volume more active.

The 29th Flotilla had been hit hard in November by the Toulon air raid, but ten boats still remained available for patrols of varying duration off the Algerian coast. An availability quotient of 50% was maintained through December 1943 in spite of the great damage done to the facilities there. But more boats were urgently needed. U.952 sailed on 16 December and U.343 on 26 December for the Strait, and, with the advantages of winter weather, insufficient Allied air and surface patrols and the element of surprise, they both got through. The total inside then stood at 15 boats.⁽²⁾

Technical and tactical developments in September, November and December 1943

Radar balloons had occasionally been reported in the Mediterranean and one was sighted by the Royal Navy in the Tyrrhenian Sea. This device, known to the Germans as 'Aphrodite', gave a radar contact at 5,000 yards producing an echo very similar to a fully surfaced submarine. It added to the uncertainties of Allied detection personnel, who were obliged to keep, as far as possible, a running watch and to start plots of every suspicious echo, false or genuine. These balloons were thrown overboard from submarines, which carried enough hydrogen to fill 20 balloons.⁽³⁾

Since August, U-boats had been painted with anti-infrared paint. More boats were being fitted with 'Hohentwiel' radar. Flak armament was being increased. There were signs in September of the use of 37 mm guns against aircraft.⁽⁴⁾ The end of the month saw the beginning of the installation of the improved 'Naxos' search receiver.

The anti-shipping offensive began to pass in this month to the German Air Force, whose torpedo-carrying long-range aircraft based in the South of France stepped up their attacks

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- (1) Submarine Trackers' Log, C.-in-C. Med. (A.H.S./Admlty.).
 - (2) Naval Staff History - The Defeat of the Enemy Attack on Shipping Vol. I. (A.H.S./Admlty.).
 - (3) C.B. 04050/43(2) (A.H.S./Admlty.).
 - (4) Ibid and Submarine Tracker's Log, O.I.C., C.-in-C. Med. (A.H.S./Admlty.).

on the North African convoys, straining seriously the organization of the Coastal Air Forces. This process became noticeable after the attack by Halifaxes on 24 November on the Toulon base, which resulted in more or less serious damage to six U-boats.

The Adriatic remained the scene of some effective minelaying.

The most significant change in tactics in December 1943 was exemplified in the determined series of attacks by U-boats on Allied naval escort units. The Admiralty summed up the general situation on 13 Dec. 43. The enemy's three chief problems were, firstly, the need to avoid or repel aircraft attack; secondly, to locate convoys; thirdly, to reduce the effectiveness of escort vessels. They hoped to solve these problems by the policies of day submersion, night attacks, improved flak, listening devices against aircraft, A.S.V. and radar, long range air reconnaissance to (1) locate convoys, and acoustic torpedoes for attack on escorts.

Probably all the U-boats in the Mediterranean were now fitted with the improved and improving 'Naxos' search receivers and ancillary devices, but commanders found 'Naxos' cumbersome, and, in emergencies, dangerous. It had to be unshipped before diving. The aerial did not give all-round reception. (2)

U-boat organization and command (3)

The 23rd Flotilla had been dissolved in April 1942, leaving the 29th Flotilla in command for the rest of Mediterranean operations. After the heavy air attack of 18/19 Apr. 43 on La Spezia, U-boats transferred gradually to Toulon. The flotilla H.Q. moved to Toulon on 1 Aug. 43. La Spezia, Pola and Salamis were then the three auxiliary bases.

Captain Kreisch, the Captain U-Boats Italy, was obliged by the Italian surrender to follow the 29th Flotilla to Toulon in September. His title was changed to Captain U-Boats Mediterranean, a post which he held until late January 1944, when he was promoted Rear Admiral and left the Command.

Although nominally subordinated to the German Naval Command Italy for operations, he enjoyed almost complete independence in U-boat operations, except in so far as the B.d.U. (Doenitz) issued general directives on tactics and policy to all U-boat commands.

By June 1944, La Spezia was too near the front line, and was accordingly wound up and its personnel transferred to Genoa.

Construction of massive U-boat shelters at Marseilles (4)

The construction of U-boat shelters was begun at Marseilles on similar lines to those at Brest and Lorient.

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- (1) Ibid and File CAF/3/AIR Encl. 5A (N.A.C.A.F. files at Cabinet Historical Archives. Ref. A.F.H.Q. Box 276/3).
 - (2) C.B.04050/43 (A.H.S./Admly.).
 - (3) War diaries of Captain U-Boats Italy (F.D.S./Admly.) and information supplied by A.H.B.6.
 - (4) Submarine Tracker's Log, C.-in-C. Med. (A.H.S./Admly.).

Construction was proceeding rapidly when, on 2 Dec. 43, Allied aircraft bombed the sites. Although the few hits appeared to have no appreciable effect, considerable seepage resulted, which frustrated every effort to effect complete drainage of the site. This caused delay in completion and a change in policy. The Marseilles shelters were never finished and probably never used for any length of time, if at all.

Allied policy

The increase in Allied shipping May to August 1943⁽¹⁾

From May 1943 to May 1944, there was a steady increase of shipping passing through the Mediterranean. It is of special interest to follow the course of this increase, for it is in itself an important gauge of the progress of the whole war in the European area. With temporary checks during the build-up for "Husky" and the occupation of Sicily, there was a rapid expansion in the number of vessels convoyed on main shipping routes. By November 1943, the number of ships thus convoyed in the Mediterranean exceeded the corresponding number for the Atlantic.

After rising from 391 ships in May, to 467 in July, the total for August stood at 400 ships in main Mediterranean convoys.

Shipping increase - September to December 1943⁽²⁾

The Allied occupation of Sicily provided them with additional bases and facilities for escort. Their commitments rose steeply as "Avalanche" was mounted and put into execution and the build-up in Italy increased. 782 ships were convoyed in September, 931 in October, 963 in November and 1012 in December. This huge commitment strained surface craft and air escort resources to their limits: it cannot be said that matters improved until January 1944, when the "Swamp" technique of a combined U-boat hunt by surface craft escorts and aircraft began to get into its stride and reinforcements somewhat eased the situation.

Mediterranean convoys exceed Atlantic convoys⁽³⁾

In January 1944, the Admiralty stated that the great volume of shipping passing through the Mediterranean in that period might not be generally realized. They gave comparative figures for the Mediterranean and the Atlantic, showing that while in October 1943 the Mediterranean total was 203 ships against the Atlantic 253, in November the Mediterranean total

- (1) Vessels convoyed on main shipping routes in the Mediterranean from May 1943 to May 1944 inclusive:-

<u>1943</u>	May	391 ships	<u>1944</u>	Jan.	1160 ships
	June	357 "		Feb.	1107 "
	July	467 "		Mar.	1294 "
	Aug.	400 "		Apr.	1266 "
	Sept.	782 "		May	1244 "
	Oct.	931 "			
	Nov.	963 "			
	Dec.	1012 "			

(Source: report of O.I.C. Submarine Tracker, C.-in-C. Med. (A.H.S. Admlty.).)

- (2) Submarine Trackers Report, C.-in-C. Med. (A.H.S./Admlty).
 (3) Monthly Anti-Submarine Report CB.04050/44/1 (Admiralty).

exceeded the Atlantic, 231 ships sailing on convoy against only 212 in the Atlantic. This was not lost on the Germans.

Growth of air convoy escort commitments⁽¹⁾

When Northwest African Coastal Air Force was created in late March 1943, it was only responsible for a coastline from 3 degrees West to the Tunisian border, which then represented a convoy escort route of 530 nautical miles. The anti-submarine convoy escort work and U-boat hunts were then covered by one day and one night Hudson squadron and one-half Swordfish (Fleet Air Arm) squadron. As a result of the conquest of Tunisia, these areas were carried to the Tripolitanian border, involving an increase of 480 nautical miles and so bringing the total to 1010 nautical miles. During and after Sicilian operation, convoy coverage increased by 250 miles to a total of 1360 miles and would be about 1650 miles in September 1943.

After the fall of Tunis, the Coastal Air Force was reinforced by two day-operating Bisley squadrons, which became operational in the first week in June. The allocation of N.A.C.A.F.'s squadrons was eventually one day and night and one day squadrons, with one-half a Swordfish (F.A.A.) squadron, at Tafaroui, one day and night and one day squadrons at Blida, with a detachment at Bone for day and night work. Additional assistance was given by one-half a squadron at Albacores (F.A.A.).

Prior to Operation "Husky", a Wellington squadron from India⁽²⁾ was loaned to Coastal Air Force, but, owing to its very old aircraft and sundry delays, was not fully operational until August. Redistribution followed the end of Sicilian operations. A Hudson squadron moved from Blida to Protville, to cover up to 13° East, and then to Sicily (Borizzo).⁽³⁾ The two Fleet Air Arm units were withdrawn.

Sir Hugh Lloyd, A.O.C., Coastal Air Force, seeing the main threat from U-boats to lie in the Western and Central Mediterranean, stated, on 30 Aug. 43,⁽⁴⁾ that unless there was a corresponding increase in the air effort commensurate with the increase in ship exposures, the Allied ship losses could not be reduced. He thought that, as there was a decrease in submarine activity in the Eastern Mediterranean and he was short of suitable aircraft, only personnel or really important convoys should be escorted during peak periods. This would release a squadron of A.S.V. aircraft from the Eastern to the Western Mediterranean.

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- (1) N.A.C.A.F. File AOC/1. Encl. 63a (AFHQ 271/1 at Cabinet Hist. Archives).
 - (2) No. 36.
 - (3) 'Husky' commitments were met with only 2 Hudson and 2 Bisley squadrons, with 2 F.A.A. units.
 - (4) AOC/1 dated 30 Aug. 43. Letter from H.Q. N.A.C.A.F. to Advanced H.Q. N.A.A.F. (N.A.C.A.F. File AOC/1. A.F.H.Q. 271/1 at Cabinet Historical Archives).

The Air Forces call for more surface craft for submarine hunts(1)

The A.O.C. of Coastal Air Force did not rest on the conclusions that his aircraft were inadequate in numbers. He went on to claim that they were doing too much in a task which rightly called for naval support. His letter of 14 Sept. 43 to the C.-in-C. Mediterranean is of great interest, not only for the statement of viewpoint therein contained, but for the reply it evoked and the moves towards joint air/naval operations which ensued. Sir Hugh Lloyd wrote on 14 Sept. 43 to Sir Andrew Cunningham:-

"I desire to raise the problem of killing more submarines in the Mediterranean, as I feel sure we can kill more submarines provided we can hunt together as laid down in M.J.A.O's.

2. Whilst I fully realise the past and present shortage of surface craft and that this has been the one limiting factor to carrying out combined hunts, I feel that I am wasting a good deal of effort at present in hunting submarines because of the lack of surface craft. For example, no surface craft have been allocated for hunts since the 17 June, when 6th Destroyer Flotilla participated, between 0850 and 1610 hours. As regards attacks on convoys, escort vessels have only been detached from their convoy for very short periods, with the result that although Asdic contact may have been obtained, it has been impossible to follow it up owing to escorts having to rejoin their convoys.

3. You are aware, of course, that we cannot carry out a successful hunt after an attack on a convoy by ourselves, as once the submarine is down it has complete freedom of action and can surface either by night or by day until it is found again by the aircraft on the hunt. I suggest, therefore, for your consideration that when more surface craft are available a sufficient number is allocated to hunts, as I feel sure that if we hunt a submarine once it has been located we will drive them eventually from the Mediterranean."

On 7 Oct. 43, Vice-Admiral A. Willis replied for the C.-in-C. Mediterranean:-

"Thank you for your letter No. AOC/1 of 14 September, in which you raise again the desirability of killing more submarines in the Mediterranean. I couldn't agree with you more. The need for having surface craft available for hunting U-boats is very much in my mind and kept constantly under review. A hunting group organised on the lines you suggest will be established to work with Coastal Air Force as soon as it is possible to do so.

2. With the present growing volume of traffic, however, it is unlikely that this will be possible until unescorted sailings can be adopted, at least over a part of the Mediterranean convoy routes."

(1) Letter of 14 Sept. 43 from A.O.C., N.A.C.A.F. to C.-in-C. Med. and of 7 Oct. 43 from C.-in-C. Med to A.O.C., N.A.C.A.F. (N.A.C.A.F. File AOC/1. A.F.H.Q. 271/1 at Cabinet Historical Archives).

Motor launch hunting groups (1)

There were operating at the time some 60 motor launches based on Algerian ports. By the end of June, five Hunting Groups of Fairmile motor launches had been established, each comprising five boats and maintaining a constant patrol of three M.L.'s at sea. They patrolled named areas within 60 miles of the coast between Alboran Island and Bizerta and were directed daily to the most 'fruitful' areas.

By late June, although they had no submarine kills to their credit, they had carried out seven U-boat hunts, two of which, it was reported, resulted in damage to the U-boat. Aircraft, it is of interest to note, co-operated in each case. The C.-in-C. Mediterranean, while allowing the greatest part of the credit for the low sinkings of Allied vessels to aircraft, affirmed, with reason, that the continued pressure of M.L. patrols had contributed to the harrying and deterring of U-boats on the convoy routes.

At the end of August, the Operations and Intelligence Centre at H.Q., C.-in-C. Mediterranean considered that these flotillas of motor launches, which now numbered 59 craft, were playing a very important role in the submarine war. In particular they helped in denying the enemy the waters close inshore, where the coastal headlands nullified detection by A.S.V. In actual combat they would be at a serious disadvantage against an enemy submarine. This was realised, but it was rightly claimed that they functioned to advantage in denying the U-boats comfortable 'living space'.(2)

Air policy in September

While the search for the right formula for combined air/navy anti-submarine operations continued, the main operational policy in September was absorbed in the Italian surrender and the amphibious landings in Italy. The special effort left the waters rather thinly covered elsewhere, but once Naples was captured, the pattern ran on more conventional lines.

A high degree of interest was maintained, however, in attempted U-boat reinforcements through the Strait of Gibraltar. These, if successful, could have disastrous consequences on the mounting volume of traffic. Convoys were expected to move within 40 miles of the coastline, so that shore-based aircraft could cover them effectively. U-boats knew exactly the lanes to watch and still enjoyed the advantage of being able to listen in to, or jam, the Allied metric radar A.S.V. in Mark II aircraft; it was very rarely that the U-boat was unable to avoid an attack by submerging in good time. The watch on the surrendering Italian submarine fleet absorbed a fairly large degree of interest.

Air policy in October

The Allied policy in October combined the offensive and defensive. The policy of prevention of reinforcements

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- (1) Letter from C.-in-C. Med. to M.A.C. and N.A.C.A.F. 1958/Med(W)/00225/4 of 28 June 43 (file as in Ibid at Cabinet Historical Archives).
 - (2) Submarine Tracker's Log O.I.C., C.-in-C. Med. August 43 (A.H.S./Admty.).

through the Strait of Gibraltar remained unaltered. While a narrow view might condemn this non-stop effort here and over a large part of the Mediterranean waters as uneconomical, it was rendered worthwhile by the occasional kill, the disruption of the enemy's plans and the loss of mobility thus forced upon him. This was keenly felt when towards the end of the month, the attempted reinforcement by five U-boats was largely frustrated.

Air policy in November⁽¹⁾

The only notable change in Allied policy during November was a return to base bombing on 24 November, when the Toulon base was attacked with very satisfactory results. This was only the third attack in any weight on Mediterranean U-boat bases. Impressed by the damage and destruction and the resulting fall in U-boat activities, the Allies carried out more frequent air attacks on Toulon, Marseilles, Finme and Pola in the following months.

There was a steady drop in ship losses during this month, due to increased air cover and surface craft protection.

Largely owing to weather conditions, there was less flying from Gibraltar and hence less control of U-boat entries.

The rise in tempo of German aircraft attacks on convoys had no appreciable effect on anti-submarine policy in November. The full impact came later.

Air policy in December

The U-boat policy of attacking convoy escorts and extending his use of acoustic homing torpedoes stimulated deliveries from the United Kingdom of counter-devices.⁽²⁾

Minelaying off Bari continued to cause concern.

The policy of bombing submarine bases was continued to considerable effect on 2 December, when work on new, heavily concreted submarine pens at Marseilles was neutralised by 118 Fortresses. If the Marseilles pens had been allowed to be completed, the immunity thus afforded would have enabled the U-boats to continue operating for probably several months, covering the highly critical phase of operations against Southern France.

It was fully realised that the Mediterranean was the life-line to the Far East. The need to combat the U-boat menace therefore, continued to be a major commitment, despite the paucity of aircraft and escort and patrol surface craft. Through November and December, a growth in the intensity of German air reconnaissance of the Western

(1) Submarine Tracker's Log, C.-in-C. Med. (A.H.S./Admty.): C.B.04050/43(11) Admiralty.

(2) Submarine Tracker's Log, O.I.C., C.-in-C. Med. (A.H.S./Admiralty).

Mediterranean shipping lanes and of ports and harbours suggested that the great value of the Allied convoys was fully appreciated by the enemy and that he would employ every means and occasion to attack it.

The co-ordination of air and naval operations

Mediterranean Joint Air Orders⁽¹⁾

In the course of co-operation between the British Naval Forces, the Royal Air Force, the U.S. Army Air Force and the U.S. Navy Air Force, difficulties and misunderstanding had inevitably arisen. It was, therefore in the best interests of all concerned in operations in which both sea and air forces were employed that the Mediterranean Joint Air Orders were drawn up, signed by the C.-in-C., Mediterranean Station,⁽²⁾ the C.-in-C., Levant Station⁽³⁾ and the Air C.-in-C., Mediterranean Air Command,⁽⁴⁾ on 5 June 43. Those orders were introduced into the Mediterranean Air Command with effect from 0001 GMT hours 5 July 43.

M.J.A.O. presented basic information on such subjects as command, restrictions, liaison, recognition, anti-submarine operations, reconnaissance, ship strikes, fighter protection, communications, air/sea rescue and exercises, so that naval and air units would know enough about the other service to co-operate smoothly. With minor alterations, these orders remained in force.

Order No. 23, concerning combined anti-submarine operations by surface and air forces continued to be of particular interest to the Admiralty, Coastal Command and the Directorate of Operations, Naval Co-operation, of the Air Ministry. Experience on that type of work was being accumulated in the Bay of Biscay area and it was likely that similar operations would soon extend to the Home Fleet area in the North. A great effort was being made to adjust the lessons from the Bay area and to evolve firm tactical instructions, a question on which there was, in August 1943, some difference of opinion between the Home Fleet, Western Approaches and the Plymouth area. There were differences in the tactics employed in the Mediterranean and Home Commands. "Swamp" was to occupy a position unique in the world's theatres of war.

Mediterranean Command changes, May to December 1943⁽⁵⁾

After the end of the North African campaigns, the pressure of events and the increasing need of unification brought about a number of changes in the various commands. To keep the operations in perspective, a brief recapitulation of those developments will now be given.

On 17 May 43, the French naval squadron at Alexandria joined the Allies, bringing a notable accession of strength.

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- (1) Short title M.J.A.O. (A.H.B.II J.1/78/547).
 - (2) Admiral of the Fleet A.B. Cunningham.
 - (3) Admiral J. D. Cunningham.
 - (4) Air Chief Marshal A. W. Tedder.
 - (5) Admiralty Draft Narrative - The War at Sea Vol. IV (A.H.S./Admiralty).

On 1 June 43, the eastern boundary of the Mediterranean was extended further eastward from that fixed in February 1943. It was moved to the meridian of 20° East. This brought the area up to the longitude of Benghazi and Corfu within the Mediterranean instead of the Levant Command. Oran and Algeria sub-areas were established at the same time. The Oran sub-area began at 02° 13' West and ended at 01° 20' East. The Algeria sub-area began at 01° 20' East and ended at 08° 40' East. The air fighter sector pattern corresponded roughly to those sub-areas, but of necessity the fighter sectors multiplied at a much greater rate to conform with the needs of increasingly mobile warfare.(1)

On 23 October, the Mediterranean Strategic Air Force was created.

On 21 October, Sir Dudley Pound, the First Sea Lord, died and was succeeded by Admiral A. B. Cunningham, then the C.-in-C. Mediterranean. On 14 October, Vice Admiral Sir A. Willis, commanding Force H. was appointed C.-in-C. Levant, and on 16 October, Admiral Sir J. Cunningham, previously C.-in-C. Levant, assumed the office of C.-in-C. Mediterranean.

On 18 October, Force H lapsed.

On 10 December, the Mediterranean air and naval commands were unified. Mediterranean Allied Air Forces was created.(2) On 28 December, the Levant Command lapsed. There were then four naval sub-commands. These were:-

1. Flag Officer Levant and Eastern Mediterranean.
2. Flag Officer Gibraltar and Mediterranean Approaches.
3. Flag Officer Western Mediterranean (at Algiers).
4. Flag Officer Central Mediterranean (Vice-Admiral Malta).

Air command affecting naval operations in the Mediterranean and the Gibraltar - Morocco area

It is opportune at this point to recapitulate the responsibilities of the various air groupings as they stood at the end of October 1943, before the unification moves at the close of the year.

Inside the Mediterranean, East of 02° 13' West, the normal British practice was followed of mutual co-operation between air and naval forces in joint pursuit of a common aim. Anti-submarine operations, and operational control of the reconnaissance and fighter defence of convoy operations were conducted by the air officer commanding concerned to meet the general requirements of the naval commander.

Inside the Mediterranean, five different air formations co-operated with naval forces:-

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- (1) The subject of fighter protection will be dealt with later and details of fighter sectors given in appendix form.
 - (2) For details of changes in the elements of the Mediterranean Air Command refer to A.H.B. narrative (first draft) on The Italian Campaign Vol. I Chapter 6 (A.H.B.).

(a) Northwest African Coastal Air Force was responsible for reconnaissance anti-submarine patrols, fighter defence of ports and shipping and anti-ship striking operations in the Western Mediterranean, East of longitude $02^{\circ} 13'$ West to a line joining Misurata and Cape Killini.

(b) Northwest African Strategic Air Force operated dependently on anti-shipping strikes, acting on intelligence information supplied by Northwest African Coastal Air Force, Malta or naval and other sources.

(c) Air Defences Eastern Mediterranean were responsible for the fighter defence of ports and shipping East of a line joining Misurata and Cape Killini.

(d) No. 201 Naval Co-operation Group were responsible for reconnaissance, anti-submarine patrols and anti-shipping strikes East of a line joining Misurata and Cape Killini.

(e) R.A.F. Malta were responsible for fighter defence of shipping within 100 miles from Malta and operated a small reconnaissance and anti-ship striking force.

In the Gibraltar - Morocco area, West of $02^{\circ} 18'$ West, the situation was a little involved and policy under frequent discussion. On 29 Oct. 43, the co-operation pattern was as follows:-

(a) The Flag Officer Commanding, Gibraltar (under the C.-in-C. Mediterranean) was the officer designated to exercise co-ordinating control of naval and air anti-submarine operations in the area bounded as follows:-

North	-	Latitude $43^{\circ} N$.
West	-	Longitude $40^{\circ} W$.
South	-	Latitude $26^{\circ} 10' N$.
East	-	Longitude $2^{\circ} 10' W$.

(b) The Air Officer Commanding Gibraltar, was under the operational command of the Air C.-in-C., Mediterranean Air Command. He operated his G.R. aircraft and disembarked Fleet Air Arm aircraft to meet the requirements of the Flag Officer Commanding, Gibraltar.

(c) The Commander, Moroccan Sea Frontier Forces, operated aircraft of the U.S. Naval Air Forces based in Western Morocco in conformity with the sea and air plans issued by the Flag Officer Commanding, Gibraltar. Those plans were prepared at Gibraltar by representatives of Commander Moroccan Sea Frontier Forces, Air Officer Commanding Gibraltar and Flag Officer Commanding Gibraltar, and issued under the authority of the Flag Officer Commanding, Gibraltar.

(d) General co-ordination of anti-submarine air operations as required by the Flag Officer Commanding, Gibraltar was conducted from the combined Navy/Air Operations Room at Gibraltar by the Air Officer Commanding Gibraltar. A representative of the Commander Moroccan Sea Frontier Forces was attached to the staff of the Flag Officer Commanding, Gibraltar and worked as part of the operational staff.

German submarine operations ⁽¹⁾ (6 September to 31 December 1943)

September operations

In the Western and Central Basins, U-boat operations were continuous after the Italian Armistice, but not conspicuously successful. On 6 September, the destroyer H.M.S. Puckeridge, on passage eastward from Gibraltar, at 20 knots, was torpedoed by U.617, one of two boats in the area, in the position 85° Europa Point, 40 miles, and sank in six minutes. She was not zig-zagging at the time of the attack. Nine officers and one hundred and twenty ratings were picked up by the Spanish ship Antequera. At 0105 hours on the 12th, U.617 was attacked and disabled by a Wellington aircraft. She made her way under further air attacks for the Spanish Moroccan coast and beached herself in 35° 13' N., 03° 29' W. She was set on fire by the guns of H.M. anti-submarine trawler Haarlem. On the question whether or not there had been any violation of neutral waters, both the Admiral and Air Officer Commanding at Gibraltar claimed that the doctrine of continuous pursuit could be maintained. The U-boat fired on the aircraft and inflicted casualties and damage on them while she was in territorial waters.

On 12 September, a U-boat ⁽²⁾ scored a hit on S.S. W.B. Travis off Bone. On 21 September, another U-boat ⁽³⁾ sank the American S.S. William W. Gerhard ⁽⁴⁾ in convoy N.S.S.3 for Salerno in 40° 05' N., 14° 43' E., 13 miles S.W. of Licosa Point. Her cargo of petrol and ammunition took fire and she became a total loss. On 20 September, U.565 torpedoed and sank the U.S. minesweeper Skill, on anti-submarine patrol off the southern anchorage in Salerno Bay. The Skill lost 72 killed, including all her officers. All attempts to locate the U-boat failed.

On 26 September, the Norwegian S.S. Christian Michelsen ⁽⁵⁾ in convoy U.G.S.17, blew up and sank in 37° 12' N., 08° 26' E., 30 miles East of Bone. It is not certain whether a U-boat or radio-controlled boat was the cause. On 30 September, the British S.S. Fort Howe ⁽⁶⁾ and the tanker S.S. Empire Commerce ⁽⁷⁾ in convoy M.K.S.26 were torpedoed by U-boat and sank in 37° 19' N., 06° 40' E., off Philippeville.

The only U-boat success in the Eastern Basin was the sinking of a schooner on 7 September south of Cyprus.

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- (1) Nominal list of major British warships etc. lost in the Second World War (A.H.S./Admlty-A.H.B. copy with Capt. Peyton-Ward): Submarine Tracker's Log, C.-in-C. Med. (A.H.S./Admlty): The War at Sea Vol. IV (A.H.S./Admlty).
 (2) Number not determined.
 (3) Ibid.
 (4) 7176 G.R.T.
 (5) 7176 G.R.T.
 (6) 7133 G.R.T.
 (7) 3722 G.R.T.

October operations(1)

The U-boats spread their effort in October in an attempt to cover sea areas previously occupied by the Italians. Four boats operated off the Algerian coast, one off Calabria, two in the Tyrrhenian Sea, one off Cyrenaica and one in the Adriatic. Those off Algeria had most success. On 2 October, one of them sank S.S. Stanmore off Cape Tenez. On 4 October, a U-boat attacked convoy X.T.4 in 32° 57' N., 21° 11' E., (about 70 miles N.N.E. of Benghazi) and sank the Norwegian tanker S.S. Marit.(2)

On 11 October, U.371 torpedoed the British minesweeper Hythe and fired on her. The latter was attacking a U-boat contact off Bougie when hit, and she sank. On 13 October, a U-boat sank the U.S. destroyer Bristol, while she was escorting a convoy off Philippeville. This brought the Allied destroyer losses for October up to three in five days. At about 1230 hours on 15 October, a U-boat torpedoed and sank the American S.S. James Russell Lowell(3) off Philippeville. She became a total loss.

The U-boat in the Adriatic, based on Pola, made a succession of minelaying patrols, as a result of which the British tanker S.S. Laurelwood(4) was sunk off Taranto.

The Germans lost two U-boats in September. U.431 was sunk on 30 October off Toulon by H.M. submarine Ultimatum. U.732(5) was sunk outside the Mediterranean in the Strait of Gibraltar on 31 October by H.M. trawler Imperialist and the destroyer H.M.S. Douglas.

November operations

U-boat activity, appreciably less than in previous months, was reduced to a new low level by the air attack of 24 November on the base at Toulon. The effort was still widely spread. An average of nine were based at Toulon, four at Pola and two at Salamis. The general unavailability of boats influenced the Germans in relying more on torpedo-carrying aircraft to disrupt the increasing flow of shipping along the Algerian coast.

A U-boat attacked convoy K.M.S.30 on 3 November, about 40 miles West of Algiers and sank the French S.S. Mont Viso.(6) On 18 November, a U-boat sank S.S. Empire Dunstan off Calabria. On 19 November, a U-boat sank the British submarine Simoon. She had been ordered on the 5th to patrol the approaches to the Dardanelles and to leave patrol on the 15th. On the 23rd, she was three days overdue at Beirut. A German communiqué claimed that a U-boat sank her. This U-boat may have been the boat detailed to support operations against Leros. It has not been identified with U.407.

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- (1) The war diaries of Captain U-Boats Italy/Mediterranean for Oct., Nov., Dec. 43 have not been recovered (F.D.S./Admlty.).
 - (2) 5542 G.R.T.
 - (3) 7347 G.R.T.
 - (4) 7176 G.R.T.
 - (5) Included in A.H.B. statistical volume for this series under Atlantic U-boat sinkings.
 - (6) 4531 G.R.T.

U.407 scored a notable success when, at 1222 hours on 28 November, she torpedoed the cruiser H.M.S. Birmingham on her way unescorted through the Mediterranean to join the Eastern Fleet in 33° 05' N, 21° 43' E., about 50 miles N.W. of Derna. She proceeded towards Alexandria at 15 knots, later reduced to 10 knots, arriving on 30 November drawing 33 feet forward and 16 feet aft. Her casualties were 29 killed and 28 wounded. H.M.S. Birmingham was out of action for exactly one year.(1) The schooner Abis was sunk on the 16th off Haifa.

U-boat minelaying in the Adriatic continued to yield good results. Bari and Barletta ports were closed on 6 November owing to Allied suspicions that aircraft had laid mines. On the morning of the 15th, the destroyer H.M.S. Quail was mined off the entrance to Bari, and berthed, badly damaged. On the 20th, a small schooner was sunk off the port. Subsequent sweeping operations that day produced no result. The harbour was closed until the 23rd, when it was reopened and destroyer patrols in the Adriatic resumed. Evidence pointed to the fact that the mines were laid by U-boats, as they were found to have been laid in line or lines.

During sweeping operations on 22 November at Bari, the minesweeper H.M.S. Hebe was sunk in 41° 08' N., 16° 52' E., although the area had already been twice covered that day. There were 38 fatal casualties, and of the 72 survivors, 50 per cent were injured.(2)

December operations

The air attack of 24 November on Toulon gravely impeded U-boat operations in December. The Mourillon base was completely disabled and the Misseissey base heavily damaged. Three oil tanks were destroyed. Five U-boats were damaged in varying degrees. These were U.593, U.380, U.73, U.371 and U.450. U.593 was fit again for service on 1 Dec. 43, U.380 on 20 Dec. 43, U.73 on 4 Dec. 43, U.371 on 22 January, and U.450 not until 15 Feb. 44.(3)

The serious effect of the air attack of 2 December on the massive new pens under construction at Marseilles has already been noted. A great deal of effort was put in to restore the situation, but it appears to have never been possible to complete the task. Notwithstanding the shock caused by the Marseilles and Toulon air attacks, five of the ten boats based on Toulon carried out patrols of varying duration off the Algerian coast.

A U-boat from Pola was very active. She laid contact and magnetic mines off Bari, then proceeded to operate off the Calabrian coast. On 9 December, she sank the British S.S. Cap Padaran(4) in convoy H.A.II (Heel of Italy to Augusta) in 39° 15' N., 17° 30' E., about 22 miles N.E. of Cotrone. The U-boat escaped pursuit.

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- (1) The cruiser H.M.S. Carlisle was disabled on 9 Oct. 43, by German aircraft in the Aegean.
 - (2) Submarine Tracker's Log, C.-in-C. Med. (A.H.S./Admlty.).
 - (3) Report of Joint Admiralty/Air Ministry Historical Subcommittee 1950 - (A.H.B. - copy).
 - (4) 8,009 G.R.T.

U.593 made determined attacks on 11 and 12 December on the escorts of K.M.S.34 for two days running, sinking two destroyers and damaging a frigate. U.593 made her first attack at 1315 hours on 11 December; she torpedoed the frigate Cuckmere forward. The frigate was towed to Algiers. U.593 renewed her attack on 12 December. This time she torpedoed the destroyer Tynedale in 37° 10' N, 06° 05' E, off the Gulf of Bougie and sank her. While a 'Swamp' hunt was proceeding, she torpedoed and sank the destroyer Holcombe at 1455 hours on the 12th in 37° 20' N, 05° 50' E., but was herself sunk on the 14th.

On the afternoon of the 16th, U.73 torpedoed the American U.S. John S. Copley(1) off Oran and submerged. Her position was noted by ships and aircraft who immediately organized a 'Swamp' hunt, as a result of which she was sunk.

One U-boat operated in the Eastern Basin and proceeded along the African coast as far as Port Said before returning to base. Her only success was a small schooner sunk on 14 December.

Allied anti-submarine operations September to end of December 1943

Flying effort East and West of Gibraltar (Sept., Oct., Nov. and Dec. 43)

The success of three U-boats despatched in December in making the Strait entry passage undetected appeared to derive from the impossibility of maintaining a high density of air/surface craft patrol with the forces available in the vicinity of the Strait for long periods.(2) Effective measures to

(1) 7,176 G.R.T.

(2) Flying hours to West and East of Gibraltar - Average strength 40 aircraft.

Month	Type	Effective Hrs.	Total Hrs.	Sightings	Attacks	Results
1943	(Day R.A.F. (x)	1081	1544	3	3	<u>U.667</u> dam.
	(Night (225(N) L/L (20(N)	(225(N) L/L (20(N)	(280(N) L/L (55(N)	5 L/L	5 L/L	<u>U.617</u> sunk
Sept.	(Day F.A.A.	90	135	-	-	-
	(Night (39(N)	39(N)	56(N)	-	-	-
Oct.	(Day R.A.F.	768	1123	-	-	<u>U.340</u> sunk
	(Night (286(N) L/L (26(N)	(286(N) L/L (26(N)	(368(N) L/L (39(N)	4 L/L	4 L/L	-
	F.A.A.	N11	N11	-	-	-
Nov.	(Day R.A.F.	639	933	-	-	-
	(Night (244(N) L/L	(244(N) L/L	(314(N) L/L (69(N)	1 L/L	-	-
	F.A.A.	N11	N11	-	-	-
Dec.	(Day R.A.F.	819	1177	-	-	-
	(Night (122(N) L/L	(122(N) L/L	(159(N) L/L	-	-	-
	F.A.A.	N11	N11	-	-	-

(x) Leigh Light.

Source:- R.A.F. narrative (first draft) The R.A.F. in Maritime War - Vol. IV - p.228 (A.H.B.).

bar the passage depended on prior special intelligence. The table in the footnote registers the declining sightings and attacks as 1943 drew to a close.

Combined anti-submarine searches⁽¹⁾

In early October 1943, before 'Swamp' was attempted, there were two standard combined surface craft/aircraft anti-submarine searches which could be ordered in signal, namely Operation 'Broom' and Operation 'Strangle'. Operation 'Broom' applied when the presence of a U-boat was suspected, but no definite position could be given as datum. Operation 'Strangle' applied when either a sighting had been obtained at too great a distance from aircraft bases to allow a saturating force of aircraft to be maintained in the area, or when the datum position was not adjacent to a coastline.

Neither of these fitted the problem which now overshadowed all others, namely that of convoys proceeding of necessity along the North African coastline, which were far more numerous than all others. It was recognized by the theatre Commanders that there were neither enough aircraft nor enough surface craft to deal with the submarine as separate forces. The idea of the prolonged hunt to exhaustion and the development of 'Swamp' combined operations was, therefore, a perfectly logical growth.

'Swamp' combined operations were unique: they were only carried out in the Mediterranean theatre. With the addition of 'Swamp' operations to 'Broom' and 'Strangle', far greater scope of joint activity and chances of killing U-boats after first sighting or suspicion were opened up, and the security of convoys noticeably increased.⁽²⁾

An early hunt to exhaustion

Mention has already been made of the destruction of U.409 by H.M.S. Inconstant on 12 July 43 in the neighbourhood of Algiers. After each of the first five attacks, H.M.S. Inconstant lost touch with the U-boat, as frequently happened, but by continuing the hunt incessantly over a period of 3 hours, she sank it at the sixth attack.⁽³⁾

This reward of sustained attack did not pass unnoticed by the Admiralty. In the September 1943 issue of their Monthly Anti-Submarine Report,⁽⁴⁾ the following statement appeared:-

'In areas where U-boats are operating singly in patrol areas to intercept shipping, they must approach the escorts when approaching the convoys. When the U-boat has been located, it is well worth while detaching most of the escorts and as many aircraft as

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- (1) Mediterranean Joint Air Orders No. 23 (A.H.B.II J.1/78/547).
 - (2) Diagrams showing 'Swamp' aircraft search patterns are given in Figure 7.
 - (3) Monthly Anti-Submarine Report Aug. 43 (C.B.04050/43(8) Admiralty).
 - (4) C.B.04050/43(9) Admiralty.

possible to destroy it, since the convoy is safe until it enters the next U-boat patrol area. It is most important to destroy U-boats operating far from base, even at the expense of shipping losses.'

The pattern of Operation 'Swamp' (1)

Operation 'Swamp' was designed to saturate with aircraft an area in which a U-boat contact had been obtained. It was based on the assumption that the contact was within 20 miles of the coast. The area searched by aircraft lay within a semi-circle, the centre of which was 5 miles inshore of the contact and the baseline of which ran parallel with the coast. The radius of the semi-circle was extended in accordance with the time after contact datum.(2)

The fact that 'Swamp' had been initiated was promulgated by signal to ships in the area (usually escort craft, sometimes motor launches) and the time and position of the incident stated. Aircraft participating signalled their search area and were not to be diverted by ships except in an emergency. As the area increased in size, the aircraft patrol became increasingly vital, for the chances of contact diminished, even if the submarine grew progressively short of air and needful of recharging its batteries. This recharging could be done at night, or by day, at periscope depth. In spite of improving equipment, most contacts were still made as a result of visual sightings by experienced aircrews.

The whole 'Swamp' procedure involved a carefully thought out system of communications, which increased in elaboration as well as chances of efficiency, as the new centimetric radar equipment was fitted. In its simplest terms, the initial action may be reduced to the following measures. If an aircraft made a sighting or contact by day, it was to attack if possible, report, mark the diving position with marine markers and maintain them until surface forces arrived. If the sighting or contact was made at night, the aircraft was to make a depth charge attack, (using the Leigh Light), report and drop flares and flame floats until surface forces were within 5 miles of the U-boat's estimated position. If aircraft and surface craft were not in communication, aircraft used flares and surface craft used star shells to notify that they were in contact with the U-boat.

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- (1) Mediterranean Joint Air Orders - No. 23 (A.H.B.IIJ1/78/547).
 (2) Table of radius of aircraft search

<u>Time after datum</u>	<u>Radius</u>
0 - 10 hours	35 miles
10 - 18 hours	50 miles
18 - 26 hours	65 miles
26 - 34 hours	75 miles
34 - 42 hours	83 miles
42 - 50 hours	90 miles
after 50 hours	90 miles

The first principles of operation 'Swamp'

On several occasions, 'Swamp' hunts were to prove abortive because of non-conformity with the first principle. This was that all positions in which a U-boat might possibly be should be covered every half hour. The patrol area covered by any one aircraft could not, therefore, exceed $\frac{\text{Air speed} \times 2 \text{ Visibility distance}}{2}$ square miles. This ideal could not always be maintained. It was usual at Coastal Air Force H.Q. to cover an area 40 miles square centred round the sighting position, using two aircraft for the first six hours. The assumption was that the U-boat had been kept down from the moment of sighting.

In order to achieve the desired result and use a minimum of aircraft (for they were in short supply) it was essential to keep the area covered strictly within the limits of the U-boat's possible travel calculated at its submerged speed of 8 knots for the first half hour and 2 knots thereafter.

Plans for a mobile air circus for 'Swamp' operations⁽¹⁾

Plans for perfecting combined air/sea 'Swamp' hunts went swiftly ahead during December. Coastal Air Force earmarked No. 36 Squadron as a travelling circus for anti-submarine operations. It might be necessary to move up to 12 aircraft for detachment at any airfield in the theatre carrying out 'Swamp' operations of 48 hours duration. Maintenance personnel were to be flown in as required. The requirements for such a circus were worked out and reported to be in all 45 personnel, 910 lb. of tool kits and 1,070 lb. of equipment.

Lloyd explained to Tedder that if he could obtain four transport aircraft for quick lifts and an additional squadron to No. 36 it would be worth while. If there was a sighting, for example, off Benghazi or in the Adriatic, the squadron could fly out with its transport aircraft and remain self-contained for 48 hours while carrying out its task of a day 'Swamp'. If No. 458 Squadron could be filled with Leigh Light Wellingtons, they could carry on the 'Swamp' by night.

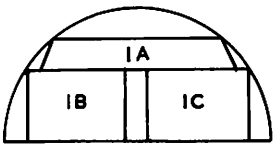
First three 'Swamp' hunts inconclusive

The first two 'Swamp' hunts started on 15 and 19 Oct. 43 respectively and involved about 400 hours' flying in all. The 'Swamp' of the 15th was begun as a result of the torpedoing of a ship in convoy and yielded a sighting 27 hours later for the expenditure of about 100 hours' flying. No attack was made owing to the failure of the aircraft to identify its target in time: the opportunity to follow up the contact effectively was lost owing to signals delays.⁽²⁾

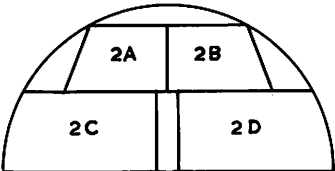
On the night 2/3 November, a 'Swamp' hunt was originated after contacts made by ships escorting convoy 'Horatius'.

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- (1) N.A.C.A.F. signal A.498 19/12/43. Memo BL/S.203/AIR. N.A.C.A.F. 23/12/43 and Letter D0/HPL (134/5) 20/12/43 (all in CAF/3/AIR at Cabinet Hist. Archives Ref. AFHQ/276/3).
 - (2) File C.A.F./3/1/AIR. Encl. 44A (A.F.H.Q./276/5 at Cabinet Historical Archives).

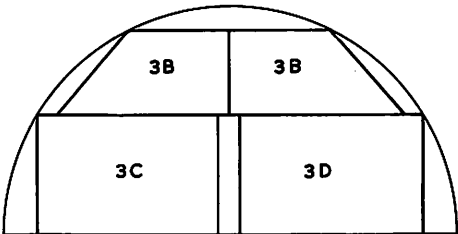
OPERATION 'SWAMP' AIR SEARCH PATTERNS



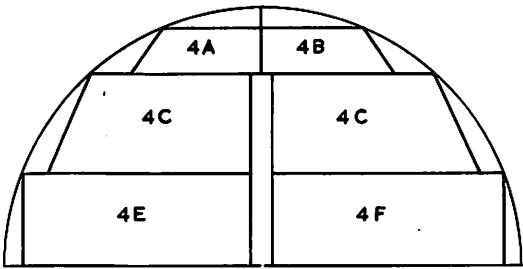
0-10 HOURS FROM STARTING



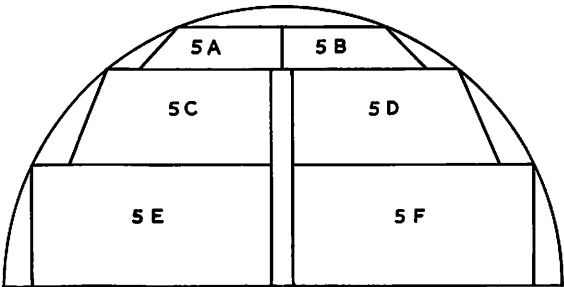
10-18 HOURS FROM STARTING



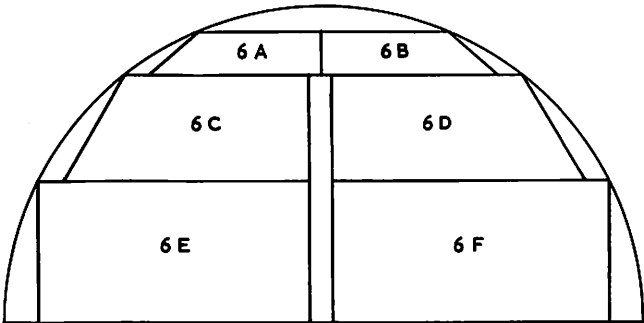
18-26 HOURS FROM STARTING



26-34 HOURS FROM STARTING



34-42 HOURS FROM STARTING



42 HOURS ONWARDS

Leigh Light Wellingtons of No. 36 Squadron recorded a total of 53 hours flying before the first sighting was made and two were recalled to base on account of bad weather. The sighting was by Wellington S/36, the crew of which sighted the U-boat at 1910 hours on 3 November after obtaining a contact at a range of 6 miles. The aircraft homed to within one-half a mile and the Leigh Light was switched on. The U-boat was seen fully surfaced in the position 37° 06' N, 02° 10' E, (off Cherohell). Aircraft S attacked immediately with six depth charges from 50 feet, straddling the U-boat amidships. The U-boat commander decided to fight it out and his guns fired a 10-second burst of cannon and machine gun fire.

Aircraft S adopted baiting tactics and left the area for 40 minutes. On his return, a contact was immediately obtained at a distance of 3 miles, followed by a visual sighting by the light of heavy and, on the whole, inaccurate flak and cannon fire from the U-boat. A second attack was made from 300 feet, the aircraft diving at an angle of 30 degrees, dropping two depth charges. No results were seen and it was thought that the depth charges overshot their target. Nothing further was seen during the following 10 minutes and the aircraft returned to base. Its tail wheel and hydraulics and the foot of the geodetics forward of the tail plane on the port side had been shot away and other parts bore the marks of cannon and machine gun fire. The area was left uncovered for about an hour before the relief arrived: the U-boat escaped.(1)

The 'Swamp' of 12-13 Dec. 43 and destruction of U.593(2)

On 12 Dec. 43, H.M. destroyer Holcombe was sunk by U.593 in the position 37° 20' N, 5° 50' East, off Djidjelli while escorting convoy K.M.S. 34.

The presence of a U-boat in the area had been disclosed on the previous day, when the frigate Cuckmere had been torpedoed. Two Wellingtons of No. 36 Squadron operated in the sea area 35 miles North of Algiers, one for two hours and one for three hours at night without sightings. One returned owing to technical difficulties and the other was recalled owing to bad weather.

At 0855 hours on 12 December, 18 Wellingtons of Nos. 458 (R.A.A.F.) and 3 of No. 36 Squadron began an intensive systematic U-boat hunt in an area North of Cape Bougaron. At 1444 hours, a 'Swamp' operation commenced in the position 37° 20' North, 05° 30' East with the object of destroying the submarine which had hit the Holcombe. At 1446 hours, a Wellington of No. 458 Squadron saw the Holcombe sink and the survivors being picked up. The two squadrons continued the search until the afternoon of the next day. Their extensive cover kept the U-boat submerged for 31 hours.

The first contact with U.593 was made by aircraft B of 36 Squadron at 0030 hours on the 13th in the position 37° 30' N, 06° 0' E. The pilot decided to use his Leigh Light, but was unable to lower it fully and did not use it.

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- (1) Ibid and No. 36 Sqn. O.R.B./Appendix 18.
 - (2) Nos. 36 and 458 (R.A.A.F. Squadrons O.R.Bs. and appendices.

The co-pilot saw an object about one mile ahead. When the pilot altered course and went in to attack, the U-boat opened fire. The Wellington was hit twice on the port wing and suffered severe damage to the port tail plane. It fell away immediately to port; the pilot was unable to drop the depth charges. The tail gunner fired about 600 rounds at the source of the flak as the aircraft passed over: the flak ceased when the aircraft returned fire. The aircraft made sighting signals, other aircraft arrived and the U-boat was forced to remain submerged. The hunt was renewed. Although the aircraft was by this time almost non-manageable and the crew prepared for ditching, the pilot succeeded by 0037 hours in getting his aircraft under control. They made a safe landing at 0140 hours at Bone.

H.M. destroyer Calpe and U.S.N. destroyer Wainwright hunted the U-boat. H.M.S. Calpe obtained a contact at about 1450 hours on the 13th about 30 miles N.W. of Cape Bougaroun and delivered a depth charge attack. This forced U.593 to the surface, where she was engaged by gunfire. The crew of the U-boat scuttled their ship and surrendered. Two Wellingtons of No. 458 Squadron, which with No. 36 Squadron was still engaged in the 'Swamp' hunt, were in the area at the time. At 1507 hours, they saw the closing phase of the incident. A dinghy with occupants and several men were in the water. At 1512 hours, U.593 sank in the position 37° 38' N, 05.58' E. So ended the first successful 'Swamp' operation. A new chapter in air/naval co-operation was opened.(1)

The 'Swamp' of 16 Dec. 43 and destruction of U.73(2)

The S.S. John Copley(3) was torpedoed at 1515 hours on 16 Dec. 43 by U.73 while en route from Oran to join a convoy. Hudson F of No. 500 Squadron was covering the convoy, East bound, from West of Habibas Island to Cape d'Aiguille in the Oran sea area. At 1515 hours, the rear gunner sighted an explosion from a merchant vessel and later a large hole in the starboard side and a list to port. An Allied destroyer was seen inspecting lifeboats alongside, but no torpedo track or U-boat was seen. The happening was also seen by Hudson B, escorting a West bound convoy. This aircraft was diverted at 1630 hours to make a square U-boat search. Hudsons X and A were also diverted to the 'Swamp' hunt from 1631 to 1905 hours, and from 1634 to 1922 hours respectively. These aircraft and four Wellingtons of No. 36 on a Leigh Light search kept U.73 submerged. When surface craft made contacts, they dropped depth charges, forcing the U-boat to the surface soon after 1815 hours. She was sunk at 1935 hours, 4 hours and 20 minutes after she had launched her torpedo and 15 miles from the point - 15 miles N.N.W. of Cape Falcon - of her none-too-successful attack.

The two victories of 13 and 16 December evoked warm congratulations from the C.-in-C. Mediterranean.

Cost of anti-submarine air effort

All anti-submarine operations, and in particular "Swamp", were very expensive in aircraft effort. The cost in aircraft

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- (1) Nos. 36 and 458 (R.A.A.F.) Squadrons O.R.Bs and appendices.
 - (2) M.A.C.A.F., and Nos. 500 and 36 Squadrons O.R.Bs.
 - (3) 7,000 G.R.T.

sorties and hours expended in achieving a few sightings are clearly shown in the table in the footnote.(1) This survey of the anti-submarine effort from 1 April to 29 September, 1943, by General Reconnaissance squadrons of North-West African Coastal Air Force is of especial interest in that it covers a period of intensive effort on both sides during the season of fair weather and long flying hours.

The following facts emerge from study of these totals. Aircrews on patrols, hunts and strikes sighted U-boats much more frequently than aircrews on convoy escort. One important reason for this is the spread of attention imposed on the escort aircraft in finding and covering the ships in convoy. The patrol and hunt aircraft had the single task of finding the U-boat.

There was no appreciable difference in the ratio of convoy escort sightings by day or night, but patrol hunt and strike aircrews had almost three times the rate of sightings at night as in daylight, aided in increasing measure by their Leigh Lights and their methods of creeping approach.

In six months these aircraft flew 4311 sorties for 35 sightings. Only 21 attacks were made in this period.

This brief review gives an idea of the pattern of anti-submarine operations until the end of the year; and it is not proposed to delay the course of this narrative by presenting a series of statistical tables for the whole of the Mediterranean sorties. After September, astronomical and weather conditions reduced progressively the flying hours and chances of sightings. On the other hand, there were compensatory factors in the promise of 10 cm. radar detection, in the growing supply of Leigh searchlights for night flying Wellingtons, improved aircraft and, in December, the first successful "Swamp" combined hunts.

The position would have been more favourable for the Allies if they had possessed more aircraft of the right kind in the right places. But reinforcements still fell short of urgent requirements. This was one of the dominant burdens of Lloyd's report of 17 Dec, 43 to Tedder and his report of 20 December, 1943 to A.V.M. Robb at N.A.A.F. Headquarters.

(1) Convoy escorts (C/V) anti-submarine patrols, hunts and strikes (A/S)
1 April 43 to 29 Sept. 43.

	SORTIES		HOURS		SIGHTINGS		SORTIES per sight	HOURS per sight
	No.	%	No.	%	No.	%		
C/V Day	1137	31.0	6,439	30.3	5	14.3	267	1,288
C/V Night	746	17.3	3,894	18.3	3	8.6	249	1,298
Total C/V	2083	48.3	10,333	48.6	8	22.9	260	1,292
A/S Day	1560	36.2	7,128	33.6	12	34.3	130	594
A/S Night	668	15.5	3,775	17.8	15	42.8	45	252
Totals A/S	2228	51.7	10,903	51.4	27	77.1	83	404
Totals C/V & A/S	4311	100.0	21,236	100.0	35	100.0	123	607
Totals Day	2897	67.2	13,567	63.9	17	48.6	170	798
Totals Night	1414	32.8	7,669	36.1	18	51.4	79	426

The aircraft position at the end of 1943⁽¹⁾

In late December, Sir Hugh Lloyd reviewed the whole anti-submarine situation and reported that he had insufficient squadrons, aircraft⁽²⁾ and equipment to meet his commitments.

On 17 December, 1943, No. 13 Squadron⁽³⁾ had left for the Middle East. The other Bisley squadron - No. 614 - was fast running out of aircraft and would be down 50 per cent on operational efficiency in two months time on that account. No. 13 Squadron had been re-equipping with the more modern Ventura aircraft. The establishment for its Hudsons had been 24 aircraft per squadron but Air Ministry could only supply 16 aircraft. This number had been accepted without modification. Fifteen had arrived, but there were no spares, equipment or tools behind them. He calculated that as it took two months to re-arm a squadron, he would thus be short by $33\frac{1}{2}$ per cent of aircraft in each of the two Hudson-Ventura squadrons and be also down in operational efficiency by 30 per cent loss. The Venturas might fall to the ground for lack of maintenance. No. 500 Squadron was being re-equipped with Venturas and would take over No. 13's Ventura aircraft.

The Wellington position was also serious. It had been decided that the four Wellington squadrons were to be at 20 aircraft per squadron, two squadrons with Leigh Light and two squadrons with Mark II (metric) A.S.V. but no Leigh Light. He asserted that all four should be Leigh Light equipped. The growing success of aircraft fitted with this searchlight tied in with A.S.V. in the Gibraltar and other areas had made a lasting impression on all concerned with night operations. But the position was that only one of the Leigh Light squadrons had any searchlights: the other had none. Coastal Air Force had been, he said, promised deliveries of 10 Leigh Light Wellingtons each month, but the actual deliveries had been 8 in October, 6 in November and only 5 in December so far. The holding of Hudsons was very limited, the Ventura allotment very meagre. The Bisley and the Baltimore were "on their last legs". With the great promise held out by the two recently successful combined "Swamp" operations, they must have an adequate number of aircraft. An offer of a French Catalina squadron from Gibraltar had unfortunately lapsed.

Sir Hugh Lloyd increases the offensive

Up to mid-September, the Air Officer Commanding had been mixing the defensive and offensive. Convinced that "Swamp" operations - the most expensive in aircraft sorties - were the best means of converting sightings to kills, and that kills were really what mattered most, he now proposed to go over on an increasing scale to the offensive. This would have to be at the expense of the defensive, viz. the

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- (1) File CAF/3/AIR Encl.13A, 14A (A.F.H.Q. 276/3 at Cabinet Historical Archives).
 - (2) A complete statement of N.A.C.A.F. locations is given at Appendix 28 which will serve not only as background for this specific topic, but as a source of information on the entire structure and disposition of N.A.C.A.F. in the period.
 - (3) Bisleys, re-arming with Venturas.

air protection of convoys. It was his view that he should provide air escort for only really important convoys. This would have to be discussed with the C.-in-C. Mediterranean, whose agreement was hoped for, but uncertain.

PART D

ALLIED AIR ANTI-SHIPPING OPERATIONS IN THE CENTRAL MEDITERRANEAN (1 OCTOBER to 31 DECEMBER 1943)

Attacks on shipping in port

Introductory

In early October 1943, the Allied air forces available for anti-shipping operations faced a situation simpler than before in some respects and more difficult in others. It was simpler inasmuch as that the Germans had been ejected from Sicily, Sardinia, Corsica and Southern Italy as far as the latitude of Naples. This had considerably restricted the area of search. There were less big shipping units to attack, for the air and naval units had, in both major and routine operations, eliminated a high proportion of the larger merchant and naval shipping units, the Italians had surrendered or scuttled a great deal more and the Germans themselves had accounted for a further sizeable volume by air attack. Very little shipping was likely to be found on the open sea. The Mediterranean had been cut into three areas of operations, viz. the Tyrrhenian, the Adriatic⁽¹⁾ and the Aegean Seas: passage between the first two was practically impossible and between the last two extremely hazardous for the Germans. It was known that the main German task was the supply of its armies fighting in Italy and that a varying proportion of the supplies must pass by coastal shipping routes. Those routes in the Ligurian and Tyrrhenian Seas were known to lie between the French and Italian Rivièras in the North and Anzio in the South.

On the other hand, Allied air and naval superiority was driving German merchant shipping progressively off day on to night traffic, on to the use of vessels of progressively lower tonnage and on to the use of smaller ports for smaller vessels. The Germans had captured a large number of smaller craft from the Italians and were turning over increasingly to the construction and use of specially designed, strongly-built and well-armed small craft such as Siebel ferries, naval ferry barges and supply and tanker barges. From these facts it will be seen that the target system of enemy shipping was increasing in complexity and would present a serious challenge to the Northwest African Air Force: and this challenge would increase with the Allied air successes against railway communications, which would automatically drive the Germans off the one medium of supply on to the other. Furthermore, the hours of daylight were diminishing, weather deteriorating and German anti-aircraft port defences thickening at key points.

(1) Anti-shipping operations in the Adriatic will be dealt with in the next chapter.

Merchant shipping sunk by Allied air attacks on ports
(October - December 1943)

During the last three months of 1943, all the German merchant shipping sunk by aircraft was in port. In these operations, the Tactical, Strategic and Tactical Bomber Forces participated. There were no sinkings by Coastal Air Force, whose effort was devoted to port defence, convoy escort and anti-submarine operations. No enemy ships, either merchant or naval, were sunk at sea by aircraft during this period.

In October, three sizeable merchant vessels were sunk, all by aircraft of the Strategic Air Force. On the 10th, three Lightnings(1) attacked Corfu harbour, scoring one direct hit with a 500 pound bomb on the motor vessel Mario Roselli (6,835 G.R.T.) and sinking her. On the 29th, thirty-three Fortresses(2) bombed the Genoa area and sank the motor vessel N.183 (700 G.R.T.) which appears to have been lying in the Ansaldo fitting works at Sampierdarena. On the 31st, a formation of Strategic Mitchells hit and sank S.S. Tigrai (1,302 G.R.T.) at Civitavecchia, the most southerly important off-loading port.(3)

There was only one significant sinking in November; this was effected by a small mission of R.A.F. Boston(4) who, on the night 13/14th, sank S.S. Lorenz L.M. Russ (1,448 G.R.T.) at Civitavecchia.(5)

December was also a quiet month, with daylight hours drawing to the minimum, many units in course of transfer, the winter campaign hardening to stalemate, and the bulk of the air effort directed on close support and the painfully slow task of disrupting land communications. On the 19th, seventy-two U.S. Mustangs(6) sank the S.S. Giovanni Bottigliere (990 G.R.T.) in Civitavecchia. On the 8th, a mission of twenty-one Fortresses of the Strategic Air Force bombed the port of Porto San Stefano, claiming to have covered the target well: but San Stefano was of minor importance at the time and three small vessels were the only shipping sunk. These were the sailing vessels Francesco Sodini (193 G.R.T.) and Angelo Raffaele(7) (56 G.R.T.) and the auxiliary sailing vessel Principessa Maria (47 G.R.T.).

Viewed as a whole, the last quarter of 1943 must be considered as a transitory and not very fruitful period. There were too many other tasks competing for priority and too much base movement proceeding for an adequate concentration on shipping. The emphasis was shifting from shipping at sea to shipping in port, but this alone would never solve the problem. Far greater weight and continuity must be applied.

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- (1) Of 82nd Fighter Group.
 - (2) Of 2nd, 97th, 99th and 301st Bomb Groups.
 - (3) On the same day, 35 Mitchells of 320th Bomb Group sank the fishing vessel Marcantonio (34 G.R.T.) at Anzio.
 - (4) Of No. 232 Wing.
 - (5) On 26 November, Mustangs of 27th Fighter Bomber Group (N.A.T.A.F.) sank the Italian tug Domenico (95 G.R.T.) at Civitavecchia.
 - (6) Of 86th Fighter Bomber Group (T.A.F.)
 - (7) Actually sank 10 days later.

Warships sunk by Allied air attacks on ports (October - December 1943)(1)

No German warships were sunk at sea in the Central Mediterranean during the last quarter of 1943 by Allied aircraft. For the Germans it was a busy period of conversion of captured vessels and reorganisation of their striking, escort and defence units: for the time being the damage caused by air attacks on their railway communications had created no serious shortages and naval movements were restricted pending the building up of suitable strength.

October passed without a single warship being sunk by Allied aircraft. November was only slightly more fruitful. On the night 13/14th, eight Bostons(2) bombed Civitavecchia, claiming hits on the outer mole, the chemical works and buildings near the gas works and causing an explosion, and a near miss on a 5,000 ton merchant vessel. They sank V.P. 7014 and V.P. 7030, (3) two small patrol vessels of the 70th Patrol Flotilla. On 24 November, a by-product of the Fortress attack on the Toulon base was the sinking of S. 56 (4) (for the second time) of the 3rd S-boat Flotilla.

December yielded no results except the sinking on the 28/29th at Civitavecchia of the minesweeper M. 7009 by a mission of forty-eight U.S. Mustangs.(5) This craft was one of a force of approximately twenty craft (ex steam trawlers or lobster boats) of the 70th Minesweeping Flotilla under command of the 7th Defence Division. (6)(7)

It would be premature to say at this point that the German Navy was as yet fully organised to meet the new situation in these waters. Their strength had as yet not nearly reached the considerable dimensions attained in 1944: but the hard core was forming. The losses recorded above were not serious. They profited by the fairly stable situation in Italy to strengthen their port and coastal defences and to mine channels likely to be used by Allied surface units probing northwards.

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- (1) In the Ligurian and Tyrrhenian Seas only. Adriatic air anti-shipping operations will be covered in the next chapter.
 - (2) Of No. 232 Wing.
 - (3) V.P. = Vier Posten (4-Post).
 - (4) 90 tons displacement.
 - (5) Of 86th Fighter Bomber Group.
 - (6) H.Q. Leghorn.
 - (7) German naval units from PG/31971 (F.D.S./Admty.).

CHAPTER 6GERMAN EXPANSION IN THE EASTERN BASINAllied strategyIntroduction

Operations in late 1943 in the Dodecanese are seldom set in their full context of military and political grand strategy. They may appear, accordingly, as a series of ill-advised and poorly co-ordinated side-shows bearing within themselves the seeds of their own defeat. They certainly appeared in that light at the period to some of the Allied commanders. Research into the grand strategy of the period by a contemporary historian(1) brings out into clear relief the validity of the British plan, the great military and political issues at stake and the advantages which might have emerged from an Allied success, which induced the Prime Minister and the British Chiefs of Staff to accept the risks.

Paramount among these considerations were the ideas of inducing Turkey to enter the war on the side of the Allies, of obtaining airfields in Anatolia for the better prosecution of the air offensive against the German system in Greece and the Balkans and of occupying a vital flank area. But for the Allied decision not to dissipate their Mediterranean forces, these consummations might have been realised. It is therefore timely to develop briefly the characteristics of Allied grand strategy.

Allied strategy aimed at the acquisition of Turkish airfields
(2)

In the Autumn of 1943, the British Chiefs of Staff believed that the greatest potential significance of the capture of the Dodecanese was that it might bring Turkey into the war. They saw that it would at once place at the disposal of the Allies a group of air bases, from which to bomb Greece, Rumania and Bulgaria, as well as some 46 Turkish divisions. It would give the Allies control of the passage of the Dardanelles and Bosphorus, the current neutrality of which favoured the Germans; the enemy in Greece would be deprived of supplies from Rumania and the Danube valley; if the Russian campaign went well, British and American supplies could be transported in bulk to southern Russia (as they were not by the existing route through Persia), instead of to the Arctic by the expensive northern convoys. Furthermore, a Turkish alliance would upset the Germans' delicately poised balance of forces throughout Europe, threatening them with a new, formidable campaign on their most sensitive flank. It needs only the most elementary comparison between the contemporary Allied air base system at extreme, impracticable range from North Africa and Palestine with that projected in Anatolia, Rhodes and Kos, to visualise the magnetic attraction it must have had for British strategists.

(1) Prof. John Ehrman.

(2) Official History of the Second World War. Grand Strategy, Vol. V. by John Ehrman (Air Ministry Library).

The Prime Minister wrote on 27 July 43

'I need Rhodes as part of the diplomatic approach to Turkey.'

Hitler, likewise, saw in successful Allied operations in the Aegean a powerful inducement to Turkey to join the Allies: and it has been noted that, although he accepted the military arguments put up by his advisers against Aegean operations, he put political and prestige considerations first, took Rhodes and insisted on the reduction of Leros and all that it implied.

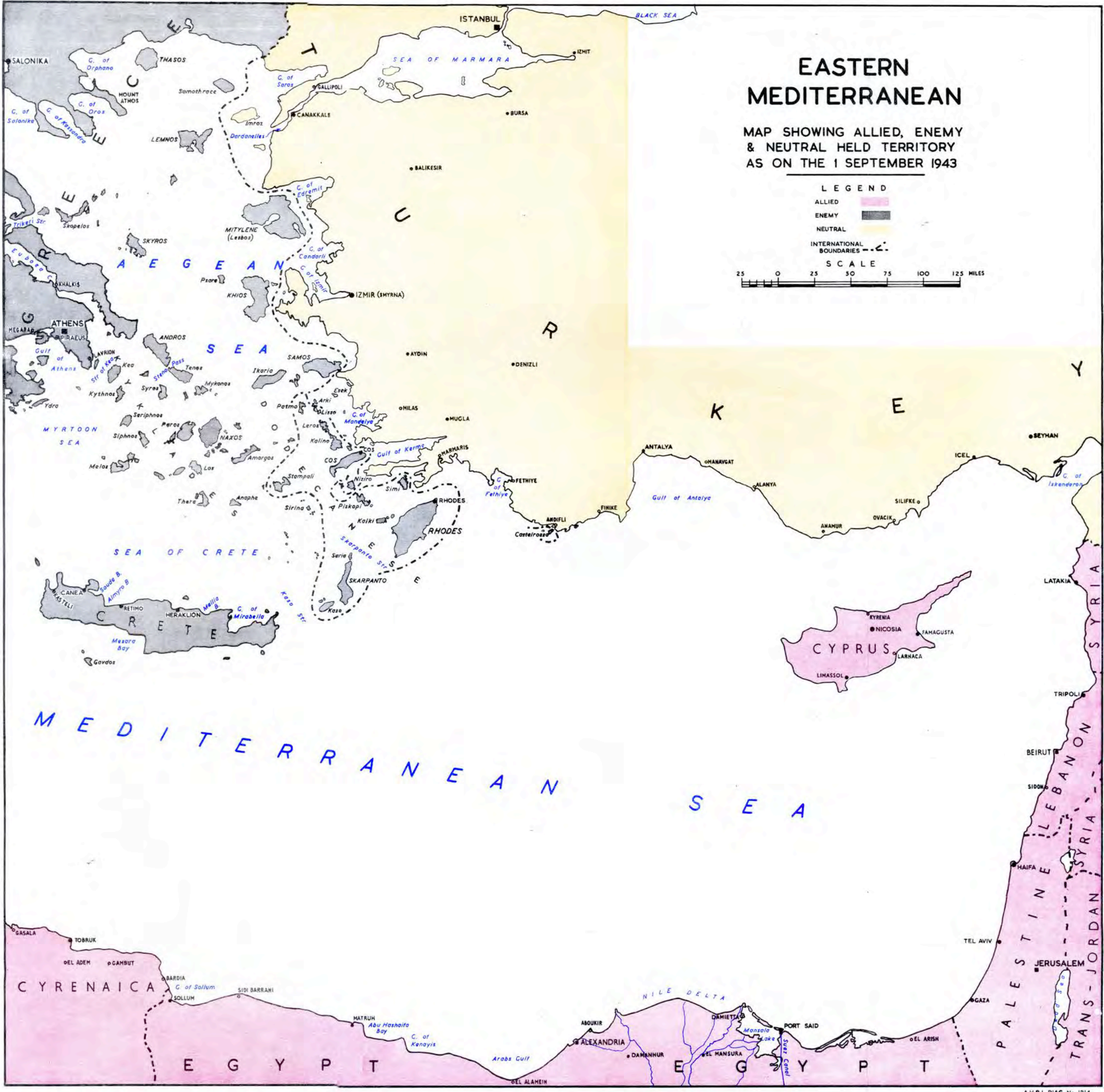
There had been in operation for some time past a system of supply of materials of war to Turkey, which came under the code name of 'Hardihood'. These supplies were now used as a lever in Allied negotiations with the Turks. Relations with Turkey, who had been very co-operative on occasions, deteriorated markedly as 1943 drew to its close. Just before the assault on Leros, talks were held in Cairo with her representatives and the request for the cession of air bases in Anatolia pressed. Apart from accepting the principle of co-belligency and admitting some technicians, the Turks, apprehensive of attacks by the now predominant Germans on their western provinces, as well as of Russian absorption if the Germans were driven out, would concede nothing. The Prime Minister, undaunted, still clung to the hope of an operations against Rhodes ('Hercules') and preparations for Turkey's ultimate entry into the war ('Saturn'). The President and the American Joint Chiefs of Staff were throughout in favour of a neutral Turkey, viewing with suspicion what they saw as dangerous diversions to operations in Italy and to the impending launching of 'Overlord'.

Differences in British and American strategic thought

During the critical period of the last four months of 1943, there were marked differences between the strategic views on Mediterranean operations advanced by the British and the Americans. It would be far-fetched to speak of a national cast of mind; but the policies of the two allies were affected by their national as well as their common interests. At the time in question, these two did not fuse and the individual approach, influenced by the course of their separate histories and military experience, was consistently at variance. It is important to define these differences.

This has been admirably done by Professor John Ehrman in the fifth volume of his work on Grand Strategy in the Second World War, so well, indeed, that it would only lose by paraphrasing. He writes:-

'To the British, nurtured and confirmed in the experience, and largely governed by the forms of maritime warfare, strategy implied an economy of effort, best achieved, if circumstances allowed, by a careful distribution of strength between a number of complementary targets, whose geographical separation from each other itself explained or reflected their interdependence. Such a mode of warfare was pragmatic, for it must develop largely



as opportunity offered; and the British placed a correspondingly high value on strategic flexibility, in preference to a rigid adherence to a long-prepared plan.

To the Americans, on the other hand, strategy implied concentration of effort, in the Napoleonic sense. Unused to long wars against numerically superior Continental powers, and rightly confident in their application of ingenuity to unparalleled strength, they had no need for, or experience of the devious approach. Their strategic resource and tactical boldness, the former already displayed in the Pacific, the latter soon to be displayed in Northwest Europe, were accordingly exercised in the service of a single strategic target and of a single well-prepared design; and they were quick to note and to fear any sign of an apparent dispersal of force, or of a departure from plans already agreed.

The Americans thus disliked the "side-shows" which to the British were an inherent element of warfare; and the Mediterranean had always seemed to them to bear all the marks of a 'side-show' 'The Mediterranean' Marshall informed a meeting of the Combined Chiefs of Staff in Washington in May 1943, 'was a vacuum into which America's great military might could be drawn off until there was nothing left with which to deal the decisive blow on the Continent'.

Moves following the Italian surrender(1)

German negotiations with the Italians

On the announcement of the Italian surrender, the Germans lost no time. Their first approaches were diplomatic and made late on 8 September. By 0130 hours on 9 September 43, agreement(2) had been reached on the following points. The Italian Eleventh Army was to maintain defence of the Greek coast for at least 14 days in co-operation with German troops and then to pull out gradually and return to Italy. If the Allies ordered the Italian Army to lay down its arms, these were to be surrendered on German-controlled territory. Shortly after, Admiral Lange, the Admiral Commanding Aegean, secured the hand-over of all Italian naval forces in the Aegean.

Swift German moves

Operation 'Achse', already in force in the Central Mediterranean, was postponed twice, eventually coming into force at 1200 hours on 9 September.

Precautionary measures taken that night included orders to lay mines off the Corinth Canal, to post navigation vessels at the East of the Corinth Canal, to close

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- (1) F.D.S. 28/53 (first draft) (F.D.S./Admlty):
Bragadin: Admiralty Battle Summary No. 36 (A.H.B. IIR/18/29).
 - (2) Between Army Group E and the Italian Eleventh Army.

the Piraeus net boom and for shore batteries to fire on any vessels attempting to leave. By 1200 hours on 9 September, a swift swoop on shipping in Piraeus, Crete (largely maintained by Italians) and in Leros had produced a useful accession of first line naval vessels and auxiliaries.(1)

On the night 9/10 September, an Allied mission was dropped on Rhodes; but at 1220 hours on the 11th, the Italian Commander had capitulated to the Germans,(2) although his forces outnumbered the Germans. The Germans landed on Syra the same day. Volos and Zante fell to them on the 14th.

In the meantime, the German service chiefs had met on 10 September and decided to abandon neither the southern chain of islands nor the Aegean islands, for they were either of value to them or of potential value to the Allies. But with their actual forces they could not be held. On the 12th, Admiral Fricke, Naval Group Command South, thought the Allies had missed the moment of German weakness in relinquishing Rhodes, but he could not resist a serious attempt to retake it. The Germans in the area looked on the Aegean as the arc that secured their southeastern flank against Russia and the other Allies. To relinquish the area would present the Allies with fresh bases. Their only hope was that the Allies, slow and methodical in proceeding to action, would hesitate until it was too late. Turkish neutrality might then swing in the Germans' favour.

On the 13th, the situation was critical, in spite of the easy capture of Rhodes. The Italians were resisting bitterly in Volos, Chalkis, Salonica, Northern Euboea and Kephallonia. A landing on Corfu had been beaten back and Samos had rejected a truce offer.

The battle for Kephallonia Island(3)

At the time of the Armistice, the Ionian Islands were garrisoned partly by German and partly by Italian troops. There appear to have been some leakages of the 'Achse' plans to seize Italian possessions, ports and shipping, for here, as in a number of other areas, a stout resistance was put up to German encroachments. The four principal islands in the Ionian group are Corfu, Kephallonia, Zante and Levkas.

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- (1) At Piraeus, undamaged:- minelayer - Marosini: destroyers - Turbine and Crispi: torpedo boats - Calatafimi and San Martino: 1 Mas boat, 16 auxiliary minesweepers and 4 small vessels. S.S. Vesta, Arezzo, and Ascianghi found sunk in harbour.
In Crete:- torpedo boats - Solferino and Castelfidardo and all the anti-submarine and minesweeping vessels there.
In Leros:- destroyer Euro and all Italian motor vessels, tugs, salvage and harbour craft.
- (2) Who at the time had a division on the island.
- (3) F.D.S. 28/53 (first draft) (F.D.S./Admty):
L'Aeronautica Italiana nella Guerra di Liberazione
pp. 99/100 Air Historical Office, Rome, 1950.
(A.H.B.6).

On Kephallonia, the Italians opened hostilities on 13 Sept. 43, by firing on German units and sinking a naval ferry barge.(1) A German attempt to land reinforcements on the 14th was resisted, but reinforcements turned the scale. Open warfare began on the 15th. Air attacks by Ju.87s turned the scale on the 21st, organized Italian resistance ceased and, on the 22nd, the Italians capitulated. Two of the transports carrying prisoners were sunk by a mine off Argostoli. These were S.S. Ardena(2) and S.S. Elsi.(3) At least 700 lives were lost.(4)

There was no Allied air intervention on behalf of the Italians.

Andros and Naxos fell to the Germans on the 23rd.

The battle for Corfu Island(5)

The attack on Corfu opened on 13 September, when three German bombers (from N.W. Greece like the Ju.87s that attacked Kephallonia) attacked Italian naval units in Corfu port. These attacks increased in weight until the end of the 21st. The first attack on the 13th was followed by landing forces, but the majority of these were repulsed.

On 14 September, after the abortive landing on Corfu, the German Command gave first priority to the capture of the Ionian Islands and postponed the suggested operation against Leros.

A second and final German landing was made on 21 September and after a severe struggle, the island capitulated on 24 September.

Appeals for air assistance were met by Superaereo, the Italian Air Command, with continued sorties by small formations of Mc.202s, Mc.205s, Re.2002s, but these efforts were too light to change the situation. Several requests for help by Mediterranean Air Command led to an examination of the situation by this latter formation, but the situation was lost before plans could mature. As in the case of Corsica, there were strict limitations to any potential air raid. The Allies were engaged in consolidating their precarious bridgehead at Salerno.

Fuehrer Conference on 24 September(6)

On 24 September, Field Marshal von Weichs reported to Hitler, in the presence of Doenitz, on the situation in the South-East and urged the timely evacuation of German outposts on the Aegean islands, including Crete. Doenitz gave as his reason for supporting this recommendation five reasons. Firstly, he thought the next Allied move was to

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- (1) Tactical number as yet unidentified.
 - (2) 1,092 G.R.T. Ex-Greek.
 - (3) 1,433 G.R.T. Ex-Greek.
 - (4) A.H.S. and Lloyds.
 - (5) L'Aeronautica Italiana nella Guerra di Liberazione, Air Historical Office Rome (A.H.B.6 copy).
 - (6) Fuehrer Conferences on Naval Affairs 1943 (A.H.B. copy with Capt. Peyton-Ward).

be against the Balkans. Secondly, the German position in Greece and the neighbouring areas of the Adriatic and Aegean was very precarious. The peninsular forces were hardly in a position to prevent a landing attempt in force. The only point where the naval forces possessed any strength to speak of was in the Aegean area. Thirdly, they had at sea only small vessels unfit to compete with the superior naval forces the Allies might bring into play. Fourthly, the Allies held undisputed air superiority in the whole area. Fifthly, the advanced island bases could be by-passed and starved out. He asked for a quick decision, as their sea-borne traffic, already inadequately protected, was in jeopardy.

Hitler agreed with these military arguments, but refused to order the evacuation of the islands, especially of Crete and the Dodecanese, on account of the political repercussions which would follow. The attitude of Germany's allies in the South-east, as well as that of Turkey, was determined exclusively by their confidence in German strength. To avoid a fatal loss of prestige, they must accept any losses of troops and material. The Air Force would assure the supply of the islands.

Allied and German moves in the Dodecanese and Aegean, September and October.

In the hope of influencing Turkey to enter the war and extending their freedom of sea and air movement in the area, the Allies landed on a number of islands and organized their defences, albeit on a modest scale and at extreme range from Cyprus and North African air bases. These islands were, in order of occupation, Castelrizzo(1), Kos (with the only good airfield outside Rhodes), Samos(2) and Leros(3). By 18 Sept. 43, the Germans considered the Dodecanese (except Rhodes) lost to them. By 30 September, British forces were in control of the islands of Ikaria, Kalymnos, Symi and Stampalia, and co-operating Italians in control of others.

The Germans moved swiftly into the Cyclades and Sporades and took up commanding positions threatening any advance by Allied naval forces into the Aegean. By 30 September, they were in control of Rhodes, Santorin and its neighbours, Scarpanto, Khalkyas, Alimnia, Kaso, Lemnos, Mitylene, Khios, Crete, Kythera, Antikythera, the Sporades and the Cyclades. Bulgarian forces were in control of Andros, Thasos and Samothrace.

During October, the Germans took Kos, Kalymnos, Naxos, Paros, Levitha, Symi and Stampalia. On 27 October, they opened a series of air attacks on Leros with greatly strengthened air forces based in Greece.

Operation 'Leopard'

Allied and German military operations centering round the struggle for the island of Leros have been described in

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- (1) 10 Sept. 43.
 - (2) Both on 13 Sept. 43.
 - (3) 13 Sept. 43.

official narratives in detail.(1) It will, however, clarify the context if the development of the German plan is very briefly outlined in the light of German documents. Thereafter, the air operations of the Middle East Interpretation Unit will be described in greater details than has hitherto been attempted.

When it was decided on 13 Sept. 43 to push ahead with operations against Leros, the Germans lacked the necessary forces. Fliegerkorps X could provide no air support for the Navy as their aircraft were fully employed elsewhere. On the 14th, in view of the serious position in the Ionian Islands, work on the plan for Leros was postponed, but was considered both feasible and urgent four days later. The Italian vessel Mas. 522 returned to Greece from Samos reporting British occupation of the Dodecanese as weak and that an exceptional opportunity for success was open. By 20 September, there were still no ground or air forces to spare for the task. On 22 September, Army Group E advised Admiral Commanding Aegean of Hitler's decision to operate against the Dodecanese. No air support was promised until operations in the Adriatic were completed.

Between 24 and 26 September, the operational plan for Leros - codename 'Leopard' - was drawn up. An air base for the German Air Force was to be decided on (adequate airfields in Greece already existed) and the Allied air forces were to be eliminated. On 6 October, the directive for Leros was issued and Lieut. Gen. Muller appointed in command, with naval and air forces to assist. The intention was to take Leros and Nikaria first, then Samos.

Reinforcements for the expedition had been lost in the S.S. Olympus convoy of 6/7 October and the S.S. Kari and Trapani convoy of 15 October; and the presence of Allied destroyers in the Kos - Leros area proved the risks were greatly increasing. There were still insufficient aircraft to ensure success. After several postponements, the Supreme Commander South-East received a blunt directive on 17 October from Hitler. The existing plans must be adhered to and carried out as soon as possible. Additional light forces and an air Geschwader were promised.

By the end of October, the losses of ships, troops and supplies to British surface craft and aircraft, were really serious.

On 6 November, the codename of Operation 'Leopard' was changed to Operation 'Taifun'.

By 10 November, reinforcements had been assured and the plan issued. The naval forces were to be 3 anti-submarine (UJ) vessels, 6 GA auxiliary vessels, 2 KFK armed trawlers, 25 landing craft and one steamship, 2 destroyers, 2 ex-Italian torpedo boats, some R-boats and S-boats and

(1) Admiralty Battle Summary No. 36 (A.H.B.IIK/18/29) and R.A.F. Narrative (first draft) - Operations in the Dodecanese Islands: September - November 1943 (A.H.B.).

1 I-boat.(1) The G.A.F., which had been reducing the Allied defences for some days past, was to support the landings by attacking naval targets in the evening of 11/12 November and from 0600 hours on 12 November, and, in the morning of 12 November, defences and airfields.

It is clear that from time to time the Germans considered their chances of success unlikely, but that prestige and political considerations led them to disregard the very heavy losses and handicaps involved and rapidly concentrate for their purpose both sufficient air forces to ensure local air superiority and craft admirably adapted to the task.

Allied air operations in the Aegean, September to December 1943

Photographic reconnaissance in September(2)

Daylight reconnaissance over the Eastern Mediterranean fell into one or more of the following categories: general sea reconnaissance,(3) coastal reconnaissance(4), armed reconnaissance,(5) shadowing(6) and photographic reconnaissance. It was photographic reconnaissance, in the critical autumn of 1943, that was most valuable in the planning of all operations whether by land, sea or air and provided the Allies with most of the facts relating to the enemy's preparations, intentions and movements.

The principle agent for photographic reconnaissance reports in September 1943 was the Middle East Interpretation Unit.(7) It had liaison officers at Air H.Q. Middle East and Army H.Q. Middle East and a detachment at the Naval Intelligence Centre in Alexandria.

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- (1) The following vessels have been identified from German records at the Admiralty (PG/32217):-
 Destroyers: T.A.14 (ex Italian Turbine), T.A.15, (ex Italian Crispi)
 Torpedo boats: T.A.16 (ex Italian Catelfidardo), T.A.17 (ex Italian San Martino), T.A.19 (ex Italian Calatafimi)
 R-boats: R.195, R.210. S-boats: S.54 (after initial landing)
 UJ-boats: U.J.2101, U.J.2102, U.J.2110. Q-boats: G.A.42, G.A.44, G.A.45.
 Harbour defence: G.A.01, G.A.02.
 - (2) Middle East Interpretation Unit O.R.Bs and appendices Sept. to Dec. 43.
 - (3) Any patrol along given tracks or in a given area carried out with the object of locating and reporting enemy surface forces at sea. This may be an offensive patrol to locate an enemy force which it is intended to attack, or a defensive patrol to discover enemy forces which might menace our own operations.
 - (4) Any patrol close to the coastline, the object of which is to locate and report enemy shipping or to observe enemy activity in harbour and ashore.
 - (5) A patrol carried out to locate and attack enemy shipping or a coastal target and generally ordered in an area in which it is not intended to despatch further striking forces.
 - (6) When enemy surface forces have been located by reconnaissance, aircraft may be ordered to 'shadow' and report subsequent movements and results of our attacks.
 - (7) Formed on 15 May 42. Amendment List No. 2 to Middle East Air Order No.505 of 30 June 42. (M.E.I.U. O.R.B.)

Most of the actual photography was carried out by No. 680 Squadron, flying Spitfires. This squadron had a detachment (B Flight) at Tobra on the Egyptian coastline and one (C Flight) at Nicosia in Cyprus. B Flight (controlled by Air Defences Eastern Mediterranean), covered Greece, Crete, the Cyclades and Aegean Islands. The detachment at Nicosia interpreted photographs in phases developing in detail. C flight, (controlled by Air H.Q. Middle East), covered the Dodecanese, the Cyclades and Aegean Islands. M.E.I.U. reported on the oblique photographs taken by No. 201 Group's reconnaissance flights and shipping strikes in the Aegean area.

No. 201 (Naval Co-operation) Group employed two squadrons of Baltimores, (short-range reconnaissance aircraft), on photographic operations. These were No. 203 Squadron, based at Berka 3 in Cyrenaica and No. 545 (R.A.A.F.) Squadron based at St. Jean in Palestine. They specialised in oblique photographs. The M.E.I.U. kept an officer with No. 205 Group on night bombers to cover night photographs.

By the end of August 1943, No. 680 Squadron had photographed all the important areas in Greece, Crete, the Aegean and the Dodecanese within its range. This extended roughly as far as the fortieth degree of latitude, including the area N.E. of Larissa and the island of Lemnos, with Salonika at extreme range.

During September, a full report on Crete was issued. During the second half of this month, the port and airfields of Rhodes were covered twice daily, and there was a daily reconnaissance of the Piraeus and many of the Greek airfields. A series of reports by the Shipping Section produced in July on the movement of merchant shipping and tankers was continued. On the basis of photographs, complete surveys of harbours in Crete, Rhodes, Mytilene, Chios, Samos and the Peloponnese were developed.

Photographic reports on the expedition against Kos in
October(1)

Valuable information, not entirely continuous, was provided on the assembly and passage of ships and aircraft engaged in the German attack on Kos island in October. On 30 September, a convoy of three merchant vessels, three F-boats and a corvette had been photographed on arrival at Kolpos Soudhas (Crete) from Piraeus and, on 1 October, shipping in Cretan waters was reported as further augmented by the arrival at Herakleion of a "Citta di Agrigento" class liner and at Kolpos Soudhas of S.S. Sinfra and three naval ferry barges (F-boats). They had all, except one, left by 1025 hours on 2 October, and on the 3rd were participating in the operation against Kos, from which they, together with the aircraft tender Zmaj, returned to Piraeus by 4 and 5 October. The movement of 14 - 19 Ju.87s from Argos to Kerakleion on 2 October was also photographed.

The ex-Vichy French S.S. Sinfra, for a long time one of the mainstays of Axis supply in the Aegean, was photographed at Herakleion on 18 October. At 1005 hours the next morning, photographs showed she had departed: this

(1) M.E.I.U. O.R.Bs.

information was signalled and that night the Sinfra was torpedoed and sunk by aircraft of No. 247 Wing.

Towards the end of the month, the steady build-up of Ju.88 forces in Crete was photographed, a pointer to more grave events.

Photographic reports on German preparations for the assault on Leros

One of the most discouraging features of the loss of Leros was that Allied air intelligence furnished a clear picture of the enemy naval forces and their progress towards the assembly centres, but there were inadequate operational aircraft, ships and land forces to prevent a landing.(1)

The contribution towards a clear day-to-day picture of the German preparation made by the three R.A.F. reconnaissance squadrons employed(2) was a remarkable one. The weather was favourable and the operations ran to a smooth plan. The first task was to discover the nature of the enemy naval forces available. The second task was to report on their progress.

After the fall of Kos, it was confirmed that the Germans had five naval ferry barges in the Kos - Kalymnos area, obviously insufficient to transport and land a suitable force. Troops had been assembling during September and October in that area. The prolonged air attacks on Leros and a wealth of varied intelligence pointed clearly to German intentions to persist with the operations. The reconnaissance aircraft proceeded to secure as exact a picture as possible as to the means likely to be adopted. There was always a chance that the naval expedition entailed might be destroyed or diverted.

On 25 October, some 60 foot assault craft(3) were photographed for the first time in the area in Piraeus. Their numbers increased until 2 November, when 13 were photographed. Some loaded stores and motor transport. Caiques, either singly or in small groups, very difficult to detect from the air, supplied the troops assembling in Kos. One steamship was engaged in operations, but was never photographed. Two naval ferry barges and two Siebel ferries(4) were photographed at various points in the islands, accompanying the expedition for a part of their journey. The vital movements to be watched was that of the convoy of 13 assault craft and its surface and air escorts.

Photographic reports on the progress of the Leros convoys(5)

The pooled evidence provided by the three R.A.F. squadrons,(6) while not absolutely continuous, threw valuable

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- (1) M.E.I.U. P.I. Report No. 3692 18.12.43 in M.E.I.U. O.R.B. Appendices Dec. 43.
 - (2) No.680 P.R. Squadron (high level), Nos.203 and later No.454 Squadron (visual and oblique).
 - (3) Undecked, with a square stern and rounded bow, forming 2 doors which opened outwards. Apart from their length they resembled I-boats (infantry assault craft).
 - (4) First appearance in the Eastern Mediterranean of these craft.
 - (5) The remarkable series of 16 aerial oblique and vertical photographs which accompany M.E.I.U. P.I. Report No. 3692 (in M.E.I.U. O.R.B. Appendices Dec. 43) will repay serious study as throwing direct light on this important operation and as an example of how organized air units and skilled photographic interpreters can provide irreplaceable intelligence to the armed forces at a time of crisis.
 - (6) The two other squadrons employed in photographic reconnaissance in the Eastern Mediterranean, viz No. 13 (Hellenic) and No.15 (S.A.A.F.) did not figure in the cover of this convoy.

light on the progress of the convoys, the stratagems of concealment and deliberate deviations of route resorted to, as well as the composition of, and changes in, the well-armed escort forces.

The unarmed Spitfires of No. 680 Squadron, which specialised in high level vertical photography, could not have furnished a running report alone, for they, defenceless and insufficient in numbers, were handicapped by weather. On the other hand, the armed, sturdily built Baltimores (of Nos. 203 and 454 Squadrons) could fly below cloud with a higher degree of protection against anti-aircraft fire and could perform the dual function of visual observation and oblique photography. They provided the photographs which were acted upon by the anti-shipping strike units and their photographs, as well as those of No. 680 Squadron, corrected erroneous visual reports by merchant vessels and revealed the presence of powerfully armed S-boats, R-boats, ferry barges and vessels of corvette type. The fact that perfect co-ordination of evidence was not attained does not detract from the undoubted value of the joint effort.

The following facts on the convoy's movements⁽¹⁾ emerged from the photographs. On 3 November, a single convoy of 13 assault craft with caïque escort left Piraeus. Nine put into Lavrion and, with an additional escort of one sloop, one corvette and one small vessel, rejoined the others at Paros on 6 November. From thence, they split up into two convoys of ten and three craft and were accompanied part of the way by two ferry barges.

On 9 November, ten assault craft were photographed in a bay off Amorgos. One craft and a naval ferry barge stayed at Amorgos from 9 to 12 November. On 10 November, the convoy, now of fourteen assault craft, was seen leaving Port Maltesana in Northern Stampalia, with three escort vessels, one R or S-boat, two 50 foot launches and a trawler from Kalymnos. Two Arado 196 aircraft were at the seaplane station and three aircraft in flight. At this point the convoy dispersed. Three assault craft probably put back to Amorgos; four sailed by N. by E. for Levinthos and were photographed on the morning of the 10th heading East towards Kalymnos: the balance of five made for the southern part of Kos harbour, where they, with two launches, an unserviceable naval ferry barge and five active ones, one escort vessel and two R. or S-boats, were photographed by Spitfires on the 11th. All types of escort vessels were heavily armed and the 50 foot launches appeared to be armed with a heavy calibre machine gun on a platform forward.⁽²⁾

The picture, therefore, already provided by air intelligence on the 11th, the day preceding the landing,

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- (1) Refer to Figure 9 for a diagram of convoy movements from 2 to 11 November.
 - (2) For details of the strenuous attempts by air formations to intercept the convoy refer to the A.H.B. narrative (first draft) on "Operations in the Dodecanese" pp.42-44. Naval efforts are referred to in Admiralty Battle Summary No.36. (A.H.B.IIK/18/29).

gave precise details of the enemy shipping forces engaged; i.e. five active naval ferry barges and five 60 foot assault craft at Kos and four assault craft at Kalymnos, in addition to naval escorts.

Photographic cover for the initial stages of Operation 'Taifun' on the morning of 12 November was very scanty owing to bad weather, but photographs were taken of the area every day up to 20 November, which seemed to provide evidence of the destruction or damage of four assault craft, with one inactive at Amorgos, also that the total naval ferry barges in the area was nine; these nine included three unserviceable at Kos throughout the period, one inactive at Amorgos and one inactive at Stampalia. The odds against the Allies were too great from the moment the landing was effected: all the photography could do now was to record, it could no longer warn or provoke offensive action.(1) The Allied forces on Leros capitulated just before midnight on 16 November. When the forces on Samos capitulated on 22 November, the whole Dodecanese was in German hands.

The air balance sheet(2)

In the course of Aegean operations between 8 Sept. and 16 Nov. 43, R.A.F. aircraft losses amounted to 98 aircraft destroyed (Category 3) and 25 damaged (Category 2).(3) Of those destroyed, the twin-engined fighters lost 43 and the single-engined fighters 24. The Middle East Air Command and Northwest African Air Force claimed to have destroyed 77 enemy aircraft in the air and 89 on the ground in attacks on airfields and landing grounds and anti-aircraft units to have destroyed 19 in the air.

The disadvantages under which the R.A.F. laboured in the Aegean area were great. The only heavy bomber squadrons on hand were the Liberators and Halifaxes of No. 240 Wing and although some help had been given by the Mediterranean Air Command,(4) this was severely limited by the priority given to commitments in Italy. Only one

- (1) Between 8 Sept. and 16 Nov. 43 inclusive, No. 680 Squadron had flown 404 sorties in photographic reconnaissance, and No. 13 (H), No. 15 (S.A.A.F.), No. 454, and No. 203 Squadrons 250 sorties between them, all in the Aegean area. (A.H.B.II J.1./159/26 Appendix C).
- (2) Operations in the Aegean area by aircraft of the Middle East Command (8 Sept. to 16 Nov. 43) (A.H.B.II J.1./159/26).
- (3) R.A.F. casualties in the Aegean area 8 Sept. to 16 Nov. 43.

Type of Aircraft	Enemy Action: Cat. 3	Enemy Action: Cat. 2	Flying Battle: Cat. 3	Flying Battle: Cat. 2	Totals
Heavy bomber	1	-	2	1	Cat. 3 - 3 Cat. 2 - 1
Medium bomber	1	1	5	4	Cat. 3 - 6 Cat. 2 - 5
Light bomber	5	1	10	5	Cat. 3 - 15 Cat. 2 - 6
T/E fighter	34	5	9	6	Cat. 3 - 43 Cat. 2 - 11
S/E fighter	22	-	2	2	Cat. 3 - 24 Cat. 2 - 2
Grand totals	63	7	28	18	Cat. 3 - 91 Cat. 2 - 25

In addition, No. 216 Squadron (Dakotas) lost 5 aircraft on the ground at Kos and 2 Cat. 3 Flying Battle during the period.

- (4) Refer to Appendix 32 for details of one of these gestures, viz: the loan of the 1st and 14th Lightning Groups from 4 - 13 Oct. 43.

LEROS ASSAULT CRAFT CONVOY

2-11 NOVEMBER 1943

LEGEND

ROUTE OF CONVOY ———
ISLANDS HELD BY ALLIES AT TIME OF GERMAN ASSAULT ON LEROS ARE SHOWN BLACK.

SCALE
MILES 10 5 0 10 20 30 MILES

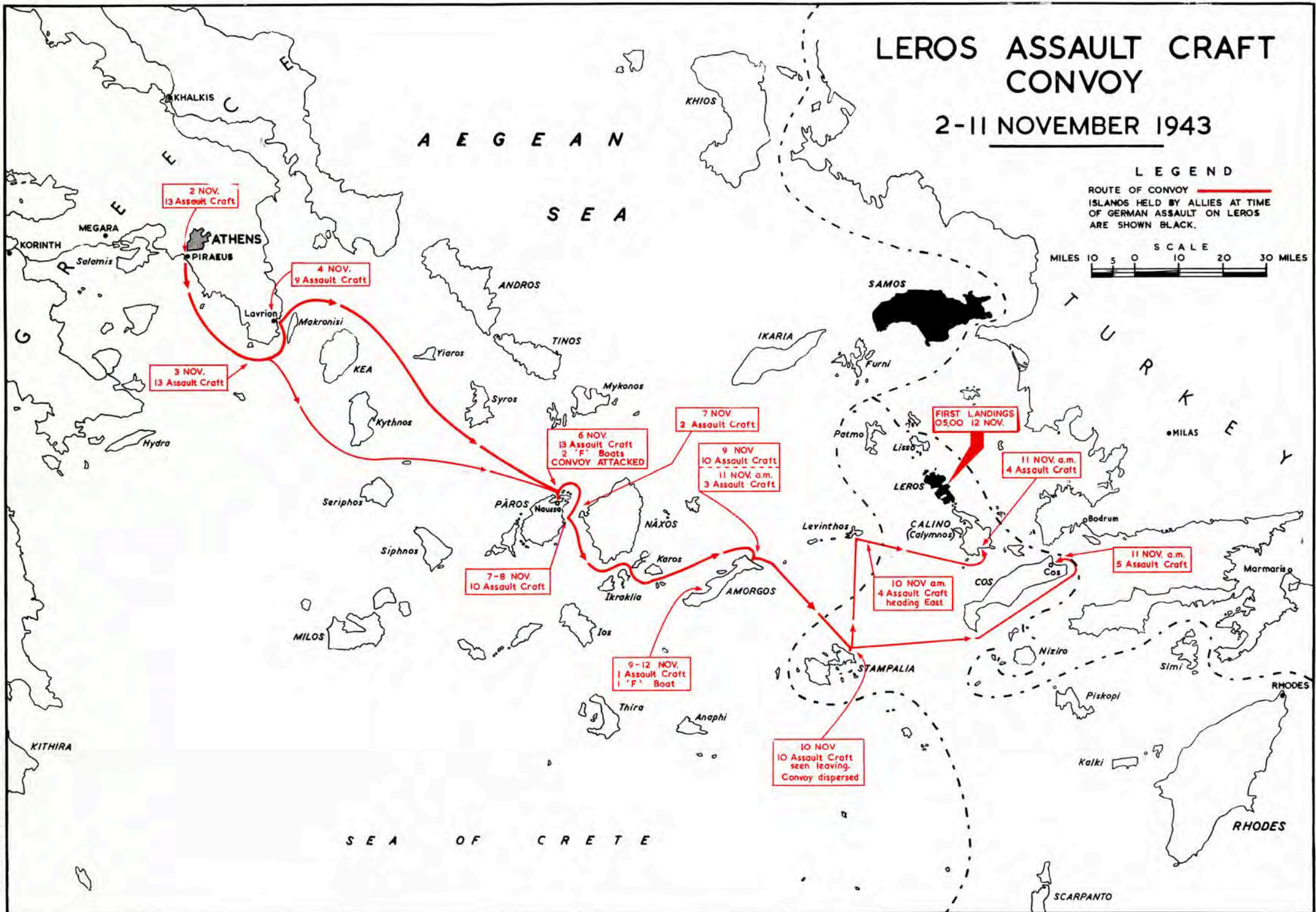


FIGURE 9

Wellington squadron - No. 38 - was available, and that was primarily employed on torpedo-dropping. Great strain was thrown on the Beaufighter squadrons, owing to the lack of facilities for operating single-engined fighters, even when fitted with long-range tanks. The reconnaissance and ship-striking forces were inadequate to cover an island-strewn area such as the Aegean, where enemy ships normally lay hidden in island bays during daylight and moved only by night. There were stretches of bad weather that put the Gambut and other landing grounds out of action and interfered with operations at critical moments.(1)

In spite of all the disadvantages, however, between 8 Sept. and 16 Nov. 43, Middle East Command aircraft contributed a total of 2,256 sorties(2) to Aegean operations. In addition, U.S.A.A.F. aircraft of Mediterranean Air Command contributed 1,062 sorties.(3) A detailed account of their operations may be found in a report prepared by Operations Record III of H.Q., R.A.F., Middle East(4) and this should be studied in parallel with the Air Historical Branch's narrative (first draft) entitled 'Operations in the Dodecanese Islands, September - November 1943' for a complete survey of Allied air participation.

The failure to obtain Turkish air bases(5)

Throughout November, Turkey was increasingly apprehensive of a German attack on her western provinces without the guarantees of what she considered adequate Allied support and protection. As the Germans invaded the whole of the Aegean, her fears grew daily. Talks opened on 5 November in Cairo ended in disillusion. On 7 November, they refused to cede the much desired air bases in Anatolia to the British without the same guarantees of British protection as if she declared war. The British had reluctantly acceded to the American arguments for a neutral Turkey, but still wanted the air bases. The Turkish demands amounted to the same 40 R.A.F. squadrons they had originally held out for, but the British would and could not advance on an offer of 17 squadrons and 30 anti-aircraft batteries.

The British continued to press the Turks through December, but although the latter accepted the latest British proposals in principle, they would not move without 216 Spitfires, 500 tanks and 66,800 tons of petrol as current aid, with 49 squadrons of aircraft as protection should they declare war. The Turkish attitude showed a marked deterioration when it was clear that their demands could not be met in the face of existing priorities in Italy and for

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- (1) Report by Operations Records III, R.A.F. M.E. (A.H.B. II J.1/159/26).
 (2) Effective Bomber and Fighter Bomber sorties 732
 Effective Fighter sorties 490
 Reconnaissance sorties (see) 380
 Photographic reconnaissance sorties (land) 654

Total sorties 2,256

- (3) Effective Bomber sorties (land targets) 860
 Effective sorties by Mitchells (sea targets) 82
 Effective Fighter sorties (by lightnings) 120

Total sorties 1,062

- (4) A.H.B. II J.1/159/26.

- (5) Grand Strategy Vol. V. John Ehrman (Official History of the Second World War).

the 'Overlord' build-up. The outcome of the third week was still uncertain and British hopes for Operation 'Hercules', (an assault on Rhodes) faded with the passing year.

Final territorial moves in the Aegean(1)

Leros was surrendered on 16 Nov. 43. On 18, 19 and 20 Nov. respectively, Samos, Seriphos and Mykonos were evacuated by the Allies. On 22 November, the Germans landed on Samos and, on 27 November, captured Santorini. On 28 November, the Allied garrison on Castelrizzo was withdrawn, leaving only a token force.(2)

German naval tasks at the end of 1943(3)

The Germans were now faced with some heavy tasks which would strain their organization(4) to breaking-point. These included the transport of thousands of prisoners-of-war and the defence and supply of the islands. Shipping was an acute problem and it would have to be closely protected. The most effective method of protection to that point had been proved to be strong escort forces, which allowed the anti-submarine (U.J.) vessels to detach in case of engagement. Here the trouble was that the German naval forces were too meagre, although drastic measures were in progress to reinforce them. The air forces mustered in Greece and Rhodes for the recent operations were to be reduced. There was little air escort for convoys, which might be forced to sail by day.

With the reduction of German air forces, Allied aircraft could operate more freely and would certainly harass shipping increasingly from the air. Adequate air reconnaissance for giving timely warning to, and diverting convoys was ordered, coast-watching services extended, harbours patrolled by surface craft, and minefields laid off the Gulf of Attica, Suda, Candia, Syros, the Gulf of Salonica, the Sporades and the Dardanelles.

Shipping target patterns for Allied aircraft in December(5)

The Allies knew of the immense supply tasks awaiting the Germans after the fall of Leros and proceeded to exploit the situation. The German position in the Aegean was secure, but the shortage of shipping tonnage acute. During November, 11,828 tons of shipping had been lost - approximately 25 per cent of the total available at the beginning of the month.

The hope of speedy relief from the Adriatic had faded. It had proved more dangerous than anticipated. Of ten

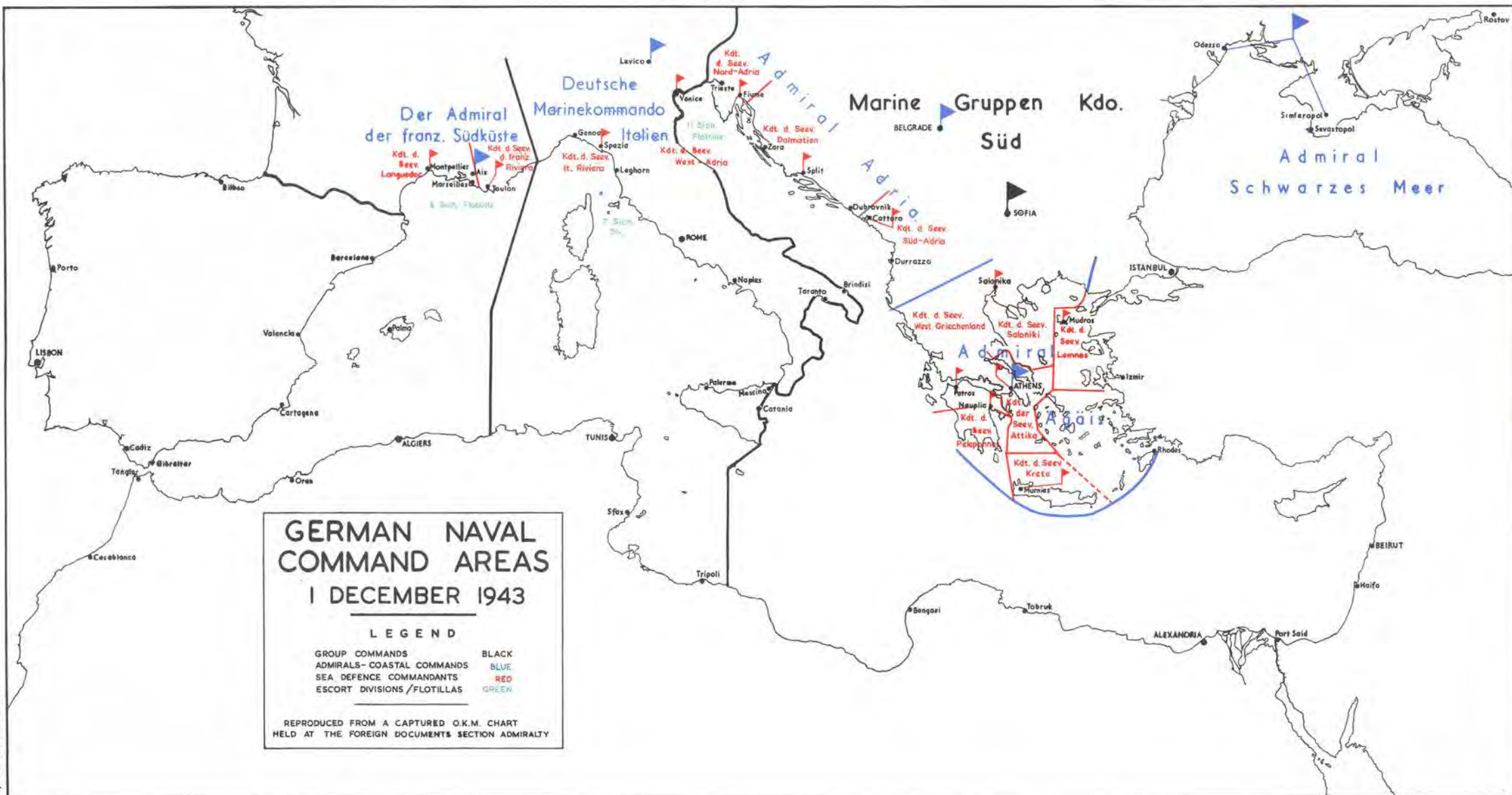
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- (1) For locations in the whole course of Aegean and Dodecanese operations refer to Figure 8.
 - (2) Refer to Figure 8 for all locations in the Aegean and Dodecanese.
 - (3) F.D.S./Admiralty 28/53.
 - (4) Refer to Figure 10 for German naval command organization on 1 Dec. 43.
 - (5) From information supplied by A.H.B.6 and from M.E.I.U. O.R.B. Appendices Nov. - Dec. 43.

GERMAN NAVAL COMMAND AREAS 1 DECEMBER 1943

LEGEND

GROUP COMMANDS	BLACK
ADMIRALS-COASTAL COMMANDS	BLUE
SEA DEFENCE COMMANDANTS	RED
ESCORT DIVISIONS/FLOTILLAS	GREEN

REPRODUCED FROM A CAPTURED O.K.M. CHART
HELD AT THE FOREIGN DOCUMENTS SECTION ADMIRALTY



vessels which had made the attempt in September to pass out to the Aegean, only two(1) arrived safely at Piraeus. An attempt in mid-October to send five Siebel ferries and five infantry landing craft met with disaster. The state of shipping repair and construction in the Aegean had reached a very low ebb and there were barely enough crews to man the effective ships. Replacement from the Black Sea was, for the time being, out of the question; the situation there was no less strained, with the struggle for the Crimea approaching a climax. Indeed, the Admiral Black Sea pressed for, and occasionally obtained, transfers in his favour. The Aegean managed to hold on to S.S. Peter (ex-French P.L.M. 16, of 3,754 G.R.T.) a coal transport. There was an almost catastrophic shortage of coal in the Aegean at this period, a situation further aggravated in the middle of December, when the coal transport S.S. Balkan was sunk off Lemnos, fully laden, while in passage from the Black Sea to the Aegean with bunker coal. As there were not enough sizeable steamers available, the Germans then allocated six auxiliary sailing vessels(2) of about 250 tons for coal transport.

While the tug-of-war between the Admiral Black Sea and Aegean continued with Gruppe Sued acting as referee, sea transport had to be found at any price. The main areas of supply shortages were Crete, Leros, Mitylene, Khios and Lemnos. To bolster up the general system, normal expediency gave way to a more realistic policy based on the increased use of small craft. A register was compiled in December 1943 of all vessels over 30 tons (including those in Western Greece), with a view to using them to the best advantage.

By the turn of the year, German shipping movements in the Aegean were assuming a fairly regular pattern. With Piraeus as the hub, shipping routes radiated westward to Patras and the Ionian Islands, southward to the southern Peloponnese and Crete (with staging harbours at Monemvasia, Melos and Thera), eastward to Leros, Rhodes and islands of the Sporades (with a staging harbour at Syros), and northward via Khalkis to Salonika (the latter port meeting most of the requirements of Mitylene and Lemnos). A secondary system of routes ran from Salonika to Straton (for the manganese ore mines), Mudros, Mitylene and Khios.(3)

Allied air check on German shipping

Almost daily, Allied photographic reconnaissance aircraft operated over the Eastern Mediterranean. A consolidated list of coded enemy vessels in the Mediterranean.(4) was kept up to date and by the end of the year it was believed that the greater part of these ships could be named. A weekly register was kept of all vessels over 200 feet in length.

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- (1) S.S. Leopardi (3,298 G.R.T.) and S.S. John Knudsen (9,071 G.R.T.)
 - (2) Grauerort, Gisela, Seerose, Luehe, Magda and Vertrauen.
 - (3) Refer to Figure 8 for all locations in the Eastern Mediterranean.
 - (4) P.I.R. No. 2691 (M.E.I.U. O.R.B. Appendices Dec. 43).

In the weeks ending 30 Nov., 8, 15 and 22 Dec. 1943, 28, 27, 23, and 28 respectively of such ships were reported operating in the Eastern Mediterranean. (1) At the close of the year, it was considered that 35 ships of this length were operating in that area, (2) in addition to an unknown, but certainly increasing number of armed caiques of varying tonnages.

No. 201 (Naval Co-operation) Group operations in December 1943

Introduction

After the Allies had lost the Aegean, their air forces still suffered from lack of numbers and range and their operations for some time to come could only be on a low scale. The target system of Axis sea supply, as yet only vaguely grasped as a whole, was of such a nature as to call for continuous attack at a large number of points. To destroy one particular point could never prove decisive: the whole intricate pattern would survive or fall as a whole. The only hope of eventually effecting really mortal damage to that system was to attack as often and at as many points as possible, until the true pattern came into clear relief and aircraft and aircrew reinforcements could be spared from more pressing engagements in other areas. During December, most of the difficulties were keenly felt in No. 201 Group. Air opposition by Ju. 88s and Arado 196s, strong anti-aircraft port and convoy defences, the short craft of daylight, the increasing multiplicity of small ~~ships~~^{craft} as targets, the hindrance of sheltering cliffs in small anchorages, the heavy convoy escort commitments and shortages of both day and night-operating aircraft were all factors in the disappointment felt at the close of 1943.

Squadrons, duties and aircraft

The duties of No. 201 (Naval Co-operation) Group during December comprised reconnaissance, anti-shipping and anti-submarine operations, close convoy cover and minelaying. Anti-shipping operations were carried out by light or medium bombers or by fighters and minelaying by heavy or medium bombers. The Group was composed of three wings, viz., Nos. 235 in the Gambut area, No. 245 in Palestine and Cyprus and No. 247 in the Berka area. (3)

Reconnaissance and anti-shipping operations were carried out by Wellingtons (4) and Baltimores; (5) anti-submarine and close cover operations by Wellingtons, (6) Beauforts, (7) Baltimores (8) and occasionally Venturas. (9)

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- (1) P.I.Rs. Nos. 3680, 3689, 3695 and 3708. (M.E.I.U. O.R.B. Appendices Dec. 43).
 - (2) P.I.R. No. 3713 (M.E.I.U. O.R.B. Appendices Dec. 43).
 - (3) Refer to Appendix 29 for Order of Battle at 23 Nov. 43.
 - (4) Of No. 38 Squadron.
 - (5) Of Nos. 13 (Hellenic) 15 S.A.A.F. and 454 Squadrons.
 - (6) Of No. 38 Squadron.
 - (7) Of No. 16 S.A.A.F. Squadron.
 - (8) Of No. 13, 15 S.A.A.F. and 454 Squadrons.
 - (9) Of No. 17 S.A.A.F. Squadrons.

Fighter anti-shipping operations were carried out by Beaufighters(1) and minelaying by Wellingtons.(2)

Operations against shipping at sea(3)

Although sweeps were carried out every day of December and wide areas of the Aegean and Dodecanes covered by the Beaufighters, Baltimore, Blenheims, Hudsons and Wellingtons, only on four occasions were merchant vessels in convoy sighted and attacked. On 7 December, two Wellingtons of No. 38 Squadron attacked a convoy of one merchant vessel (of some 4,000 tons), two destroyers and one other vessel on a southerly course east of Siphnos. The torpedo of one aircraft missed and the other's course could not be observed. The moon had gone down by the time the third aircraft located the convoy. There are no admissions of losses in German records. The same day, four Beaufighters on an offensive strike sighted a convoy west of Leros consisting of one merchant vessel (6,000 G.R.T.), two destroyers, three coasters (about 1,000/1,500 tons each) and three other small vessels on an easterly course, with an air escort of six Arado 196's at 250 feet altitude. The Beaufighters attacked the Arados, one of which broke off with dense black smoke coming from the engine. Anti-aircraft fire from both the ships and from Leros Island did no damage to the Beaufighters. There are no admissions of losses in German records.

In the night of 13/14 December, one of six Wellingtons of No. 38 Squadron, searching for shipping between Mykonos and Nikaria, located a convoy of a 1,200 ton vessel and two others (probably the escort), in the position 36° 17' N., 23° 46' E.(4) Flares were dropped and flame floats laid ten miles east of the convoy for the guidance of other Wellingtons. A bomber attack was made with unobserved results. A second aircraft launched an attack with a torpedo which ran well astern. The convoy directed intense anti-aircraft fire and the Wellington was hit once. Bad visibility prevented attacks by two other Wellingtons and a fifth failed to locate the convoy. The sixth Wellington sighted another convoy of a 3,000 ton merchant vessel, a destroyer and two small vessels north of Nikaria, but weather conditions rendered an attack impracticable. There are no admissions of losses in German records for these typical operations in difficult night conditions.

Caiques, singly or in small groups, were sighted on eighteen days of the month and in increasing frequency as the month proceeded. This pointed to the energetic programme of requisitioning, arming and conversion to naval supply functions of this purely civilian fishing and trading vessel. The Germans gave them tactical numbers, with prefixes, (such as PIR for Piraeus) indicating their bases. Although they were not so frail as their graceful cut and lateen sail suggested, and they were well armed, Allied aircraft had more success in their attacks on them than on the escorted and well defended convoys. A few

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- (1) Of Nos. 47 and 252 Squadron.
 - (2) Of No. 38 Squadron.
 - (3) All details from No. 201 Group O.R.Bs and Tables of Operations up to 9 Dec. 43 (A.H.B. II J.1/31/1).
 - (4) N.E. of Nisos.

Mitchells of Twelfth U.S. Army Air Force co-operated in the search for shipping. As a result of attacks by small formations of aircraft on 1, 4, 5, 8, 10, 12, 15, 22, 24, 26 and 28 December, several caiques were reported hit and either sunk, burnt out or abandoned. German records are not explicit on details of their caique losses. The only caique which can actually be identified as lost to aircraft was SYR.680 at Kythera on the 22nd. But there can be no doubt that Allied aircraft were actually responsible for a high proportion of the loss of the twenty caiques admitted lost in December.(1) Many were sighted and not attacked: it was sometimes impracticable or doubtful if they were under German Command, or they were lying or sailing under high cliffs and so immune from attack.

Two Wellingtons flying North of Melos late on the 5th sank S.511,(2) a small encroachment into the hard-pressed German E-boat strength: and on the 22nd, Beaufighters sank the naval tug Fano Vortune at Amorgos. Allied surface craft sank the steamships Sonia and Balkan.

German air opposition

The pattern of German air escort and the employment of their coastal air units(3) were partially revealed by encounters with Arado 196 float planes and Ju.88 twin-engined fighters.(4) On 4 December, four Beaufighters of No.47 Squadron on offensive sweeps in the Eastern Aegean, sighted and destroyed an Arado 196 on the water: they then attacked three more Arado 196s which were circling at 300 feet altitude. One Arado ditched, broke up and sank. During the combat, a high speed launch was attacked by three Beaufighters and left smoking. Four Beaufighters made a second sweep in the same area. Two of them attacked an 80 ton caique, leaving it smouldering and listing. Three minutes later, an Arado 196 was seen taxiing on the water towards a 120 ton caique. The Arado was attacked and burst into flames. The encounters on the 7th, West of Leros, have already been related above. On the 14th, four Beaufighters of No. 47 Squadron encountered four Arado 196s in the Stampalia area. An obsolete Heinkel in their company was shot down, but the engagement was otherwise inconclusive. On the 20th, four Mitchells of 310th Bomb Group escorted by two Beaufighters of No. 603 Squadron on an offensive sweep in the S.E. Aegean, sighted three 150 ton barges in Trianda Bay (Rhodes). No attack was made, as four Ju.88s were active at 1500/2000 feet altitude and four Arado 196s at deck level. Anti-aircraft shore batteries were firing. A flash, followed by black smoke, suggesting a collision, was seen in the region of

(1) F.D.S. 28/53 (F.D.S. Admly.).

(2) Ibid.

(3) On 10 November, there were 50 coastal aircraft, 34 of which were serviceable, based in Greece and the islands.

<u>2/SAG.125</u>	Arado 196	Strength 6	Serviceability 6
<u>Stab SAG.126</u>	Bv.138	Strength 1	Serviceability 1
<u>1/SAG.126</u>	Arado 196	Strength 12	Serviceability 8
<u>2/SAG.126</u>	Arado 196	Strength 12	Serviceability 7
<u>3/SAG.126</u>	Arado 196	Strength 10	Serviceability 5
<u>4/SAG.126</u>	Arado 196	Strength 9	Serviceability 7

(4) Of II/Z.G.26 Strength 16 Ju.88s.

four Ju.88s diving over Rhodes. A Baltimore reconnoitring the Rhodes - Symi area sighted three 150 ton caiques escorted by three Arado 196s and two Ju.88s East of Symi. The Baltimore was attacked and slightly damaged, but took evasive action and scored machine gun strikes on the Ju.88s, which broke off the engagement.

On the 23rd, two rocket Beaufighters of No. 603 Squadron sighted two small caiques and three Arado 196s (the latter moored) in Port Vathi (Samos). As the caiques were so positioned as to be difficult to attack, the Beaufighters attacked the Arados, destroying one with rocket and cannon fire. On the morning of 26 December, a Baltimore, carrying out a reconnaissance of Rhodes harbour, was attacked and pursued by three Ju.88s and forced to take evasive action, but not before taking photographs.(1)

Port bombing(2)

With the exception of the Fortress attack on Piraeus on the 14th, practically all the port bombing in December was left to small formations of No. 201 Group's aircraft; and the majority of this was the work of Wellingtons at night. These efforts came to an end on the night of 19/20 December. Thereafter, the weather closed in and port bombing was abandoned temporarily. Enough was not yet known about the German system and the flow of reinforcements had not yet made good the serious losses in the Dodecanese of the autumn. There were meanwhile other vital tasks on which aircraft should be employed such as the mining of busy harbours and straits and the escort of convoys.

The areas considered as the most fruitful targets in December were Salonika, Rhodes, Athens (Salamis and Piraeus), Leros, Crete, Symi, Samos and Melos. Salamis was attacked on the nights of 6/7 December by eight Halifaxes of No. 462 (R.A.A.F.) Squadron, who dropped one hundred and eight 500 pound bombs. Six aircraft bombed anti-aircraft and searchlight positions and two bombed harbour installations as a diversion during the mining by aircraft of the harbour. The searchlight was extinguished and heavy 'flak' positions straddled. The aircraft reported heavy and accurate 'flak'. On 14 December, twenty-seven Fortresses of a large force attacking Greek airfields bombed Piraeus. While these attacks caused some damage, it was only too well known from long experience that only weight and continuity of air attacks could neutralize a big port for any length of time.

There were light attacks on Symi on the 4th (by three Baltimores of No. 24 Wing) when dock-yard buildings were set on fire, on Salonika on the night of 5/6th (by eight strategic Halifaxes of No. 205 R.A.F. Group while three Liberators laid mines in the harbour), and on Rhodes on the 5th (by five Hudsons who found no shipping there). Crete came in for attention by light forces on the nights of 11/12 and 12/13, when Suda harbour was bombed by seven and nine Halifaxes and Liberators respectively of No. 205 R.A.F. Group. Portolago (Leros), Melos and Candia harbours were bombed by a few aircraft on one occasion each.

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- (1) No. 201 Group O.R.Bs: Tables of Operation up to 9.12.43 (A.H.B. II J.1/31/1).
 - (2) No. 201 Group O.R.Bs: Tables of Operations up to 9.12.43 (A.H.B. II J.1/31/1: War Room Summary.

When the month's effort of port bombing is reviewed it does not amount to very much, but it undoubtedly harassed the Germans within limits and was valuable exploratory work. The actual loss inflicted was not notable and the Germans were not perturbed, for they could go on requisitioning Greek caiques and constructing harbour works and light, armed naval craft for some time to come. It is hard to suggest what alternative to these harassing operations lay open to the Allies, for the hopes of help from Central Mediterranean air units was meagre and real weight and continuity of attack impossible to attain. Hitler's directive ordering the strengthening of the Greek and Aegean defences was being carried out with the customary German speed and thoroughness and the anti-aircraft defences almost everywhere were ample evidence to aircrews that they could expect stiff resistance from ships and shore batteries to most of their operations.

Minelaying operations by aircraft(1)

The Allies began laying mines in November in the Aegean. They carried out seven small air operations in that month, laying mines off Syros, Kalino, Naxos, Lavrion and Candia (Crete). This effort was stepped up in December when eleven operations extended the risks for German shipping. The object was to restrict the enemy supply ships to certain channels, so narrowing down a little the great area so far largely inaccessible to the meagre Allied air forces and increasing the chances of strikes, as well as to sink ships entering or leaving harbour.

The units employed were small formations of Wellingtons from No. 38 Squadron of No. 201 Group, and of Liberators from No. 178 Squadron of No. 240 Wing of H.Q. R.A.F. Middle East, the only formation of heavy bombers in that command.

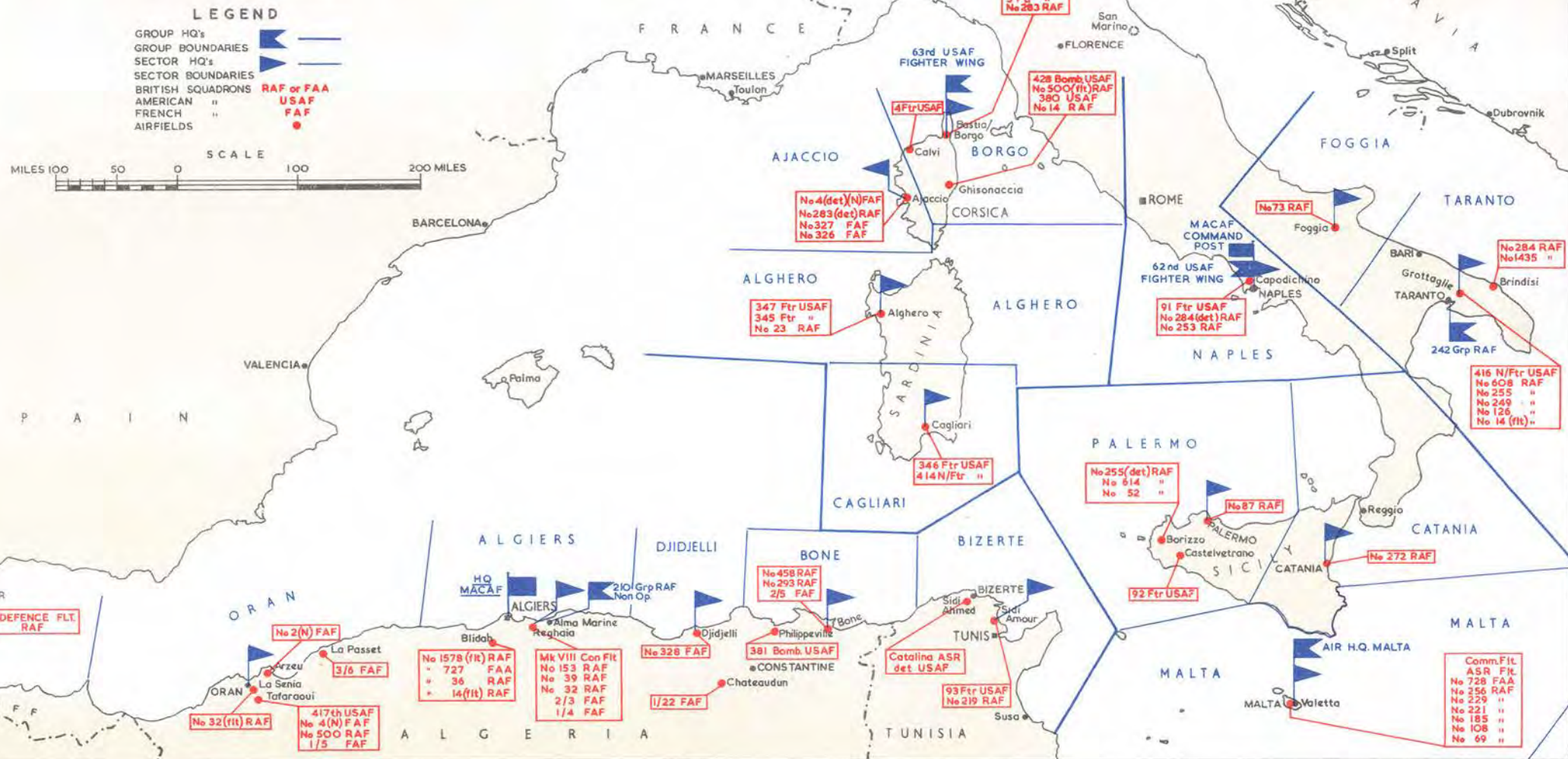
Between the nights of 4/5 and 19/20 December, missions of one or two aircraft laid mines on one occasion in each case in Salamis Straits, Salamis harbour and the harbours of Syra, Salonika, Naxos, Melos, Khalkis, Candia and Suda. It cannot be traced that any German vessels were sunk as a result of these operations. It was only after several more months of minelaying that results would be apparent. Many of the light, shallow draught craft were almost certain to escape and sweeping was being rapidly organized.

The question of relief ships and the danger from mines(2)

On 7 Dec. 43, almost as soon as air mining operations had opened, the C.-in-C. Levant pointed out to the Admiralty the danger to Swedish relief ships using Greek harbours. He approved of mining as he did of port bombing, and suggested that the Swedes should accept both risks and that while the Allies would continue to respect safe

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- (1) Nos. 240 and 201 Groups and Nos. 38 and 178 Sqds. O.R.Bs.: Tables of Operations up to 9.12.43 (II J.1/31/1).
 - (2) Preliminary Narrative Vol. IV (Admiralty Historical Section).

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conduct routes, they could accept no responsibility for the safety of relief ships in the harbours themselves. The Admiralty replied on 21 December that the Cabinet attached great importance to the continuance of relief. The sinking of relief ships by mines in Greek harbours might have serious repercussions and result in an indefinite suspension of the traffic.

Discussions continued until 21 Jan. 44, when the Admiralty ruled that the laying of limited life mines in ports visited by Swedish relief ships was, on the whole, unsatisfactory: but as Salonika was only visited at lengthy intervals, approval was given to lay limited life mines there, and one month's notice of visits would be given. No mines were to be laid in Piraeus, Corfu, Preveza and other specified ports. In addition, as it was desirable that at least some of the Cyclades Islands should be provisioned, the Flag Officer, Levant named two ports - Port Naussa (Paros Island) and Port Gavrion (Andros Island) to be left unmined. With all these exceptions, the mining of Greek ports could continue.

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CHAPTER 7

AIR OPERATIONS IN THE
ADRIATIC (OCTOBER 1943 TO MAY 1944):
THE ISLAND OF VIS: THE CLIMAX OF
THE SUBMARINE WAR

A

THE ADRIATIC

The role and concentration of the Air Forces

Strategic introduction

To understand the role of the Air Forces in the Adriatic from the time of the Italian surrender to the Spring offensive in 1944, the course of Allied strategy in that area must be briefly outlined. The evolution of that strategy governed closely location of air bases, range of aircraft and the shipping target patterns. The results of land operations and the need of both sides to nourish their forces progressively moulded the form of maritime air operations into one of a war against supply in small ships using small ports: and the growth of flotillas of these small enemy ships and craft, (all well-armed), magnified for the air forces a problem they had not so far solved. The successful evacuations of Sicily and Corsica in small craft had enhanced the German belief in their possibilities; and as German escorts and defences were improved, the situation for the Allied air forces grew in complexity.

Southern Italy was in Allied hands by the end of 1943 and air units moved in from North Africa and Sicily. The process was slow and gradual, for very large numbers of aircraft and quantities of material were involved and manpower could only be spared grudgingly for the task.

In the Eastern and Northern Adriatic, where the Italian-based air forces were to find a high proportion of their targets, the situation was constantly changing. It was not until the end of January 1944 that anything like a stable pattern could be assumed. The nature of these changes followed on the following considerations.

Up to the time of the Italian Armistice, Allied operations in the Balkan area had been governed by the decisions of the Quadrant Conference of late August 1943. They were limited to the supply of guerillas by air and sea, minor Commando raids and bombing of strategic objectives. Although 32 bombers were employed in supplying the two resistance groups,⁽¹⁾ the actual volume delivered by air in October, November and December 1943, i.e. after the Armistice, was still small in comparison with that delivered by sea.⁽²⁾

When Italy surrendered, the Partisans rapidly took over wide areas of the East Adriatic coastline from Istria

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- (1) The Cetniks, under the command of Draza Mihailovic and the Partisans under command of Josep Broz (TITO).
 - (2) 125 tons by air against 2,050 tons by sea (Quoted in Grand Strategy Vol. V, John Ehrman, H.M.S.O. 1956).

in the North to Albania in the South, and large quantities of Italian arms, supplies and installations. Some Italian units joined them. They occupied some of the islands off the coast. The balance of power thereupon began to swing, the Allies noted, decisively in favour of Tito's Partisans: the influence of Mihailovic declined, a process hastened by internal dissensions. In October 1943, for the first time, the Allies viewed the Partisans as a serious military proposition and the developments in Yugoslavia as of real strategic significance. In November, they set about the task of placing the Partisans on a regular military basis and intensifying measures to nourish them; these measures were still further intensified after the Cairo Conference of early January 1944, but the air support envisaged was to be undertaken only in the light of the general situation. This special supply traffic and air operations over the inland areas of Yugoslavia and Albania are outside the scope of this record, which is, however, concerned with operations over the sea and in the ports of the Adriatic. The Coastal Air Force itself was, it is to be noted, involved in operations over the Balkan land areas.

Realising the threat Tito's new accession of territory presented to their supply system all down the Adriatic, both to their Tenth Army in Italy and the divisions (which rose to eighteen) in the Balkans, the Germans launched without delay what came to be known as the Sixth Offensive; it reached a successful climax by the end of January 1944 with their establishment all the way down the East coast and on the more important islands. This, with their firm hold on the East coast of Italy as far as Pescara, placed them in a very strong position territorially and in the light of their maritime needs. Their weakness lay in the inadequacy of their air force to fulfil all the tasks required of it and in shortages of naval escort vessels, minelayers, mine-sweepers and anti-aircraft defences and warning systems.

Air anti-shipping forces in late 1943

In periods of static warfare, anti-shipping strikes had been the task of special Coastal Air Force squadrons of light bombers or heavy fighters and port bombing the task of medium bombers of Coastal Air Force or Tactical Air Force and heavy bombers of Strategic Air Force. With the advent of mobile war and the commitment of a heavy proportion of Allied air strength to the anti-communications campaign and similar indirect army support, operations against shipping were subject to a continuously changing emphasis in direction, weight and distribution of forces. Hence, as the autumn advanced, Tactical Bomber Force medium bombers and Desert Air Force fighters took a large share in the effort against shipping both at sea and in harbour, for Tactical Air Force still carried the major responsibility for operations against the Germans along both coasts of Italy and the Adriatic. The Coastal Air Force progressively moved its units forward and increased its strength, so that it could, in time, relieve Tactical Air Force of its excessive burden of responsibility. In the Adriatic, this tendency found expression in the settlement of No. 242 Group Headquarters in Taranto and the occupation of Grottaglie and other convenient airfields in Southern Italy by its squadrons.(1) Desert Air Force squadrons

(1) Refer to Appendix 38 for No. 242 Group locations and operational orders of battle from October 1943 to June 1944.

moved from Sicily into airfields in the Heel. Strategic bombers filtered slowly into the Foggia area from October until January: these will be seen attacking Adriatic ports from time to time when commitments of higher priority were relaxed or weather presented those ports as alternative targets.

Coastal Air Force moves forward again(1)

Quick advantage was taken by the expanding Coastal Air Force of the German evacuation of Corsica, Sardinia and Southern Italy: squadrons were pushed forward in rapid succession to those areas, with all the ancillary services which were to give radar and other forms of protection to Allied naval and convoys and control the operations of aircraft over a much greater range of distance than heretofore and with greater precision. At the same time, realising that the German retreat northward would probably lead to long range aircraft concentration on convoys between Gibraltar and Bone, the Coastal Air Force rightly decided, as a long term measure, on the retention of day and night fighter squadrons all along the Northwest African shore.

By November, radar units were being withdrawn from Sousse, Bizerta, Lampedusa, Pantelleria and Sicily, where the threat of enemy air attack was now small, and being transferred to the Naples, Foggia and Corsica areas. The major moves of ship striking forces were those of the 63rd Fighter Wing to Corsica and of No. 242 Group to Southern Italy. The concern from this point in the chapter will be largely with the operations of No. 242 Group in the Adriatic: the operations of the 63rd Fighter Wing will be related in a subsequent chapter.

It would serve no useful purpose to follow in detail the routine transfers of Coastal air units over these months, but it is appropriate at this point to consult the chart(2) showing the locations of Coastal Air Force's squadrons on 4 Jan. 44. By that time, the forward moves were approaching, if they had not reached, finality, the Coastal Air Force strength was at its highest and its greatest effort of the campaign rising towards the zenith of the month of March. Especially relevant to Adriatic operations were the assembling forces of No. 242 Group in the Heel of Italy.

New weapons for aircraft of the Coastal Air Force(3)

The Hudsons of No. 608 Squadron, who now operated in the Adriatic, had carried rocket projectiles as an anti-submarine weapon since 28 May 43: but it was not until November 1943 that the idea of using rocket projectiles as an anti-shipping weapon became a reality in policy. After carefully studying the pattern of German shipping in the Adriatic and the Gulf of Genoa, the two areas where most of it was likely to be found at sea, the Coastal Air Force decided that the enemy had largely resorted to seaborne supplies in small lighters, Kriegs Transport (K.T.) ships and small coastal steamers. This was true in the main, although a rough simplification

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- (1) N.A.C.A.F. and M.A.C.A.F. O.R.Bs and appendices.
 - (2) Figure 11.
 - (3) N.A.C.A.F. Air Staff O.R.B. Nov. 43.

of the facts. There were practically no torpedo targets,(1) it was stated. The rocket appeared to be a more suitable weapon. In consequence, it was decided to give up the torpedo altogether in the Central and Western Mediterranean. The torpedo units gradually returned their torpedoes to H.M. Navy and the maintenance personnel became available for other theatres of war.

No. 39 Squadron, with its Beaufighters, was transferred from Sidi Amor, where it was not fully employed, to Reghaia, where training began on the use of rockets(2) as an anti-shipping weapon: the squadron prepared for the additional role of long range stopper patrols in the Balearic Islands area to catch enemy reconnaissance aircraft.

Some Mitchell squadrons now carried 75 mm cannon. On 11 Jan. 44, Leigh Lights were fitted to a M.A.C.A.F. squadron of Wellingtons - No. 458 - No. 36 Squadron already carried them.

In late February 1944, No. 242 Group, in the Heel of Italy, was strengthened by the advent of No. 6 Squadron, whose Hurricanes employed rockets and began operating in March. The same month saw the first employment of 1,000 pound bombs by Airacobras.

No. 242 R.A.F. Group(3)

No. 242 Group was transferred on 22 May 43 from the Tactical to the Coastal Air Force and took over the operational control of No. 328 Wing (reformed after disbandment), Tunis and Sousse Fighter Sectors and ancillary units. The aircraft of the new Coastal group assembled on the airfields at Protville, Sebala, Bonnane, Sfax and Monastir. Its functions from then on until the surrender of Italy were the protection of the Northwest African territory from Cap Negro to the Tunisian - Tripoli boundary, provision of air cover and anti-submarine patrols for all convoys in an area West of a line extending from the Tripolitanian border to 34°N., 12°30'E. and thence due North, sea air reconnaissance in Western Mediterranean enemy waters, control of anti-shipping strikes in the last-named area and of general Special Air/Sea Rescue services within its range. The Headquarters worked in a combined operations room at Naval Headquarters, Bizerta. By 14 June, it had been strengthened by the forces of No. 323 Wing and held under command two U.S.A.A.F. fighter groups(4) with six U.S. squadrons, two French Air Force squadrons(5) and one Fleet Air Arm squadron.(6)

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- (1) There were, in fact, still several large merchant vessels plying on Adriatic routes.
 - (2) In April 1944, No. 39 Squadron began developing the use of double rockets fitted one above the other, an aircraft then carrying 14 rockets. Note the sinking of S.S. Kilissi on 12 Mar. 44 by Nos. 39 and 272 Squadrons' rocket projectiles.
 - (3) No. 242 Group and N.A.C.A.F. O.R.Bs and appendices: file 242G/S.5/Air No. 242 Group (A.H.B.IIJ1/116/139).
 - (4) 52nd and 81st.
 - (5) 2/5 and 2/7.
 - (6) No. 821.

From 25 July onwards a partial move to Sicily was carried out and Palermo Fighter Sector was established and manned. At the beginning of September, the group administered No. 323 and No. 328 Wing and the Tunis Fighter Sector. The latter was replaced by a new Wing - No. 286 Wing. On 23 September, the No. 242 Group advance party proceeded to Salerno, thence to Naples on 3 October and shortly afterwards to Taranto where they worked in the Combined Operations Building with the Royal Navy, Taranto. No. 328 Wing, (1) destined for Sardinian bases, passed from No. 242 Group's control.

The process of removal to Italy was a slow one and some squadrons were borrowed by Tactical Air Force for operations over Western Italy and based at Monte Corvino and Capodichino until the end of the year 1943. On 13 Dec. 43, No. 286 Wing with Nos. 126, (2) 249(3) and 255(4) R.A.F. squadrons, detachments of Nos. 14(5) and 608(6) R.A.F. squadrons and the 416th U.S.A.F.(7) squadron were firmly based on Grottaglie airfield. H.Q. 323 Wing, with only one of its three squadrons - No. 73 - was based at Foggia Main airfield, No. 1435 squadron was based at Brindisi. An Italian Seaplane Wing (8) was formed on 15 Oct. 43 and came under command of No. 242 Group. It was based at Taranto.

During November, the tasks of the group were redefined. The day and night fighter and the general reconnaissance squadrons were to be employed on offensive sweeps, local defence, convoy protection, and shipping reconnaissance and strikes and air/sea rescue. The aim was to concentrate on Adriatic operations, but the pressure of the Italian campaign delayed its fulfilment for some months to come. Grottaglie airfield was often unserviceable as winter approached and squadrons were glad to use the better facilities of Brindisi airfield.

On 20 Feb. 44, a detachment of No. 6 Squadron, equipped with Hurricanes fitted with rocket projectiles, was allotted to No. 242 Group and joined No. 286 Wing at Grottaglie on 22 March. On 26 March, No. 221 Squadron from Malta, equipped with non-Leigh Light Wellingtons, was detailed for anti-shipping reconnaissance and strike operations in the Adriatic and the north-west coast of Italy as well as for operations against submarines on patrol on the convoy route off the Toe of Italy and on passage through the Adriatic to and from their base at Pola: but it did not reach Grottaglie until June.

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- (1) All information from N.A.C.A.F. and No. 242 Group O.R.Bs and appendices.
 - (2) Spitfires.
 - (3) Spitfires.
 - (4) Night Beaufighters.
 - (5) Marauders.
 - (6) Hudsons.
 - (7) Night Beaufighters.
 - (8) It was ultimately organized into 4 Gruppe - Nos. 82, 83, 84 and 85.

By 18 June, the strength of No. 242 Group was distributed as follows:-(1)

At Brindisi	- 1 squadron Spitfires
At Foggia Main	- 4 squadrons Spitfires, 1 Night Beaufighters, 1 Baltimores and detachment of Warwicks.
At Grottaglie	- 1 squadron Spitfires, 1 Wellingtons, 1 detachment Night Beaufighters, 1 detachment Marauders and 1 detachment Day Beaufighters.

The role of the air forces on the island of Vis will be related later: it is to be noted here that on 18 June 44, No. 3 Forward Fighter Control Unit and three radar stations were functioning there for defence, naval co-operation, assistance to offensive fighter operations and aid to aircraft in distress.

With the ground advances of the armies in the Italian Spring offensive pointing to Rimini, the Germans' field of action was shrinking and increasingly under the supervision of No. 242 Group and those forces which could occasionally be spared by the Desert and Strategic Air Forces to intensify the attack on ports and shipping at sea.

The successes of No. 242 Group in this latter field between October and December have been seen to justify their employment, although making no decisive difference to the enemy's will to war: they made further calls on his manpower and materials and generally harassed him, as the situation reports by Admiral Adriatic(2) testify. By exercising pressure on his supply routes they created a need for anti-aircraft defences and air and surface escort forces which it became impossible to meet.

Before proceeding to the account of Coastal Air Force operations in the Adriatic, it will be necessary to relate briefly the course of military events in that area and to present the shipping target problem as it faced the Mediterranean Air Command from soon after the Italian surrender until January 1944.

The pattern of enemy sea supply

German expansion (September and October 1943)

Before the Italian Armistice, the Germans had exercised very little influence in the Adriatic, their principal concern being with the U-boat base and repair facilities at Pola. The Armistice confronted them with an entirely different situation in that sea from those in the Western Mediterranean and Aegean. Their only available surface forces were four S-boats:(3) the two in Taranto left hurriedly for Venice after sowing the mines which probably sank H.M.S. Abdiel on the day of the Operation 'Slapstick' landings in Taranto.

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- (1) See Appendix 36 for numbers of squadrons.
 - (2) Refer to the series of situation reports by Admiral Adria in Appendix 34.
 - (3) S.30 and S.33 at Pola and S.54 and S.61 at Taranto. All four had been cut off from the 3rd S-Boat Flotilla by the closing of the Messina Straits.

By the 20th, some 51,000 tons of large merchant shipping space was ready for use in Venice.(1)

In Eastern Italy, the occupation of the ports ordered under Operation 'Achse' proceeded smoothly except at Bari, Brindisi and ports to the south of them, where Allied forces forestalled them. At sea in the Adriatic, the Germans could do nothing to intercept the surrendering Italian warships and merchant vessels. The loss of Italian support led to a war of attrition among the islands of the Eastern Adriatic and compelled them to seize control of the major part of the sea and land communications.

By the end of September, the ports of Zara, Sibenik, Dubrovnik, Kotor, Durazzo and Valona were occupied by German troops, but in uneasy tenure, for they were dominated by those Dalmatian islands held by the Yugoslav Partisans, who also held the important port of Split and the province of Istria. Coastal defence and shipping systems had to be entirely built up from the bottom. There were no anti-aircraft defences, reconnaissance or escort services and no staffs to set all this in motion.

First, all Italian prisoners-of-war were transported from the Dalmatian area to Italy. Then, lines of communication for the supply of German troops in Yugoslavia were established. The most important islands were cleared of partisans. Between the middle of October and the end of November, all the northern Dalmatian Islands were cleared. In mid-October, the islands off Sibenik were cleared, so permitting shipping northwards from that port.

German expansion in November, December and January

These operations were followed, in early November, by the clearance of the islands covering the approaches to Split, a move which opened the route between Sibenik and Split; and, during the latter half of November, by the occupation of islands to the North and South of Zara,(2) which cleared the routes from Zara northwards to Fiume and Pola and southward to Sibenik. By the end of November, they held the entire stretch from Fiume to Split and at once planned to get supplies through to Split and the South.

With Split as a base, they embarked on a series of operations aimed at the occupation of the larger islands in the Central Adriatic, viz. Sulet, Brao, Hvar, Korcula, Mljet, Lagosta and Vis. In Mid-November, as a preliminary, they overran the hotly-contested strip of country, between Split and Dubrovnik, in the Peljesac Peninsula covering the approaches to Metkovic and Mostar.(3) Korcula was overcome on 28 December, Mljet on the 31st, Sulet on 13 Jan. 44, Brao on 14 Jan. 44 and Hvar on the night 18/19 Jan. 44. After a temporary set-back in the islands off Zara, farther north, the route through the Pasman Strait was reopened to shipping

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- (1) Information from A.H.B.6; German Naval Command Italy War Diary and German Operations in the Mediterranean (both at FDS/Admly.).
 - (2) Pasman, Uljan, Rivanj, Sestrunj, Dugi, Pag, Rab, Vir, Asinello, Sansego, Unie, Lussino, Cherso and Krk. Isolated operations continued into January and February 1944.
 - (3) Both important towns on the Neretva River.

on 25 Jan. 44. Germans landed on Uljan and Dugi on 31 Jan. and 2 Feb. 44 respectively. The clearing-up of the Zara area was completed on 3 Feb. 44.

The end of January marked the limit of German expansion in the Adriatic theatre. By then, they were secure on the west coast north of the front line (just north of Pescara), along the entire east coast and on most of the important off-lying islands, with the exception of Lagosta and Vis. Their organization was complete and working to some effect in spite of Allied offensive operations; and the commissioning of ex-Italian naval and merchant vessels was proceeding to the limits of personnel available.

Sea transport between East Italian ports(1)
(September to December 1943)

At the end of September, many of the main ports on the east coast of Italy were in German hands. As larger ships were more vulnerable to attack by air and sea, supply of the east coast would have to be maintained by small vessels. In early October, a ban was placed on the sailing of ships from Trieste to the East Italian coast, but as the needs of the Tenth Army (facing the Allied Eighth Army) grew rapidly, the ban was lifted so that some of the essentials could be transported by sea from Trieste and Venice to Pescara and Giulianova. Allied air and sea attacks on shipping, at first desultory, began to get into their stride as autumn passed. The Armies were making do with much less than had been planned, but, in November, it was estimated that 7,000 tons per month would have to be lifted from Trieste or Venice to San Benedetto del Tronto. Demolitions had already been carried out in Pescara harbour in anticipation of the Allied attack across the Sangro River. By 28 December, the day Ortona fell to the Allies, Pescara was closely threatened. The entry into first-line importance of small ports such as San Benedetto, previously never even mentioned, is an indication of the changing pattern of maritime and air operations. It was becoming rapidly a war against small ships using small ports.

For the protection of sea traffic South of San Benedetto, the Germans decided to provide a patrol service between Ancona, Rimini and Venice and harbour defence vessels and armed fishing vessels for the Po Delta, where they used the elaborate system of canals radiating from the Chioggia area for inland water transport: they mined the coast wherever they considered an Allied landing likely - at Giulianova, Civitanova, Ancona and between Cattolica and Rimini. These precautions proved inadequate against the increasing tempo of Allied air and surface attacks. Four of the six auxiliary sailing vessels working between Ancona and San Benedetto were sunk by destroyer gunfire on 2 December.(2) Sailings were cancelled. Coastal and harbour defences in the Civitanova - Pescara area were very weak and the naval units not yet

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- (1) Deutsche Kriegsführung im Mittelmeer - Naval War Diary of 1/Skl. and 'The Division of Forces between the Western Mediterranean and Adriatic' PG/32217. (All at FDS/Admty.)
- (2) The Regina B, Alba, Cinque Sorelle and Gemma.

adequately organized to retaliate against Allied surface vessels.(1) Supplies were badly needed, so the service was reopened on 6 December, and vessels sailed singly. The system was still makeshift and the lifts inadequate.

German redistribution of merchant shipping (2)

Before assessing the impact of Allied air operations against seaborne supplies in the Adriatic, account must be taken briefly of German moves to solve the complex shipping problems facing them after the defection of their Italian Allies.

The German Navy in the Mediterranean had, since the opening of hostilities, never disposed of large surface fleets and their policy had been largely concentrated on the effective use of merchant ships. The functions of the naval units, all of low tonnage, had been the protection of merchant ships, by static defence in the form of minefields and minesweeping, by mobile defence by escorts, harbour repair, new construction and fuel facilities. The merchant tonnage supplied the war fronts and the rear occupied areas, in particular with civilian and industrial goods and coal and fuel oil from the Black Sea.

These objectives remained: they were even more difficult than before to attain. The Germans had enough Italian merchant shipping to fulfil their needs, but there were complications. Firstly, Allied progress had split the Mediterranean into three minor theatres of war. If there was insufficient tonnage in one area, shipping was immobilised in the others: secondly, Allied air attacks on ports and shipping threw a high light on the dangers of life in ships and led to increasing difficulty in finding crews: thirdly, lack of fuel: fourthly, lack of port facilities: fifthly, lack of shipyard building and repair facilities: sixthly, the unsuitability of some ships for the tasks required of them and lastly, the lack of escorts and minesweepers.

The first major task was the redistribution of shipping out of the over-flowing pool of the Western and Central Mediterranean to the needy areas of the Aegean and Adriatic. It has already been noted how attempts were made to nourish the Aegean. The Adriatic problem was more easily soluble, although the Strait of Messina had been sealed. They began to transfer peniches, Siebel ferries, naval ferry barges and infantry landing craft overland from Genoa to Venice. There were steady arrivals of peniches at Marseilles and Toulon via the Rhine - Rhone route; naval ferry barges were built both in the Western Mediterranean and in the Adriatic with parts sent from Germany.(3)

It was decided on 14 September to retain 18,000 tons of shipping in the Adriatic and transfer the balance to the Aegean. There was a surplus of large ships and a shortage

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- (1) Allied air sinkings of Adriatic shipping October to December 1943 follow shortly.
 - (2) PG/32217 (F.D.S./Admly.).
 - (3) They planned the building of 110 at Monfalcone. By March 1944, a monthly production of 10 boats was expected.

of small ships in the Adriatic. But it was almost impossible to sail the large ships out through the Strait of Otranto. Strenuous efforts were made to recruit foreign nationals (such as French and Italians), to man the ships, but as there were never sufficient crews there were never sufficient operational escorts.

Redisposition of naval forces(1)

The paramount need of the German naval forces was to set and maintain in motion the seaborne supply traffic down the west coast as far as Ancona and along the Dalmatian coast. The traffic from Trieste along the Dalmatian coast was expected to play a decisive part in the Balkans, for land transport was not to be relied on owing to lack of roads and railways and to partisan activity. From this situation arose the clearance of the islands all the way south, and the instalment of coast and anti-aircraft defences. Then followed the formation of light naval surface units for offensive operation against Allied vessels and the partisans and for escort. These forces had to concentrate for safety off the Balkan coast; other areas were accordingly neglected.

The 3rd S-boat Flotilla was to concentrate its forces and transfer to the Aegean: it was to be replaced by the 6th and 7th S-boat Flotillas: the 6th R-boat Flotilla (then in the Western Mediterranean) was to transfer to the Adriatic and the six boats of the 12th R-boat Flotilla were to transfer from the Western Mediterranean to the Adriatic for onward passage to the Aegean. The Adriatic was to be reinforced by naval ferry barges after the evacuation of Corsica and Elba. All available naval vessels and auxiliary warships were to be taken over.

Admiral Adriatic(2)

When the Italians surrendered, the Germans abolished the command of Sea Defence Commandant Italian East Coast and divided the area along the line of the Isonzo River into two new commands - Sea Defence Commandant Western Adriatic(3) and Sea Defence Commandant Northern Adriatic.(4) For the east coast of the Adriatic, the new command of Admiral Commanding Adriatic (Admiral Adria) was created in late September(5) and began to function on 21 October. It was divided into three areas under Sea Defence Commandants Northern Adriatic, Dalmatia, and Southern Adriatic and in practice he supervised operations over the whole sea. Sea transport operations initially controlled by Split, Kotor and Zara, were controlled from 26 Nov. 43 by the Principal Sea Transport Office at Trieste. The Isonzo River was the new dividing line between the areas of German Naval Command Italy and Admiral Adria.(6)

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- (1) PG/32217 (F.D.S./Admly.).
 - (2) Admiral Adriatic PG/46511 and German Naval Command Italy war diaries (F.D.S./Admly.).
 - (3) H.Q. Venice.
 - (4) H.Q. Trieste.
 - (5) Advanced H.Q. Belgrade: Rear H.Q. Sofia.
 - (6) Refer to Figure 10 for command areas for the whole Mediterranean.

Allied anti-shipping operations (October 1943 to December 1943)The first German break-out(1)

On 14 Sept. 43, Hitler decided to transfer as many as possible of the larger cargo vessels from the Adriatic to the Aegean. Large, fast ships, sailing independently, were to make a dash through the Strait of Otranto. Small numbers of Siebel ferries and infantry landing craft were to follow by the same route and others to be transported overland from Genoa to Salonika.(2)

Nine cargo vessels and three tankers were chosen for the initial break-out. The cargo vessels were S.S. Cagliari, (3) Giovanni Boccaccio, (4) Mario Roselli, (5) Merano, (6) Dea Mazella, (7) Leopardi, (8) Olimpia, (9) Argentina (10) and Tunisino; the tankers were the Pozarica (11) (ex-Mexican), John Knudsen (12) and Prometheus. (13) The ambitious plan was almost completely frustrated by Allied aircraft, surface craft and submarines. Allied aircraft had a hand in the destruction of five of these ships. The Prometheus and Cagliari did not sail. The Dea Mazella was destroyed on 30 September by Partisans.

At 1114 hours on 14 October, Marauder Y of No. 14 Squadron (No. 242 Group) reported sighting the Pozarica off Dugi Otok Island. She appeared to be in ballast and fired light flak (14) at the Marauder without effect: acting on this report, Allied naval surface units located her the next day well down the Central Adriatic, 5 miles off Cazza Island (near Koroula Island), seized and towed her into Bari.

The same Marauder's crew sighted a smaller merchant vessel on the same course. This was probably S.S. Merano, sighted by surface craft the next day not far from the Pozarica. She had some 500 tons of bauxite (iron ore) on board - a very valuable cargo at that time. The German armed guard sabotaged her to avoid capture and she was sunk by the Allied vessels. At 0947 hours on 16 October, Marauder H of No. 14 Squadron sighted the Argentina (5014 G.R.T.) (loaded with hay) and the Olimpia sailing southwards. On the strength of the report, H.M. destroyers Tyrian and Tumult intercepted them off Mljet (Meleda) Island, northwest of Dubrovnik. The Argentina was taken into Bari: the Olimpia was sabotaged, caught fire and was sunk.

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- (1) PG/32217 (F.D.S./Admlty): Enemy Shipping losses in the Mediterranean, Nominal List (A.H.B.): Navi Perdute by Italian Admiralty (A.H.B.6 copy): The War at Sea (A.H.S./Admlty.).
 - (2) 7 infantry landing craft left Genoa in January 1944 and were ready for operations in Salonika by mid-March.
 - (3) 2,322 G.R.T.
 - (4) 2,322 G.R.T.
 - (5) 4,572 G.R.T.
 - (6) 9,071 G.R.T.
 - (7) 3,082 G.R.T.
 - (8) 5,014 G.R.T.
 - (9) 7,800 G.R.T.
 - (10) 6,040 G.R.T.
 - (11) 3,705 G.R.T.
 - (12) 6,835 G.R.T.
 - (13) 3,141 G.R.T.
 - (14) No. 14 Squadron O.R.B.

On 10 October, four lightnings of the 82nd Fighter Group of the Strategic Air Force, (part of a joint anti-shipping sweep), scored a direct hit with a bomb on the Mario Roselli in Corfu harbour. She capsized and was not refloated until the end of 1948. The Tunisino was reported missing in the Central Adriatic. Lloyds report a Tunisino (997 G.R.T.) as having been taken prize on or about 12 September; this is probably the vessel.

The Giovanni Boccaccio reached Greece, only to be sunk by H.M. Submarine Sickle on 19 November.(1) Only the Leopardi and John Knudsen reached Piraeus safely and went to strengthen the shaky German position in the Aegean.

Port bombing on the East Italian coast - (October to December 1943)

Although Ancona, Pescara and Giulianova were bombed a few times from 14 to 25 October, the targets were road and railway communications, not harbours. There is no evidence of any shipping having been sunk in the course of those attacks.

In Italy, the Allied Army's situation was critical: every effort was called for from the Tactical Air Force in November to interfere with the enemy's supplies and reinforcements. The greater part of the weight of bombing fell on West coast ports, but bombers of the Tactical Bomber Force diverted some attention to Ancona and Pescara. Four of the five attacks on Ancona were directed on the harbour. The crews in the first attack, on 1 November, by 36 Mitchells,(2) reported that their entire bomb load fell on the harbour. A fortunate direct hit caused the loss of the ex-Italian cruiser Ottaviano Augusto,(3) which had been captured by the Germans in mid-September when three months short of completion.(4) A potential menace to Allied surface forces was thus removed. No other losses can be traced in German records; but it was claimed that five large fires were started. On the 7th, 30 Mitchells of the Tactical Bomber Force(5) claimed to have hit a ship and dock installations at Ancona.(6) This port was not visited again until 25 November, on that occasion by 23 Mitchells. This mission was a relative failure, for the majority of the 180 bombs fell in the water off the harbour. Mitchells returned the next day, but the few hits on the docks and a near miss on a merchant vessel were merely asides to the more successful main attack on the marshalling yards. Pescara was attacked on the night 28/29 November by 14 Tactical Bostons. Some bombs fell on harbour installations North and South of the river; but there is no trace of any destruction of shipping.

An even lighter weight of effort could be spared in December. Adriatic shipping was still a minor commitment.

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- (1) One report states at Monemvasia and another the Gulf of Salamina (Salamis?).
 - (2) 340th Bomb. Group: dropped 172 x 250 and 210 x 500 pound bombs.
 - (3) 3,362 tons displacement.
 - (4) Navi Perdute (A.H.B.6 copy).
 - (5) 340th Bomb. Group (Tactical Air Force).
 - (6) No admission of losses in German records.

The back of the railway system was very far from being broken. Yugoslav partisans were still fighting a rearguard action and the German tenure of the sea was so strong that nothing short of a campaign of all forces would dislodge them. The true position was not yet clear to Intelligence: air reconnaissance was too meagre (although evidence was being steadily photographed) and the weather was worsening.

On the night 16/17 December, a single Boston (of No. 232 Wing) was sent on a search for shipping reported north of Ancona. It did not return to base; but German records mention the loss to aircraft attack of a small vessel - the Stella Saturna(1) at Ancona on the 16th, which cannot be linked with any other mission. The only other German admission in December of loss to aircraft is of another small ex-Italian fishing vessel - the Cristoforo Colombo(2) at Pescara on the 31st.

It cannot be traced in German records that Allied aircraft sank any warships in November 1943 apart from the Ottaviano Augusto, or any in December.

The last quarter of 1943 ended with only minor results for a good deal of scattered effort. In this it resembled comparable transitional periods preceding it, when the main emphasis of the battle was elsewhere and the ultimate significance of the Adriatic was unrealised. It was still something of an unexplored flank. Before it assumed the status it was later to acquire, much had to happen and decisions on the highest strategic level to be taken.

Allied air successes against merchant shipping along the Adriatic coast (October to December 1943)

During October, the Allied air effort was closely linked with the struggle to consolidate the foothold in Italy: bombing attacks of any weight on Adriatic Balkan ports were not possible until the last night of the month, when 12 Bostons and 12 Baltimores of No. 3 Wing (S.A.A.F.) of the Tactical Bomber Force attacked Split and sank S.S. Marco.(3) While Split had been still in Partisan hands, German aircraft had badly damaged S.S. Balcio.(4) Little had yet been learned by air and other sources of Intelligence of the whole pattern of German supply or of the ultimate scope of their plans for territorial expansion. There were no other offensive operations in October against the Balkan ports. No. 242 Group's activities were almost entirely defensive, deterrent and exploratory. No merchant shipping was sunk by aircraft at sea during October. The German's strength in larger cargo vessels was still considerable.

In November, in view of the methodical German advance southwards, Mediterranean Air Command switched a heavier bombing effort to the Balkan ports. Mitchells of the Tactical Bomber Force and fighter bombers of No. 242 Group attacked Dubrovnik once, Zara twice, Split five times and

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- (1) 32 G.R.T.
 - (2) 29 G.R.T. Probably by Desert Air Force aircraft on a sweep.
 - (3) 1,487 G.R.T.
 - (4) On 15 Oct. 43 - 3,494 G.R.T.

Sibenik six times. The greatest weight of bombs fell on Sibenik, (1) Split (2) and Zara. (3) On the 28th, attacks on Sibenik and the adjacent port of Zara were co-ordinated. Serious damage to facilities and installations was inflicted. For the cumulative effects of these and successive operations the best evidence is to be sought in the periodic situation reports of Admiral Adria. (4) No shipping was sunk in the air attacks on those ports.

The Air Forces had, however, a few successes at sea, one of them of temporary importance. Again, a Marauder of No. 14 Squadron was initially responsible. During its reconnaissance flight on 4 November from Lagosta to Tagliamento, the crew sighted a merchant vessel at sea. Following this report, six Beaufighters of No. 39 Squadron were despatched to strike the ship - Ramb III (5) then functioning as a store ship. Six of the aircraft attacked with torpedoes and two with cannon. The Italian Admiralty records her as a loss on that date. Although out of service for some weeks, she was salvaged, renamed Pelikan and converted to minelaying. (6) The only other sinkings in November were those of the tug Sicam on the 9th off Saseno Island, (7) of the small steamer Cavtat (8) on the 28th in Dubrovnik by 24 Tactical Bomber Force Mitchells and of S.S. Balcio (already damaged), on or about 16 November. (9)

Port bombing continued through December on a heavier scale, but not nearly heavy enough to be decisive. It created great difficulties at Zara, but elsewhere traffic continued to flow. Operations were mainly concentrated on the key ports of Sibenik, Split and Zara. Sibenik was attacked six times, (10) Split four times (11) and Zara three times. (12) All these attacks were the work of Mitchell units of the Tactical Bomber Force, (13) devoting a maximum effort against land and sea communications. Supplementary to these operations was the employment of small formations of Bostons (of No. 232 Wing) night intruding over the Dalmatian coast, where they bombed any sign of enemy activity. (14)

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- (1) 91.1 tons.
 - (2) 46.0 tons. -
 - (3) 34.9 tons.
 - (4) Refer to Appendix 34.
 - (5) 3,667 G.R.T.
 - (6) Later her name was again changed to Kiebitz and she was sunk 4/5 Nov. 44 in an R.A.F. attack on Fiume.
 - (7) Claimed by D.A.F. Kittyhawks: it is possible that Spitfires of No. 1435 Squadron had a hand in the sinking, too.
 - (8) 115 G.R.T.
 - (9) Admiral Adria records in his war diary (PG/46511 FDS/Admlty.) that S.S. Balcio was sunk by aircraft on 16 Nov. 43 at Split and became a total loss. It is impossible to say whether U.S. Warhawks in the Sinj area (North of Split) on the 16th or Warhawks and Spitfires over Marina (W. of Split) on the 14th were responsible. Neither formation reported an attack or sinking in Split Harbour and no other aircraft appear to have operated there at the time.
 - (10) 143.9 tons.
 - (11) 80.8 tons.
 - (12) 130.4 tons.
 - (13) Of 12th, 321st and 340th Bombardment Groups (U.S.A.A.F.)
 - (14) T.B.F. N.A.A.F., N.A.C.A.F. and No. 242 Group O.R.Bs: Admiral Adria war diary (Refer Appendix 34).

Zara partially immobilised by air attacks.(1)

The most successful port bombing of December was effected on the 16th, when Tactical Bomber Force's twelve missions of 147 aircraft devoted their main effort to support of the Partisans. The primary targets for 75 Mitchells(2) inland being obscured by cloud, they were diverted to shipping and harbour installations at Sibenik and Zara. The 24 aircraft attacking Sibenik reported good coverage, but those attacking Zara were unusually successful. At 1358 hours, 51 Mitchells dropped their bombs (including fifty-four of 1,000 pounds) from 8,500/10,000 feet. They reported a large explosion with black smoke, hits on two ships, (one of which exploded) and on another anchored off the peninsula, followed by a 'terrific explosion', and on the barracks and mole. One of the ships hit was S.S. Mar Bianco, of 8,446 tons, one of the largest vessels operating in the Adriatic. On 7 December, she had hit a mine in the Srednje Channel(3) and had run into Zara for repairs. This most fortunate hit was followed by others. On that night of 16/17 December, eight Bostons of No. 232 Wing reported a direct hit on a large vessel and a 'tremendous explosion'. She was believed hit again in the Mitchell attacks of the 27th and 30th: as a result of this succession of mishaps she was written off as a loss.(4)

The Admiral Adriatic reported the full extent of the damage to Zara, the rear supply base for island operations, as considerable. There was much destruction inflicted in the town and harbour areas; 80 metres of the pier, all the storage sheds and warehouses in the harbour, also the army engineers' stores were all completely destroyed. Soon afterwards, the cumulative effect of the air attacks led to the port becoming untenable for a period: for one reason, all the wells in the town had either been destroyed or had dried up. This result, achieved by a combination of favourable visibility, accurate navigation and bomb release, an element of good luck and steady application of weight and pressure was yet another pointer to the right rhythm in air operations against busy ports. One of the accepted margins of error was that a proportion of bombs must almost inevitably fall harmlessly in the water. Hence the need for as great a weight of bombs as possible.

Air effort against enemy warships in the Eastern Adriatic (November and December 1943)

November air attacks on Adriatic ports made no impression on the steadily growing German Navy beyond the sinking on the 28th by 12 Tactical Bomber Force Mitchells of A.S.O.5, a harbour defence vessel, at Sibenik: in addition, three small naval craft(5) were sunk by the Navy; a small ex-Italian gunboat - Lido (of 226 tons) was lost from unknown causes while lying as harbour defence vessel off San Benedetto.

December paid better dividends to air units looking for shipping, clearly seen as of increasing importance as

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- (1) N.A.A.F. and T.B.F. O.R.Bs and appendices: Admiral Adria war diary (PG/46511 F.D.S./Admly).
 - (2) Of 321st, 12th and 340th Bomb Groups.
 - (3) In 43° 54'N. - 21° 04'E.
 - (4) Admiral Adria war diary (PG/46511 FDS/Admly).
 - (5) S.D.112, F.483 and Mas.431 (FDS/Admly).

the anti-railway offensive grew in intensity. Now that the Germans were carrying a growing volume in small vessels under naval command, naval and merchant shipping targets overlapped more and more frequently.

On 2 December, 72 U.S. Warhawks of the Tactical Air Force, escorted by 4 Spitfires, on armed reconnaissance over the Omis - Trau - Drvenik area, blew up Siebel ferry S.F.263 at Klein Drvenik and reported damage to other craft. On 3 December, Tactical Bomber Force aircraft destroyed A.S.O.1 (a harbour defence vessel) and the ex-Italian Mas.430. On 30 December, Tactical Bomber Force Mitchells destroyed two small patrol vessels - G.101 and G.105. These efforts retarded, even if slightly, the energetic German build-up of naval forces for escort and defensive purposes.

A notable naval success must be recorded here. For some time, the activities of the ageing, but very mobile gun-boat Niobe(1) (the ex-Yugoslav cruiser Dalmacija) had been the cause of anxiety and many fruitless patrols. She had run aground near Silba Island during a German assault. On 22 December, M.T.Bs 226 and 298 attacked and completely disabled her. These small Coastal Forces, some of which were working from a base on Vis Island, were continuously engaged on a variety of enterprising operations. Further naval successes in December included the sinking of one Siebel ferry(2) and two Zara defence vessels(3) and the capture of two motor boats.(4)

The effect of air attacks on sea supplies for the Southern Balkans

The pressure of the Allied air and naval forces and the Yugoslav partisans dominated the course of supplies for the German divisions in Yugoslavia and cut the optimistic estimates down to bare minimums. It took weeks to set the sea lift in motion; aircraft and surface craft took appreciable toll from the onset. In October, of the 15,000 tons of cargo despatched to the South, only 6,000 tons reached its destination. Ships sailing to northern, securer waters were intercepted: arrivals were unpredictable; locations were not reported and great care had to be taken by German Air Force units not to attack their own ships. German aircraft would have been profitably employed in attacking Allied ships, escorting German convoys or harassing the partisans, but the gradual growth of the numbers and activity of Allied fighters in all areas deprived those air units of mobility and led to the sinking or damaging of ships and destruction in harbours. Schedule delays of up to a fortnight's duration were frequent all over the Adriatic.(5)

Admiral Adriatic, in his reports to O.K.M., underlined all the difficulties and, pessimistic of ever obtaining the material, reinforcements and defences he knew the situation required, placed his demands unrealisably high, giving the

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- (1) 2,398 tons.
 - (2) S.F.193.
 - (3) A.Z.8 and A.Z.9.
 - (4) Mas.432 and 434.
 - (5) Admiral Adria war diaries PG/46511 (FDS Admlty); Information supplied by A.H.B.6.

impression that the Allied forces were complete masters of the situation and that his supply organization was almost unworkable.(1) This was not the case.

Patrols, port defence and convoy cover by No. 242 Group(2)
(October, November and December 1943)

Although No. 242 Group did not arrive in Taranto until 18 October, its Beaufighters(3) patrolled Taranto, Brindisi and Bari from the 1st onwards daily and provided escorts for convoys engaged in the build-up of the Eighth Army and Desert Air Force. The four Marauders of No.14 Squadron did valuable reconnaissance over areas from Corfu northwards, alternating between close observation of southerly ports (such as Durazzo) and the Northern Adriatic. Their great range was of special advantage, but as their numbers remained low, there were strict limits to what they could achieve. Apart from sighting the four cargo vessels engaged in the first German break-out to the Aegean, they gave useful reports on the enemy shipping system and defences. On 22 October, a Marauder of this squadron photographed suspected radar installations on the Albanian coast. On 2 November, one of its aircraft witnessed and photographed an attack on a Freya radar station some 5 miles north of Durazzo by 22 Spitfires.(4) As a result of forty-four individual attacks in three formations, the buildings and aerial frame were repeatedly hit, emitting vivid blue flashes: they were left in flames 100 feet high.

On 27 October, the Italian Seaplane Wing began operations. Four Cant Z.506s carried out a U-boat sweep between Cape Stilo and Cape Colonne. The next day, they entered the Adriatic for the first time with a U-boat hunt South of Brindisi.

Spitfires were first employed on harbour protection from 7 October, at first at fairly long intervals, but, as the month proceeded, with increasing frequency, although still not daily: the average number engaged was about ten aircraft, but on 20 October, thirty patrolled Bari and Brindisi from dawn till dusk. The first successful interception of enemy reconnaissance aircraft was on 15 October, when a Me.210, sighted at 22,000 feet over Bari, was destroyed by aircraft of No. 1 S.A.A.F. Squadron (Desert Air Force). No. 232 Squadron Spitfires IXs damaged a Me.210 in the Bari area on the 23rd and later destroyed two Me.109s 60 miles N.E. of Bari. The weather on the last three days of October prevented practically all operations by No. 242 Group. Such periods throughout the winter afforded profitable respite to the Germans.

Convoy escort in October, November and December was a constant commitment closely linked with the steady flow of men and supplies for the armies, air forces and naval parties. As the Army advanced, new ports had to be manned and brought into use, additional air force units established on airfields and radar and other warning and control installations set up and operated along the increasing coastline

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- (1) Ibid.
 - (2) No. 242 Group O.R.B.
 - (3) 416th (U.S.) Squadron.
 - (4) Of Nos. 126 and 1435 Squadrons.

captured. At first, only small naval vessels operated offensively and on supply missions to the Partisans, but, before long, French light cruisers were penetrating into the North Adriatic. Hudsons, (1) Wellingtons, (2) Beaufighters, (3) Spitfires (4) and Cant 506s (5) all co-operated with the Navy through to the end of 1943.

By 1 December, as No. 242 Group grew more firmly established in Italy, the protection afforded convoys was made more frequently continuous over the 24 hours. By the end of the year, as many as 38 Spitfires, 9 Hudsons and 7 Cants were engaged on convoy protection in the Bari-Otranto area in a single day. (6)

Allied anti-shipping operations (January to May 1944)

Introduction

By January 1944, the pattern of German sea supply had assumed firmer outlines and the Allied air and naval forces were better placed, although not yet fully informed or equipped, to pursue their campaign against the units of smaller ships using smaller ports and harbours. Yet another problem presented itself, namely the steady construction of naval surface craft and special underwater weapons in the Italian shipyards at Trieste and Monfalcone.

Owing to the diffusion of air effort dictated by the strong German defence in Italy and the priority accorded to other strategic air targets in Europe, nothing approaching a decisive application of weight to the problems presented in the Adriatic had been attainable. Along the eastern Italian seaboard, adequate supplies continued to feed the German army. Along the Balkan seaboard, the Germans were in secure possession of almost all the vital ports and harbours. The only break in their territorial stranglehold was the island of Vis. (7) Certain material gains could however be pointed to. The air and naval forces had so harassed shipping as to prevent the German Navy fulfilling its primary function of supplying the armies. Routes were restricted, which confined ships to known channels: air convoy support in the southern areas was inhibited: in November, the sailing of large ships to Split had been forbidden: transshipment from Sibenik into small motor coasters of all cargo for southern harbours had become necessary: only two or three ships were allowed in harbour at a time on account of air attacks: in early December, it was impossible to discharge all the ships in Sibenik owing to those same risks and sailings to that port had been temporarily suspended: Zara had been partially immobilised: in mid-January, it was agreed between the German naval and army authorities that no more ships over 1,000 tons were to be loaded for Zara,

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- (1) Of No. 608 Squadron detachment.
 - (2) Of No. 458 Squadron.
 - (3) Of 416th U.S.A.A.F. Squadron (Night Beaufighters).
 - (4) Of Nos. 1435, 249 and 126 Squadrons.
 - (5) Of Italian Seaplane Wing.
 - (6) 30 Dec. 43.
 - (7) The Allied air, sea and land occupation of Vis, operations therefrom and the German threat to it are discussed fully in a later section.

Sibenik, Split or harbours to southward. The small growing fleet of R- and S-boats and other small craft were clearly doomed, unless something could be done to offset the weakness in anti-aircraft defences and escorts, both sea and air; this led to a policy of building camouflaged, bomb-proof shelters all along the Eastern Adriatic, which gave the infant Navy a new lease of life.(1)

Port bombing of East Italian ports (January to May 1944)

Air attacks in strength of ten aircraft upwards on the supply ports on the coast of Eastern Italy will now be briefly summarised and details of the shipping sunk examined. Operations in the first two months of 1944 were limited everywhere by weather conditions and shorter hours of daylight. The night bomber force, committed to Strategic Air Force policy, was in no position to ensure decisive round-the-clock bombing, either at this period or any other.

In January, Ancona was attacked once,(2) Civitanova once(3) and San Benedetto(4) twice. In February, Ancona was attacked twice(5) and San Benedetto once.(6) In March, Ancona port was attacked once(7) and Civitanova once(8). These two ports, as well as San Benedetto, Fano, Giulianova and Porto Recanati, were also attacked by a total of thirteen small formations ranging in strength from one to six aircraft: the growing awareness of the significance of the smaller ports is to be noted. In April, Ancona was attacked five times,(9) Civitanova three times(10) and San Benedetto twice.(11) Early in the month, the Germans demolished and evacuated Giulianova port. In May, only Ancona was attacked, on four occasions.(12) The timing of attacks three days running on the 15th, 16th and 17th, was a step in the direction of non-stop effort, which alone could materially retard enemy unloading operations and turn-round. In both April and May, scattered attacks by single or a few aircraft, both by day and night, were made

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- (1) Details from Admiral Adria war diary (PG/46511 F.D.S./Admlty.)
 - (2) On the 9th by 24 Mitchells of the 321st Bomb. Group (T.A.F.)
 - (3) On the 15th by 8 Fortresses.
 - (4) On the 2nd by 33 D.A.F. Warhawks and on the 29th by 70 Mitchells of 12th, 321st and 340th Bomb. Groups.
 - (5) On the 2nd by 30 Kittyhawks and on the 12th by 12 Kittyhawks (all of No. 239 Wing).
 - (6) On the 3rd by 12 Kittyhawks.
 - (7) On the 2nd by 11 Kittyhawks, escorted by 6 Spitfires (No. 7 S.A.A.F. Wing).
 - (8) On the 4th by 11 Kittyhawks.
 - (9) On the 11th by 24 Kittyhawks, on the 12th by 12 Kittyhawks, on the night 18/19th by Bostons (number unspecified) of Nos. 18 and 114 Squadrons, on the night 19/20th by 10 A-20 Bostons of 114th Squadron; and on the 23rd by 12 Tactical Marauders.
 - (10) On the night 1st/2nd by 6 Bostons (No. 18 Squadron), on the 7th by 12 Kittyhawks and on the 15th by 12 Marauders.
 - (11) On the 15th by 24 Baltimores (T.A.F.) and on the 20th by 12 Kittyhawks.
 - (12) On the 15th by a force of 12 Kittyhawks, 24 Spitfires and 12 Marauders, on the 16th by 24 Spitbombers (D.A.F.), on the 17th by 24 Spitbombers (D.A.F.), and on the 21st by 11 Mustangs and 38 Spitfires (D.A.F.)

on Ancona, Civitanova and San Benedetto. These recorded attacks exclude operations against railway and road communications.

Allied air successes against merchant and naval shipping in East Italian ports(1) (January to May 1944)

Among the 38 merchant ships and 52 warships identified as sunk by Allied aircraft in Adriatic ports from 1 Jan. to 31 May 44, it is worth recording first the details of those merchant vessels of 300 tons upwards and secondly the warships. Those sunk in Italian ports will be recorded first. Attacks on the ports of the North Adriatic engaged in ship building will be dealt with under a separate heading.

In the attack on San Benedetto on 2 January, 33 Warhawks of Desert Air Force dropped thirteen 1,000 pound and twenty 500 pound bombs on shipping. They claimed near misses on a schooner and direct hits on the warehouse. The only ship sunk was the schooner Alfio D.(2) One small schooner(3) was the only ship sunk in the attack of the 9th on Ancona. None were sunk in the second attack of the 29th. The only other sinking recorded in the attacks on other Adriatic Italian ports was that of a small auxiliary sailing vessel(4) on the 21st at Rimini, where the marshalling yards and bridge were under attack by Fortresses. This was a poor return for the extended effort, but it must be remembered that it was January and visibility often unfavourable. An example will illustrate contemporary events. On 29 January, a force of 70 Mitchells(5) attacked San Benedetto. One formation of 48 aircraft reported that the majority of their bombs fell in the water. Only the south mole was hit in the harbour area.

In February, in the five attacks in various strengths on East Italian ports, the only identifiable success(6) was on the 28th when 12 Kittyhawks of No. 239 Wing (Desert Air Force) scored direct hits with one 1,000 pound and two 250 pound bombs on S.S. Bice (1,459 G.R.T.) in Ancona and sank her. The only other loss in Italian waters ascribed to Allied aircraft was that of U.J.207 (the ex-Italian Corvette Carabina) which was, according to the Italian Admiralty, destroyed in an air attack on Venice in February 1944. There were no air attacks on Venice in February 1944 and, at present, no indications of the true time and position.

Results in terms of shipping destroyed in March air attacks on Italian ports was only slightly less disappointing than in January and February. It must be borne in mind, however, that the attacks often combined railway and road communications with harbours as targets. Only one vessel of any importance was sunk. This was the

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- (1) Enemy Shipping Losses in the Mediterranean, Nominal List (A.H.B.)
 - (2) 92 G.R.T.
 - (3) Corrado (33 G.R.T.)
 - (4) Dora (137 G.R.T.)
 - (5) Of 12th, 321st and 340th Bomb Group.
 - (6) Apart from the sinking of the auxiliary fishing vessel Sabina (48 G.R.T.) in the Falconara area on 2 Feb. 44, probably by No. 239 Wing Kittyhawks.

anti-submarine vessel U.J.205 (the ex-Italian corvette Colubrina) (565 tons), almost certainly sunk on the 29th in the attack on Mestre (opposite Venice) by a force of 126 Liberators of the Strategic Air Force.(1)

Successes came more freely in April, as the weather improved and the Kittyhawks of No. 239 Wing used their growing experience to greater effect. Two ships over 500 tons were sunk in port. The first was S.S. Eneo,(2) (545 G.R.T.) hit by 12 Kittyhawks (of No. 112 Squadron) on the 7th in Civitanova. The other was S.S. Mariannina (1,262 G.R.T.) sunk on the 12th in Ancona by 12 Kittyhawks (of No. 250 Squadron). Four other small cargo vessels were sunk in harbour.(3) Apart from the valuable results of day strategic bombing of northern Adriatic shipyards, only one sinking of a naval craft was recorded.(4)

May was inconspicuous as regards results, in spite of the use of a total of 159 sorties against East Italian ports. Only four schooners and a tug were sunk(5) during the month.

Assessment of success of East Italian port bombing by 31 May 1944

The apparently inconspicuous results of so many air attacks on East Italian ports in terms of tonnage sunk are not in themselves a reliable index of the overall effect on the enemy supply system. When the period under review opened, sailings between Ancona and San Benedetto had been temporarily cancelled on account of the pressure of attack by aircraft and surface craft; and the coastal and harbour defences in the area between Civitanova and Pescara had almost completely collapsed. Traffic was restored, however, and vessels sailed singly at four-hourly intervals. Low scale seaborne traffic continued on makeshift lines. As 1944 progressed, the threat increased with occasional days of respite. In January 1944, it was reported that 1,300 tons of supplies had been discharged at Ancona from 25 coastal auxiliary sailing vessels, now playing an increasingly active role. By March, Allied air and naval attacks had led to a dangerous accumulation of cargoes awaiting shipment in Trieste and Venice. The value of this coastal shipping had been enhanced by the mounting toll of air attacks on the railways and roads. In April, the required quota of shipments to Ancona was therefore raised to 9,000 tons, of which at least 3,000 tons were to be transported on to San Benedetto. In the Northern Adriatic, heavy shipping traffic was carried on with greater immunity, as few of the Allied aircraft available for anti-shipping operations had the necessary range to interfere with it.

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- (1) 5 other small vessels were sunk by aircraft during the month. These were the Ernani (80 G.R.T.) and the Domenico Elizabeth V (71 G.R.T.) both sunk by No. 239 Wing, the first near Chioggia and the second near Civitanova, the Assunta C. (44 G.R.T.) sunk on the 5th at San Benedetto, the Delpho sunk on the 5th at Civitanova and the Olga Orlana (100 tons) sunk one mile off Civitanova on the 4th (both the latter naval auxiliaries).
 - (2) Ex - Soca (Y.S.)
 - (3) The auxiliary sailing vessels Miria or Maria (106 G.R.T.) on the 11th in Ancona and the Ausonia (58 G.R.T.) and the Nomade B (55 G.R.T.) and the Marte, a naval auxiliary (30 tons) on the 13th in Civitanova.
 - (4) Antonio C (tonnage unknown), a small auxiliary, on the 25th in San Benedetto.
 - (5) The Sant'Alessio (65 G.R.T.), Buona Maria (57 G.R.T.), Tullia Nives (104 G.R.T.) and Maria G. (41 G.R.T.) and the naval tug Cailliope.

Renewed Allied progress along the Italian coast threatened and overwhelmed one port after another. Giulianova fell early in April, San Benedetto in early June, and Ancona, Senigallia and Fano in mid-July, after which the front was again stabilised.

There were two points relating to air operations which merit consideration here. One is that up to the end of May 1944, port bombing by day or night Strategic Air Force bombers was rare and spasmodic. The other is that the results emphasise the fact that precision in bombing and the employment of suitable weapons such as the 1,000 pounds bombs by small formations of, for example, Kittyhawk fighter bombers may achieve as much as high level bombing by much larger formations of heavier aircraft, provided the anti-aircraft defences are not prohibitive.

Shipping construction in the Northern Adriatic

The remnant of the Italian Navy which remained loyal to the Axis placed at the disposal of the German Navy its communication lines, harbour and lighthouse facilities, and (this was of far reaching importance) arsenal and dockyard concerns. This offer was accepted and, in addition to the yards at Genoa and elsewhere in the Ligurian Sea, Monfalcone, Trieste and other Italian yards were soon concentrating, as has already been noted, on the production of the small, heavily-armed craft with which the Germans hoped to solve their sea supply problems, as well as on offensive and escort vessels.

The situation at the end of 1943 was reasonably satisfactory, although the shortage of crews enforced a drastic limitation of output. In Italian shipyards, prominent among them those at Monfalcone, there were 20 TA-boats (torpedo boats), 19 corvettes and 37 R-boats under construction, in addition to others already allocated for commissioning. Four destroyers were almost completed.(1)

Cargo ships were also steadily constructed in the German-controlled shipyards of the Adriatic. It is reported that the Italians understood that at the end of 1944 the following ships were under construction:-

13	cargo ships of over 6,000 G.R.T. including 12 tankers
6	" " " " 3,000 " "
6	" " " " 1,000 " " 1 tanker
19	" " " " 500 " " 1 tanker
203	minor units of various types

Air attacks on the shipyards and torpedo factories (January to May 1944)

Monfalcone and Trieste were the most important centres of ship construction. Both had extensive repair and berthing facilities. Pola had always been a naval base and had repair facilities: it was a U-boat base. Fiume was the hub of supplies for the Balkan armies and also had extensive facilities for shipping, a torpedo factory and oil refinery.

(1) For details of the naval shipbuilding programme for the second half of 1944 refer to Appendix 36.

Monfalcone was attacked once in March,(1) three times in April(2) and once in May.(3) Pola was attacked once in January(4) and once in February(5) Fiume was attacked twice in January,(6) twice in February,(7) and once in March.(8) The only attack on Trieste in the five months under review was on the night 31 January/1 February by a single aircraft, when no shipping was sunk.

In January, the attack of the 9th on Pola by 107 Fortresses, escorted by 47 Thunderbolts and 34 Lightnings(9) met no enemy aircraft and only moderate and inaccurate flak. They sank the ex-Italian submarine Nautilo,(10) which, when captured at Venice on 11 Sept. 43, was unseaworthy and sabotaged. The fact that it had reached Pola in the meantime suggests that efforts to repair her may have been proceeding. They also sank U.81(11) (a source of annoyance for some time), and R.87(12) a small tug. The object of the attack on Fiume of 9 January by 21 Fortresses was the torpedo factory but the main buildings were not hit. A second attack on the torpedo factory was made, this time by 43 Wellingtons of No. 205 Group on the night 21/22 January. Among the 72 tons dropped figured two 4,000 pound bombs: these, with some 500 pound bombs, straddled the target. An enormous explosion, with fires visible for 100 miles, were reported. They met with no air opposition. The flak was moderate and inaccurate and quickly died down.

A whole month passed before any fresh attacks on the naval bases were made. On 24 February, 24 Fortresses, unable to penetrate the bad weather between them and their primary target, hit the torpedo works and oil refinery at Fiume, meeting a handful of retiring enemy aircraft and shooting down a Me.109. When, on the following day, 16 Liberators(13) bombed Fiume port and marshalling yards, 25-30 enemy fighters were met, including (it was reported) 3 to 6 Me.210s equipped with rockets. The presence of these fighters may have been connected with the concentration of some 230 fighters which met the main Strategic force from Trieste northwards on its way to bomb an aircraft factory at Regensburg. They were reported as very aggressive. Pola was attacked the same day by 27 Fortresses(14) of the main Regensburg force as an alternative. Strike photographs showed direct hits on the

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- (1) On the night 19/20th by 38 Wellingtons, Liberators and Halifaxes of No. 205 Group.
 - (2) On the night 11/12th by 10 Wellingtons: on the 20th by 64 Liberators: and on the night 30th/1st May by 7 Halifaxes.
 - (3) On the 25th by 61 Liberators.
 - (4) On the 9th by 107 Fortresses.
 - (5) On the 25th by 27 Fortresses.
 - (6) On the 7th by 21 Fortresses: and on the night 21/22nd by 43 Wellingtons.
 - (7) On the 24th by 27 Fortresses (as a weather alternative) and on the 25th by 16 Liberators (as an alternative).
 - (8) On the 26th by 27 Fortresses (as an alternative).
 - (9) No record of Units in A.H.B.
 - (10) 746 tons.
 - (11) 769 tons.
 - (12) 37 tons.
 - (13) No record of Units in A.H.B.
 - (14) Ibid.

quay, torpedo factory and navy yard, but there is no record of any shipping sunk, as is also the case with the two other February attacks mentioned above.

In March 1944, Monfalcone began to attract Allied attention. On the night 19/20th, No. 205 R.A.F. Group despatched a mixed force of 38 Wellingtons, Liberators and Halifaxes to bomb the base. They concentrated their bombs (which included three 4,000 pound and fifty-two 1,000 pound bombs) on the ship building ships of the Cantiere Navale Triestino Company, warehouses and the Cant aircraft works, starting numerous fires. Only a few heavy anti-aircraft batteries responded and no aircraft were lost. No shipping was sunk. Three more attacks were launched against Monfalcone in April. The first was a small attack by 10 Wellingtons on the night of 11/12 April on the shipyards. The second was by a force of 64 Liberators on 20 April. Only 26 aircraft reported hitting the docks. Various set-backs affected the rest of the aircraft. The activities of some 20 enemy aircraft (four of which were reported shot down for the loss of one Liberator) made operations difficult. Two warships were sunk, the U.J.203 (an anti-submarine vessel) (ex-Italian corvette Tersicore of 565 tons) and an ex-Italian midget submarine - the C.B.15 - of 36 tons. The third attack on Monfalcone was a small one by 7 Halifaxes of No. 205 Group on the last night of April, in which although many hits were observed, cloud obscured the observation of results. No comments were made on the flak, no ships were sunk and no enemy aircraft reported. Another month had almost elapsed when, on 25 May, Monfalcone harbour was attacked by 61 Liberators escorted by 47 Lightnings. Many hits were claimed and some were successful. The vessels sunk were the U.J.204 (the ex-Italian corvette Euridice of 565 tons), two S-boats viz: S.622 and S.624, AZ.12 (a small harbour defence vessel), and, most probably, the ex-Italian submarine Beilul(1) (615 tons).

The only other attack on the naval centres all through March, April and May was the attack of 26 March on Fiume. Forced back from their target of Steyr aircraft factory, a small group of 27 Fortresses,(2) out of a much larger force, bombed Fiume port with poor results, as an alternative. On the return journey from Steyr over Yugoslavia, the escort reported some 90 enemy aircraft between Fiume and Maribor. They engaged 25 of them and claimed to have destroyed 5. Over Fiume itself, 10 enemy aircraft were reported.

The aircraft reported on these operations from January to May 1944 reflect the German anxiety to protect their strategic targets and their increasing concentration on heavy bomber formations on their way to, and return from, centres of war industry in Germany, Austria and the Balkans: their positions assist in explaining why so little was available for the escort of shipping in the Adriatic.

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- (1) The Italian Admiralty, in their volume 'Navi Perdute', do not record the date in May of its loss to aircraft, but it can only be related to the Liberator attack on the 25th.
 - (2) No record of units in A.H.B.

An unusual and difficult target was attacked, apparently fruitlessly, on 20 April, when 54 Strategic Liberators(1) bombed Venice harbour.

There were minor shipyard facilities at Porto Marghera, near Venice, on the mainland. Two successes by aircraft were worthy of mention as causing additional inroads into the German anti-submarine service and so aiding our own submarines. U.J.206 (the ex-Italian corvette Bombarda of 565 tons) was probably sunk in the attack of 20 April by 54 Liberators of the Fifteenth Air Force: and U.J.209 (the ex-Italian corvette Scure of 565 tons) was sunk during May in one of the four attacks on that port.(2)

Allied air attacks on East Adriatic shipping
(January and February 1944)

In spite of unfavourable weather, further inroads were made in January and February into German supply and naval forces. Details will now be given of the circumstances of sinkings of naval craft and of merchant vessels of 300 tons upwards, and names, dates and positions of smaller vessels sunk are given in footnotes.

For the Germans, January was a month of great offensive activity in which they cleared the mainland and the last of the offshore islands of partisans, employing newly-built, converted and repaired vessels as soon as available. February, for them, was a month of consolidation, improvements in their defences and repairing damage inflicted by air attacks. They also planned for the second break-out of shipping to the Aegean (which came to disaster on 1 March) and the capture of the island of Vis.

Allied air forces carried on their attacks on enemy supply shipping, reinforced by the Kittyhawk squadrons of No. 239 Wing of the Desert Air Force. No. 242 Group of Coastal Air Force had its hands too full with its commitments of naval protection and co-operation to provide continuous armed sweeps along the Eastern Adriatic: as the Kittyhawk squadrons got into their stride, the weather improved and hours of daylight lengthened; reinforced occasionally by Spitfires and rocket-firing Hurricanes of No. 242 Group, Italian Air Force Macchis and Desert Air Force Spitfires, they carried the war into the remotest harbours and havens, hampering the enemy's inter-island and mining operations, holding up supplies for his armies and scotching his attempts at offensive naval operations.

On 14 Jan. 44, No. 5 Squadron of No. 239 Wing made a very successful attack on shipping at Sibenik and sunk S.S. Milano (4,028 G.R.T.) and S.S. Arborea (4,959 G.R.T.): again on the 16th, Sibenik was visited by Kittyhawks (of No. 260 Squadron) who sank S.S. Spalato (896 G.R.T.)

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- (1) No record of units in A.H.B. The copies of the daily Intops Summary issued by M.A.S.A.F. which have survived the war in Air Ministry records are not complete. In the autumn of 1943 the system of compiling Tables of Operations was scrapped. M.A.A.F.'s daily summaries do not give units on strategic operations. Full records of M.A.S.A.F. operations only exist in the U.S.A.F. records in America.
- (2) 14, 19, 22 and 25 May 44.

Six other small merchant vessels were sunk during the month by aircraft. Allied surface craft sunk five small schooners and a small motor tanker during January in the eastern waters of the Adriatic.(1)

Turning to air successes among German naval craft, Kittyhawks of No.239 Wing played some part in the sinking of all five vessels destroyed. On 8 Jan.44, Metkovic was attacked by 11 Kittyhawks, as well as by 48 Strategic Mitchells.(2) Two small 1-boats - I.03 and I.43(3) - were destroyed. On 10 Jan.44, 59 Kittyhawks attacked shipping at Kurzola Island and sank S.55, one of the few E-boats in operation, which had been drafted to the Adriatic after the Leros operations in November, and damaged S.36. On the 11th, 48 Kittyhawks and 12 Warhawks and 12 Thunderbolts of Desert Air Force carried out sweeps, but the only naval craft sunk was a naval ferry barge - F.268 - at Trau (Trogir). On the 21st, the same combined sweeps that led to the sinking of the small merchant vessel Norma and the schooner Pinarosa, sank a Siebel ferry - S.F.267. These losses in naval craft, schooners and merchant vessels represented, when added to the sinking of the torpedo boat T.7 by Allied m.t.b.'s a serious blow to the German supply organization; but they did not prevent the Germans completing the occupation of all the vital coastline and islands along the entire eastern seaboard.

The total effort against Dalmation ports in February and March was 48 aircraft on Metkovic, 32 on Makarska, 11 on Ploca, 79 on Sibenik, 59 on Split, 71 on Zara and 10 on Dugi. There is no point in quoting individual reports. The general damage effected may be assumed from a great deal of previous material. The point at which to appreciate its part in the whole pattern of Adriatic operations will be when the Germans began to withdraw. Then, all the contributory causes will be seen to have played a part in defeating the German plans to feed the South.

The second German break-out(4.)

At this point a brief digression must be made in favour of an account of the second German attempt to transfer shipping from the Adriatic to the Aegean, where the shipping position remained critical.

Two 15 knot motor ships, Kapitaon Diedrichsen (the ex-Italian Sebastiano Venier) of 5,023 G.R.T.(5) and Citta di Tunisi of 5,419 G.R.T., were chosen for the break-out in the new-moon period at the end of February, preferably during bad weather. With reinforced anti-aircraft armament,

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- (1) S.S. Federico either near Metkovic or Makarska, the Nipumagioti (aux.s.v.) at Metkovic, S.S. Iagosta at Zara, the Rubicone (m.v.) in the Canale di Place, Metkovic, the Pinarosa (aux.s.v.) and the Norma (m.v.) in unidentified positions.
 - (2) Of 12th and 321st Bomb Group.
 - (3) Infantry landing craft.
 - (4) Admiral Adria war diary (PG/46511 F.D.S./Admly.)
 - (5) Lloyd's figure; but Italian sources give 6,310 G.R.T.

they were to proceed in three stages; from Trieste to Sibenik, Sibenik to Kotor and Kotor to Corfu, lying camouflaged by day and sailing by night. Three R-boats, (1) just arrived from the Western Mediterranean, were to transfer with them to the Aegean. Escort was to be augmented by the two new torpedo boats TA.36 and TA.37 and the two corvettes UJ.201 and UJ.205, together with all available S-boats as an offensive screen. It was originally intended that the break-out should be synchronised with an attack on the Allied-held island of Vis. A German fighter squadron was to cover both operations and the landing was to distract attention from the convoy for the Aegean. The attack on Vis was postponed and the fighter squadron transferred to Germany before the attempt. Only three or four S-boats were available (air attacks had put two out of action in January, as related) for screening at the most dangerous zone of the passage - that south of Sibenik and Split, where no protection was afforded by the islands. Here the destroyers, motor torpedo boats and motor gunboats of the Allied Coastal Forces maintained almost continuous patrols, cutting the supply route to the South. An interesting point is that the most elaborate internal security precautions were taken to prevent leakages to anyone outside the grade of Senior Officer. On 25 February, the postponement of the Vis operations caused the collapse of a major part of the plan for the breakout. But the phase of the moon becoming hourly more favourable, arrangements were pushed forward speedily. On 28 February, the Citta di Tunisi failed to complete the loading of her cargo of coal and departure was postponed 24 hours on account of engine trouble. The convoy sailed at 1830 hours on 29 February without her. It comprised Kapitan Diedrichsen, TA.36, TA.37, UJ.201, R.190, R.191 and later, UJ.205. The S-boats were unable to sail owing to the bad weather.

Unobserved by the two German reconnaissance aircraft on patrol, the Free French light cruisers Le Malin and Le Terrible overtook the convoy about 30 miles northwest of Zara(2) and engaged it. As the result of the action, Diedrichsen and UJ.201 (the ex-Italian Corvette Egeria of 565 tons) were sunk and TA.37 damaged, without the Germans having any clue as to the real source of the attack.(3)

The third German break-out

After the failure of the Kapitan Diedrichsen episode, another attempt was planned to pass three boats of the 12 R-boat Flotilla (R.188, R.190 and R.191) into the Aegean. This was postponed to allow the boats to operate against Allied coastal forces and partisan vessels in the Dalmatian area until the 6th R-Boat Flotilla was ready for operations. While carrying out these tasks, they were attacked on 27 March off Brac Island by Kittyhawks of No.239 Wing operating from Cutella. R.191 was destroyed, R.188 heavily damaged and written off, and R.190 slightly damaged.

When the plans for the capture of Vis lapsed, the 12th E-Boat Flotilla became redundant and was ordered on 26 May 44 to proceed into the Aegean. The only four

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- (1) Of the 12th R-Boat Flotilla.
 - (2) In the position $44^{\circ} 20' N.$, $14^{\circ} 30' E.$
 - (3) They attributed it to shore batteries firing in the direction of the island Ist.

effective boats of the flotilla (R.38, R.178, R.185 and R.190) sailed from Pola on 28 April; after two attempts to make the passage from Kotor to Corfu during the nights 1/2 and 2/2 May, the operation was again postponed, first until 15 May, then until the night 18/19 May. On this occasion, the four R-boats escorted by S.36 and S.61, sailed from Kotor to Durazzo and reached Northwest Greece the following night. R.190 was sunk on 20 May by aircraft(1) at Sarande (near Corfu). It was thus proved that, in spite of Allied intelligence and air and naval alertness, it was still possible for surface craft to break out of the Adriatic.

Allied air attacks on East Adriatic shipping (March 1944)

Allied air and naval maritime operations in March 1944 fell into two groupings. The first consisted of routine sweeps against the sea supply routes and ports nourishing them. The second consisted of air and naval operations in support of Allied commando landings on the Dalmatian islands from 19 to 31 March. These two groupings overlapped. After having summarised the successes attained by the routine sweeps and strikes, the Allied raids on German-held islands will be examined.

During March, the offensive against the ports continued, but on a subdued scale, as the land campaign in Italy and strategic bomber priorities in Central Europe and elsewhere left very little over for maritime communications targets. Dubrovnik was attacked twice(2) (by the Italian Fighter Wing) Sibenik twice(3) Metkovic once,(4) Split three times,(5) Zara once(6) and Kotor three times.(7) Some of these attacks will be considered below in connection with the record of Allied commando raids.

In terms of shipping sunk, the results of these air attacks were much more fruitful than anything preceding them. The month opened with attacks by 10 Spitfires and 12 Thunderbolts of Desert Air Force on a large number of small craft. Although the damage was reported as high, only four small coasters can be certified as sunk and these were between Kurzola Island and the Peljesac peninsula. Seven Italian Mo.205s of No.242 Group also claimed to have damaged several landing barges off Kurzola. On the 2nd, a large harbour defence vessel - the Elettra -(8)

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- (1) Spitfires of No.249 Sqdn. It had been damaged by destroyers the previous night.
 - (2) On the 17th by 8 Reggiani 2002s of the Italian Fighter Wing (239 Squadriglia based at Palata (Foggia)). The targets were the oil dumps and refinery. L'Aeronautica Italiana nella Guerra di Liberazione - A.H.B.6 copy for this and other references to Italian Air Force operations); and on the 29th by 8 Re.2002s.
 - (3) On the 2nd by 12 Thunderbolts and on the 16th by 12 Kittyhawks.
 - (4) On the 19th by 33 Liberators.
 - (5) On the 3rd by 22 Kittyhawks, on the 11th by 10 Spitfires and on the 19th by 22 Kittyhawks.
 - (6) On the night 3/4th by 27 Wellingtons.
 - (7) On the 3rd, 4th 29th and 31st by very small formations.
 - (8) 633 G.R.T.

was sunk (probably by 12 Thunderbolts of No.57 Group) at Sibenik. On the 3rd, the ex-Yugoslav S.S. Jadran(1) and the schooner Ponente(2) were sunk by Kittyhawks(3) at Split and AZ.13, a harbour defence vessel, sunk either in Zara or Biograd, probably by 7 Italian Mc.205s of No.232 Wing.

On 11 March, a formation of 15 Italian fighters reported two hits on a small merchant vessel near Dubrovnik. Air reconnaissance on the 17th confirmed one as sunk. The Italian Admiralty records the loss of S.S. Sangigi of 3,666 G.R.T. on the 10th at Ombla, near Dubrovnik: in the absence of any other relevant evidence, it may be assumed the Sangigi was sunk by these Macchis of the Italian Fighter Wing (later to be absorbed by Balkan Air Force, after its creation in June 1944). On 13 March, 20 Spitfires of Desert Air Force and 12 Kittyhawks on offensive reconnaissance claimed to have destroyed a Siebel ferry at Omis (unconfirmed). Two infantry landing craft were sunk at Kurzola - I.34 and I.72 - probably by these same formations.

From then on to the end of the month, Allied air formations recorded almost daily successes. Some of these will be recorded below as centering round the Allied amphibious operations. The balance came about as follows. On the 15th, 36 Kittyhawks sank two Siebel ferries - S.F.192 and S.F.276 - out of three bombed at Jelsa on Hvar Island. This was to hurt the Germans a few days later, when Commandos landed and initiated bitter fighting. Two days later, Kittyhawks sank the harbour defence vessel AZ.01 at Zara and 8 Spitfires of No.1435 and 185 Squadrons(4) machine-gunned and sank the harbour defence vessel AG.07 (70 tons) at Bojana near the River Drin and Lake Scutari (Albania). On 18 March, the schooner Giacomo S.(5) was sunk in the Sibenik Canal, probably by 44 Kittyhawks operating in the Primosten area. On the 21st, two Siebel Ferries - S.F.277 and S.F.278 - were sunk by 28 Spitfires of Desert Air Force at Tkon (Pasman Island), one of them by a direct hit with a 1,000 pound bomb, the other by cannon fire. On the 26th, four small Pioneer boats (small infantry landing craft) were sunk in the Zara area.(6) On the 27th, a formation of 58 Kittyhawks sank a large schooner - the Virtus(7) - in the Diat Canal near Sibenik.

Air support for Commando landings on Solta (Sulet) Island(8)
(19 March 1944.)

The Allied occupation of the Vis (or Lisa) Island made itself felt not only by the radar, staging and

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- (1) 179 G.R.T.
 - (2) 66 G.R.T.
 - (3) Unless otherwise stated in this chapter, it may be taken that all Kittyhawks quoted came from No.239 Wing.
 - (4) No.242 Group.
 - (5) 162 G.R.T.
 - (6) Aircraft responsible untraceable to date.
 - (7) 377 G.R.T.
 - (8) No. 239 Wing O.R.Bs: Commander Land Forces Adriatic Report (Cabinet Historical Section 5001/367).

refuelling facilities for aircraft, smoother evacuation of wounded and sweeps by light naval surface craft, but also, from mid-March onwards, by the launching of frequent Commando attacks on the German-held islands known as the Southern Dalmatians.

The first of these raids was on the night 18/19 March, when British and American forces landed on Solta (or Sulet) Island, overwhelmed the garrison and withdrew. No.239 Wing of Desert Air Force, briefed to reduce the defences before the assault, launched the first attack at 0550 hours on 19 March, when No.3 Squadron bombed the village of Grohote.(2) Five similar attacks on the same target followed. The local air control described the results as 'very good indeed' and 'just a case of walking in now'. The Army commented on the highly accurate bombing. The adjacent mainland supply port of Split was attacked by twenty-six other Kittyhawks of Desert Air Force. No ship- ping appears to have been sunk by our forces that day.

Air support for Commando landing on Hvar Island: Operation "Endowment VI" (22 March 1944).(2)

On the basis of information that the German garrison on Hvar Island was evacuating from the port of Jelsa on the north coast, a landing with the code name of Operation "Endowment VI", by Royal Marine Commandoes and a brigade of Partisans, was planned. Its object was to destroy the garrison. Desert Air Force provided air support by allocating three squadrons with 36 aircraft from No.239 Wing. The whole operation suffered from being mounted at short notice. However, air photographic cover of the area had been obtained and so all ranks had been "put into the picture" as to the terrain.(3)

The Land Force Commander had asked for Jelsa to be bombed between 1600 and 1800 hours, under the impression that the force would be ashore by that time. Jelsa was bombed at about 1600 hours by 36 Kittyhawks. Three E-boats were located cleverly camouflaged with branches and blended in with the coast vegetation. They set one on fire (with- out destroying it) and obtained near misses on the other two.

The force sailed from Vis, the L.C.I.s at 1420 hours with m.t.b. escort, and the schooners at approximately 1515 hours. The expedition was delayed by a sweep for mines along the South coast of Scedro Island, which proved to be justified. The L.C.I.'s did not beach at Goromin Dolac until 1730 hours and the schooners not until 2000 hours. The force was therefore not in a good position (as it should have been) at the time of the bombing to take advantage of it; but it pressed on and surrounded the town. The Germans were reported as somewhat demoralised by the R.A.F. attack, but had broken up and dispersed. After

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- (1) Where the German garrison, 100 strong, was concentrated.
 - (2) concentrated.
 - (3) No.239 Wing O.R.Bs: No.242 Grp. File 242 G/MS. 42/2/3/Air (A.H.B.II.J.1/116/36): Land Forces Adriatic Commander's Report (Cabinet Historical Section 5001/367). For outline of Air plan see Encl. 5a in A.H.B. II.J.1/116/36.
 - (4) Refer to Figure 12 for all operations in the Southern Dalmatian Islands.

stubborn fighting for two days, 130 of them were either killed or captured. The Commando re-embarked late on the second day, leaving the Partisans to hold the island.

On 25 March, 16 Spitfires(1) on a sweep over the area, destroyed the Siebel ferry S.F.272 at Sucuraj at the eastern tip, and a small infantry landing craft at Jelsa. The same formation probably sank S.F.169 in the Split area.

The Allied landing on Brac Island (23/24 March 1944)

The third Commando raid was on the night 23/24 Mar.44, when a landing was effected on Brac (Brazza) Island, which, like the rest of the Southern Dalmatians, lay in the area of the 118th Jaeger Division. There was no air support.

Air successes against enemy shipping in late March in the Island area

Air activities in the last week of March were directed in particular at naval craft, on which the Germans relied for all their island operations. The results, although not impressive by some standards, helped to hasten a state of mortal unserviceability in the enemy naval forces which marked a turning point in their previous good fortune. They also created a more favourable situation for the series of area Commando and Partisan operations planned to follow.

On 27 March, a formation of 58 Kittyhawks of Desert Air Force came on a concentration of shipping off Pvolja, (on the North coast of Brac) and sank two R-boats - R.188 and R.191 - and a landing craft - L.45. The Liguria, a small tanker, was sunk in the area, probably by the same aircraft. On 29 March, Siebel ferry S.F.271 and L.08 were sunk by Kittyhawks of No.239 Wing at Makarska, the adjacent mainland port; and on 30 March, the patrol vessel J.85 and the ferry SA.275 were sunk at Bol (on Brac) either by a formation of six Italian Macchis of No.242 Group or by No.239 Wing Kittyhawks.(2)

In addition to the above-named and previously mentioned sinkings in March by aircraft, the Allied Navy had sunk UJ.201, VP.7023 (patrol vessel), one coaster and the ferry barge F.4729. No.III Repair Vessel had been stranded off the coast of Degas Island. This was one of a long list of cases of that marine factor of misadventure to which a fleet of small ships is particularly subject in adverse conditions.

Crisis in German naval situation at the end of March 1944(3)

The Germans recorded their serious naval losses during the period of the above recorded amphibious and air operations, i.e. from 23 to 31 March in the area of 118th Jaeger Division, as:-

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- (1) No. 7 Wing.
 - (2) D.A.F., M.A.C.A.F., No.242 Group and No.239 Wing O.R.Bs.
 - (3) German Operations in the Mediterranean, Captured German document (PG/33051a. F.D.S./Admty).

- 2 R-boats
- 3 Siebel ferries
- 3 Infantry landing craft
- 4 combined operations boats
- 7 motor coasters

The only effective boats then left to them in the area were:-

- 1 assault boat
- 3 combined operations boats
- 2 infantry land craft
- 1 motor coaster.

This disastrous weakening of local forces was only one aspect of a grave overall breach in his system, effected primarily by the air forces and secondarily by the surface craft of the Coastal Forces. A situation report of 23 March by O.K.M. summarised the facts.(1) Allied superiority was being exercised day and night in the Central and Southern Adriatic. Air attacks, often in force, were directed against even the smallest craft along the coastal routes and in the bays and harbours. Their control of the Northern Adriatic, although by no means complete owing to its extreme range, was growing. Allied air reconnaissance, long-range signals stations and agents provided the Allies with a fairly clear picture of almost all sea movement. Using Vis or islands temporarily occupied by Partisans, the Allied Navy was employing 8 to 10 E-boats and gunboats and some armed Partisan craft. German land communications in Bosnia, Dalmatia and Albania were poor, difficult and under constant air attacks: for that reason coastal sea supply was especially vital. The anti-aircraft defences urgently pleaded for had not been forthcoming and air attacks had eaten into what had already been organized. There were no heavy batteries anywhere up the eastern seaboard until one reached Pola; and even there, after bomber attacks, there were only four heavy batterien(2) and no searchlights remaining. If Venice was excluded, there were only five large and eight small flak batterien for the defence of forty harbours and 800 miles of coastline. Nor was the air force position any more promising. In theory, twelve fighters were available, but for various reasons (Allied air superiority among them) they were seldom in evidence.(3)

Shipping losses, it was recorded, since mid-September, had been serious. 32 steamships of a total tonnage of 69,023 G.R.T. had been destroyed and 35 coasters of a total tonnage of 4,937 G.R.T. so heavily damaged as to be written off as losses: in addition, 18 steamships of a total tonnage of 22,344 G.R.T. and 32 coasters of a total tonnage of 2,408 G.R.T. had been damaged in varying degrees.(4)

(1) See also Appendix 34, p.11.

(2) The establishment of a Luftwaffe heavy batterie was four (occasionally six) 88 mm. and three 20 mm. guns of a medium batterie twelve 37 mm. guns and of a light batterie twelve 20 mm. guns. (Information from captured Flak records in A.H.B.6).

(3) See also Appendix 34.

(4) Ibid.

For the whole of this critical situation, the participating aircraft of the Coastal and Desert Air Forces (including the expanding formations of the co-belligerent Italian Air Force), must be accorded the major share of the credit. The Allied Coastal Forces worked admirably and to great effect, but their efforts were limited by low strength and their range by the steadily expanding German programme of minelaying over wide areas of the Adriatic.

Air support for raids on the islands (April and May 1944)(1)

Between 21 and 24 Apr. 44, Partisans based on Vis landed raiding parties on Mljet and Korzula Islands without any close air support and returned to Vis. On 10 May, Partisans from Vis raided Solta.

On the night 22/23 May, the 2nd Special Service Brigade, with a force of Commandoes, anti-aircraft units and an American O.S.S. Operational Group landed on Mljet. (2). At 0455 hours, on the 23rd, 8 Spitfires of No. 249 Squadron and 3 Spitfires of No. 185 Squadron were airborne from Southeast Italy and bombed the German positions with apparently good results. Two Spitfires based on Vis patrolled during the forenoon over Mljet, but encountered no enemy aircraft. The Allied force never caught up with the enemy, who disappeared in the dense scrub. This operation concluded the offensive activities of the forces on Vis until the over-running of Tito's headquarters on the mainland led to a major diversionary raid against Brac.

Air Support for the Brac diversion (Operation "Floundered") (1 to 4 June 1944)(3)

On 25 May 44, Marshal Tito's headquarters at Drvar in Bosnia was attacked by superior German forces and compelled to evacuate. Tito ordered the Partisans on Vis to carry out an immediate offensive, with Allied co-operation, in order to draw off German forces and facilitate his escape. He and his staff, as well as elements of Allied missions, were rescued by Allied and Russian aircraft in the nick of time, between the nights 3/4 and 5/6 June.

On receipt of Tito's appeal for a diversion, all available troops and ships on Vis were employed in an unplanned scramble to reach Brac Island, where the Germans were strongly entrenched. No. 242 Group of the Coastal Air Force, now firmly established in the Brindisi - Foggia - Grottaglie area, was called on for close support and cover; and Desert Air Force and Strategic Air Force were asked to put in some sharp attacks on the mainland ports of Split and Omis, the likely reinforcement bases.

The enemy held strong positions at Supetar, Sumartin, Bol, and Nerezisce. The Allied forces lacked artillery; co-ordination with the Partisans was difficult. Naval

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- (1) No. 242 Grp. O.R.Bs: Cabinet Hist. Sec. 5001/367.
 - (2) Operation "Forthound".
 - (3) Appendix 25 of the A.H.B. narrative on the Italian Campaign Vol. II: No. 242 Grp. File T.S.42/2/8/Air (A.H.B. IIJ. 1/116/41).

cover for the assault on 1 June was provided by H.M. destroyers Terpsichore and Tuscan and units of the Coastal Forces. About 1,000 British, 100 Americans and 2,500 Partisans were engaged in the landing, known by the code name of Operation "Flounced." Force 266 in Bari asked for an important air contribution, but M.A.A.F. Advanced H.Q. and No. 242 Group, feeling the tug of Italian operations very keenly at the time, felt they could do no more than afford some cover for what was hardly a major operation.

Air support began on 2 June. All the rocket-firing Hurricanes were from No. 6 Squadron and Spitfires from Nos 73 and 253 Squadrons. Soon after daybreak, 4 Hurricanes attacked gun positions with rocket projectiles. They were followed about noon by 4 Spitfires, who claimed hits on Supetar town and quays. Supetar was again visited during the afternoon, on this occasion by 4 Hurricanes: and 2 Spitfires bombed and machine-gunned a hilltop, which was reported as captured soon after by Allied troops. Every day the area was patrolled by 2 Spitfires, who broke up small formations of Me.109s.

On 3 June, operations ran more to a plan: 38 Liberators and 24 Baltimores attacked Split; and 36 Liberators and 30 Baltimores attacked Omis. Although the results cannot be defined, confusion and delay may certainly be assumed imposed on enemy shipping facilities during the crisis, for there is no trace of any German reinforcements reaching Brac until the Anglo-American force withdrew. Eight Spitfires were patrolling during the day. Two Hurricanes carried out sweeps and two others afforded close support. At 1645 hours, 2 Spitfires attacked a German headquarters, which was repeatedly attacked by 6 other Spitfires during the evening. Some of these aircraft used the landing strip on Vis. On 4 June, as Allied troops pressed against the strong German defences, 14 Spitfires gave cover, and destroyed 2 Me.109s which tried to interfere. Night reconnaissance was carried out by 2 Wellingtons of No. 221 Squadron.

On 4 June, the bulk of the force withdrew, having, in the opinion of the Commander Land Forces Adriatic, more or less achieved its object as a diversion. Soon thereafter, German forces were withdrawn from the mainland to Brac. As a military operation, many ingredients of tactical success were absent. The Germans were well organized; the Allies were not. There had been no time for preparing well organized air support and inadequate forces were available if there had been. In the confused fighting conditions, on the scrubby terrain and with poor communications it is surprising that the troops were able to profit by the close air support. It is difficult to visualise any other outcome to the effort than enforced retirement. But valuable lessons were learned, which were put to good effect later in the campaign: and Tito and his staff lived to fight another day.

The Limitations of air effort in the Adriatic (April, May and June 1944)

While the battle for control of the strategic islands was assuming more definite form, the air effort in Italy was being progressively absorbed in the major interdiction campaign known as Operation 'Strangle'. This was an all-out attempt to neutralise the Germans communications in

preparation for the Allied Spring offensive (Operation 'Diadem'). This offensive was launched in mid-May and its rapid progress until the halt on the Trasimene Line imposed the maximum of strain on the resources of the Tactical and Coastal Air Forces. Events defeated earlier hopes of simplified control, dictated new alignments of forces and restricted the scope of anti-shipping operations in the Adriatic. In June, when a special command was created to deal with Balkan and Adriatic problems, Desert Air Force parted with its responsibilities over the Yugoslavian coast. Its activities were confined to the East Italian coast and possibly, as they put it, to the Central Adriatic. Their constant movement was straining their signals resources to the uttermost and they could not deal with the stream of reports on shipping and aircraft movements which No. 286 Wing of No. 242 Group fed to them in the interests of co-operation.(1) In April and May 1944, the responsibility for anti-shipping operations was falling increasingly on No. 242 Group of the Coastal Air Force, whose organization when it stood at its peak on 18 June 44 is given below.(2)

Allied air attacks on East Adriatic shipping (April and May 1944)

Apart from air support for island raids in April 1944, which led to losses among German supply and naval craft, air attacks on shipping in that month were on a reduced scale. There was only one attack on a major supply port, namely that of 10 April on Sibenik by 12 Kittyhawks, who claimed the sinking of 4 barges (unconfirmed). There were light attacks, usually as part of extended sweeps deep into enemy-held territory on Tivat, Loviste, Oberislav and Port Gruz, in which no shipping was sunk. But these, like so many other sweeps, fitted into the growing pattern of hindrance and damage which a multitude of small operations, not recorded day by day in this narrative, all part of the

- (1) Signal No. 242 Grp. to D.A.F. 21.6.44 (Encl. 71a in A.H.B. IIJ1/116/34c).
 (2) No. 242 Grp. (M.A.C.A.F.) H.Q. Taranto Town

<u>No. 286 Wing H.Q.</u>		Grottaglie Village
No. 6 Sqn.	Hurricanes R.P.	Grottaglie
No. 14 Sqn. Det.	Marauders	Grottaglie
No. 39 Sqn. Det.	Beaus.	Grottaglie
No. 221 Sqn.	Wellingtons	Grottaglie
No. 249 Sqn.	Spitfires	Grottaglie
No. 255 Sqn. Det.	Night Beaus.	Grottaglie
No. 1435 Sqn.	Spitfires	Brindisi
<u>No. 323 Wing H.Q.</u>		Foggia Main
No. 23 A.A.C.U.	Baltimores	Foggia Main
No. 32 Sqn.	Spitfires	Foggia Main
No. 73 Sqn.	Spitfires	Foggia Main
No. 87 Sqn.	Spitfires	Foggia Main
No. 253 Sqn.	Spitfires	Foggia Main
No. 255 Sqn.	Night Beaus.	Foggia Main
No. 293 Sqn.	Warwicks	Foggia Main
(Air Sea Rescue)		
<u>G.R. Operations</u>		Grottaglie
<u>No. 242 Grp. Communication Flight</u>		San Vito di Normani
<u>Italian Seaplane H.Q.</u>		Taranto Town
Gruppe 82, 83, 84 and 85		Taranto Town

air offensive, were imposing on the enemy supply system. There were a few carefully selected attacks on radar stations along the coast.

The few traceable losses among German vessels arose mostly from air operations over the sea or small havens. These were, in chronological order, as follows. On 1 April, 5 landing craft(1) in Tarn Bay (Brac) by Spitfires: on 8 April, 3 tank barges(2) about 7 miles North of Zara by Spitfires: On 15 April, 1 schooner(3) at Korzula: on 24 April, 1 tug at Kotor: on 25 April, S.S. Lastvar(4) in Kotor, probably by Kittyhawks on a sweep: and, lastly, a small landing craft(5) on 27 April at Trpanj (Peljesac).

Results in May were hardly more encouraging on paper, although air and sea attacks were eating into the bare margin between needs and strength of the German sea supply system. The diminishing effort by Desert Air Force was partly offset by the growing participation of the Italian Fighter Wing.

There were no attacks on the major supply ports in May, with the sole exception of four light attacks on Durazzo (Albania) in which no shipping sinkings can be traced. The remaining port attacks, all in low strength, were on Ploca on the 2nd and 3rd, Kornat on the 11th, Bar on the night 1/12th and Velaluka on the night 14/15th. The following vessels were sunk by aircraft, either at sea or in small harbours. On 3 May, a motor raft(6) by Spitfires; on 14 May, a schooner(2) near Karlobag by Italian Macchis; on 19 May, attacks were made off Loviste on two small oil barges(8) by 16 Spitfires(9) and probably by 10 Italian Macchis 202 and 205, and by MGB.661 and M.T.B.667. Both were sunk. One of them was claimed as damaged by the surface craft. The least success in May was the sinking of S.F.264, laden with troops on the 30th off Fiume by Hurricanes.(10)

Two E-boats claimed sunk by surface craft and aircraft
(19 - 20 Apl. 44.)

In the latter half of May, two more interesting cases of air/naval co-operation developed which led to the destruction of an E-boat. In spite of better weather, Allied Coastal Forces reported enemy sea traffic harder to find. No contacts were made between 2 and 19 May. After a small success on 13/14 May, nothing occurred until the night of 18/19 May, when M.G.B.661 and M.T.B.667 engaged an enemy convoy off the Peljesac Peninsula: they claimed to have sunk a heavily-armed R-boat and damaged a 700 tons coaster and one of two I-boats in company, but M.G.B.661 was nearly lost

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- (1) I.42, Pionier boats 309, 310, 311 and 312 of c. 20 tons each.
 - (2) Hummel, Grille and Fliege of c.20 tons each.
 - (3) The Heyduckvelko, tonnage unknown.
 - (4) 133 G.R.T.
 - (5) I.57 of c. 20 tons.
 - (6) 100 tons.
 - (7) Adriana, of unknown tonnage.
 - (8) Veronika and Felix, of 25 tons.
 - (9) Nos. 37 and 249 Squadrons.
 - (10) No. 69 Squadron.

through fire. At 0350 hours on 19 May, a Wellington(1) was airborne and searched the Kotor area for 'E-boats sighted by destroyers' on the previous night. From 0528 hours, extensive searches were carried out during the day from the Gulf of Kotor to Valona, entailing eight missions of sixteen Spitfires.(2) No E-boats were seen by either the Wellington or Spitfires. On 20 May, four rocket-firing Hurricanes(3) and a Spitfires IX(4) which were airborne from Vis sighted what they took for a stationary E-boat in 43° 03' N, 17° 01' E. (at Loviste on the tip of the Peljesac Peninsula). The Hurricanes scored direct hits on the vessel and reported leaving it lying on the bottom and disintegrating. A little later, six Spitfires,(5) in two attacks, set two landing craft on fire at Loviste.

Unfortunately, Admiral Adria did not record the loss of any R. or S-boat round that date anywhere. This must accordingly be written off as a series of Allied observational errors. The vessel in question may have been a large landing barge or schooner.

On the night 19/20 May, H.M. destroyer Termagant and Tenacious encountered five enemy E- or R-boats, reporting the destruction of one and possible damage to two. These were part of the escorted convoy of four R-boats of the 12th R-Boat Flotilla breaking out of the Adriatic to reinforce the Aegean station. In the event, they sank nothing, but damaged R.190. On 20 May, Spitfires searched the sea areas to southwards. At 0519 hours, they caught up with R.190, which by then had reached the vicinity of Corfu Island. At 0612 hours, four Spitfires Vs(6) sighted R.190 in the position 39° 50' N, 19° 58' E. (off Sarande, on the Greek mainland opposite North Corfu) going south at an estimated speed of 10 knots. They fired on and damaged her, leaving her smoking and heading for the mainland. The return fire was heavy and one pilot was forced to bale out. About three and one-half hours later, five Spitfires(7) and four rocket-firing Hurricanes,(8) despatched to administer the coup de grace, sighted her, 'a grey sunken vessel surrounded by a large spreading oil patch', in the position 39° 52' N, 20° 01' E, just offshore at Sarande.

B.

The Island of Vis (September 1943 to May 1944)The Island of Vis (or Lissa)(9)

Vis lies well into the Adriatic off the Southern Dalmatian coast, approximately 30 miles south-west of the

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- (1) No. 221 Squadron.
 - (2) 15 of No. 249 Squadron and 1 of No. 37 Squadron.
 - (3) No. 6 Squadron.
 - (4) No. 32 Squadron.
 - (5) No. 73 Squadron.
 - (6) No. 249 Squadron.
 - (7) 3 of No. 249 Squadron and 2 of No. 87 Squadron.
 - (8) No. 6 Squadron.
 - (9) A.F.H.Q. G-2 Provisional topographical study (Encl. 2A. A.H.B. IIJ1/90/39).

port of Split (Spalato). It is the most westerly of the larger of the South Dalmatian group of islands.(1) The small island of Bisevo lies some 3 miles to the southwest. Vis is generally hilly, with much tree and scrub. The western coast is broken by the large bight Lago Komiska, on the shores of which stands the small town and port of Komiza. The northern coast is indented by Lago Vista, at the head of which stands Vis, the principal port and town. In September 1943, anchorage was available for medium sized vessels in Porto San Giorgio (the port of Vis) and in Komiska Bay. Motor transport roads were limited. There was at that time no suitable landing strip for contemporary aircraft. Water was scarce. The island was difficult to seize by assault (owing to terrain and lack of landing beaches) except by frontal attacks on Komiza and Vis.

Strategic background to its occupation by the Allies(2)

To the Germans, the importance of the Dalmatian islands lay not only in their potential role in preventing sea supply to the Partisans. They must maintain their own supplies and guard against an Allied thrust across the Adriatic. In November, they were in a strong position on the mainland for an offensive against the southern Dalmatian Islands. By 21 Jan. 44, Korzula, Brao and Hvar had been captured. There remained in Partisan hands only Lagosta and Vis, to which most of them had withdrawn as the other islands fell.

Vis had been occupied by the British from 1812 to 1815 and was used by them as an advanced naval base. Its value for the same purpose was already being considered in December 1943. It was of the utmost importance to the Partisans as a supply staging point and they were determined to hold it. Although there was no landing ground for aircraft, there was a suitable valley which might be developed into a landing strip. On the strength of reports by reconnaissance parties, it became clear that arms and reinforcements must be sent there if the island was to be held and defended. The Allies found themselves committed to its maintenance.

At the time, Balkan policy was still controlled by the C's-in-C. Middle East, although since the occupation of Southern Italy by the Allies, operations in the Western Balkans and the Adriatic had become progressively more closely linked with those in the Central Mediterranean. Force 133 in the Middle East set up an advanced base at Bari and R.A.F. units moved steadily (as has been recorded) into the Heel of Italy. The changing situation made it necessary on 12 Apr. 44 for Allied Forces Headquarters to assume direct control in Albania, Jugoslavia and Hungary. Accordingly Advanced Headquarters Force 133 was severed from the Middle East and renamed Force 266. It was in this capacity that it assumed control of the British forces in Vis.

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- (1) Area approximately 40 square miles, average length 10 miles (E.W.), average width $4\frac{1}{2}$ miles (N.S.).
 - (2) Report of Commander Land Forces Adriatic. (Cabinet Historical Section 5001/367, courtesy of Major F. Jones).

When it was first decided to occupy Vis fully, the first moves were made by the Army and Navy. Air Force ideas on its possibilities were still in the realm of speculation. Before long, the needs of the other two Services for defence warning devices and air support for amphibious operations set up a process of air force occupation and development: and for a long time Vis continued to yield handsome profits as an ad hoc air base. It was different from most other air bases in the peculiar pattern of its functions, but its strategic role certainly proved to be a real one.

Entry of Land and Naval Forces

Between 20 and 25 Jan. 44, a British Commando from Italy and a detachment of an Operational Group of the Office of Strategic Services (U.S. forces) were landed at Vis.(1) The Allied and Yugoslav commands were separate.

On 29 Jan. 44, a naval officer arrived at Komiza as Senior Naval Officer Vis(2) (SNOVIS) with a force of small craft(3) which he operated under Flag Officer Taranto from Komiza Harbour.(4) Support by some ten ships of the 24th Destroyer Flotilla at Bari was arranged.

Air Liaison was carried out between Brigadier H.G.P. Miles of Force 133 in Bari and Air Commodore G. Harcourt Smith, A.O.C. No. 242 Group, at Taranto. Later, planning for operations mounted from Vis was carried out on the island under the O.C. 2nd Commando's direction with the N.O.I.C. and a squadron leader of No. 242 Group. Local liaison was maintained in the early stages with the Forward Fighter Control Unit as soon as it was set up. The organization outlined above operated until the regrouping of forces in early June 1944.

Establishment of a Forward Fighter Control(5)

At the end of January 1944, No. 242 Group was given the responsibilities of the air protection of Vis and shipping sailing to and from it.

On 4 Feb. 44, the first R.A.F. unit landed on Vis. This was No. 3 Forward Fighter Control Unit of No. 242 Group.(6) It began operating from a trailer sited in the west end of the island and was strengthened in late March. During the month of March, three Air Ministry Experimental Stations(7) were set up on Vis: two of them were light

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- (1) Under Command of Lt. Col. J.M.T.F. Churchill (2 Commando) who was under the control of Brigadier H.G.P. Miles, C.O. of Force 133 Advanced H.Q. at Bari.
Source: The Davy Report (Cabinet Hist. Sec.5001/367).
 - (2) Lt. Cdr. Morgan Giles, R.N.
 - (3) A fuelling point was set up on Bisevo Island.
 - (4) R.O. Case 8925. C.-in-C. Med. War Diary (Records Section, A.H.S./Admiralty)
 - (5) No. 242 Group O.R.Bs and appendices.
 - (6) From 5 Apr. 44 known as Forward Fighter Sector No.242 Group.
 - (7) Nos. 6005, 6008 and 6109 A.M.E.S.

warning sets. These extended the coverage furnished by No. 323 Wing's(1) radar and air raid warning stations in Italy and, although handicapped by the presence of high land masses to the eastward, provided an essential link in the radar, direction finding and control system, both in the island's defences and in the direction of aircraft landing, refuelling and taking-off.

Construction of landing strips(2)

Soon after No. 3 Forward Fighter Control opened its headquarters, work was begun on the clearance by hand of a crash strip for aircraft, 1,500 feet long. This strip was responsible for the saving of the lives of pilots in distress on many occasions thereafter.

The growth of Allied commando operations against the islands called for air support: the need for a permanent operational landing strip became urgent. U.S. engineers were called in and by 12 May they had constructed a strip 1,000 yards long(3) in one of the few level valleys with taxiways and dispersal.(4) The maximum number of aircraft expected at first to refuel was between 25 and 30 daily: but when it came to the point of the Brac Diversion of 1 - 4 June, as many as 120 aircraft fuelled there in a day.(5)

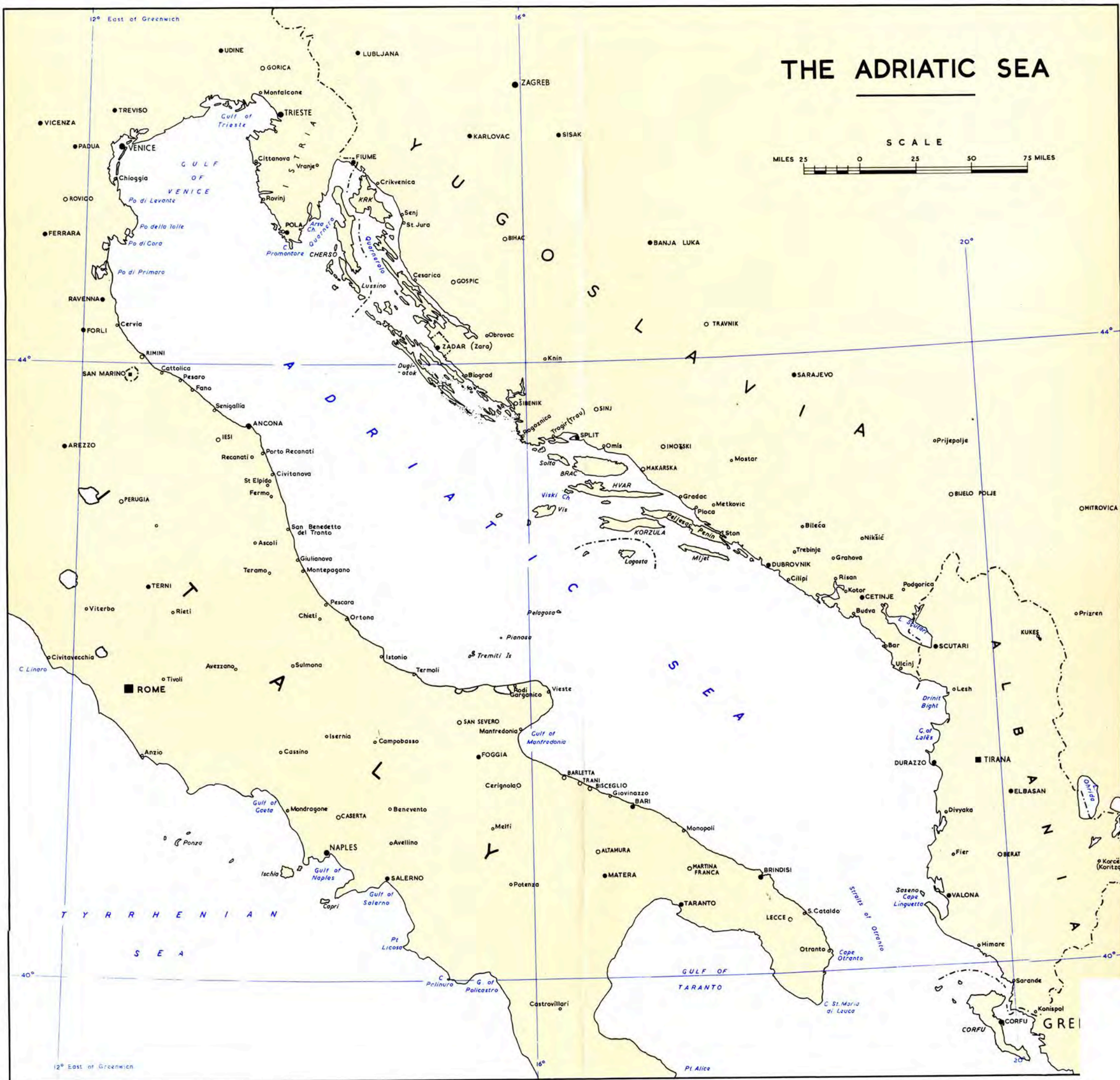
The future of Vis as an advanced air base.

Coastal Air Force, foreseeing an active role for the facilities on Vis, were in favour of using the fighter strip for refuelling on offensive operations(6) but it was some time before Mediterranean Allied Air Forces Rear Headquarters could see eye to eye with them. H.Q., M.A.A.F., out of touch with the rapid developments on Vis, maintained that it was not intended to build it up, but simply to provide the minimum facilities to give some air assistance to the Partisans defending that island in the event of attack. But there were not only Partisans on Vis.

On 29 Apr. 44, at a meeting of the Supreme Allied Commander, Air Marshal Slessor was invited to initiate action with a view to developing Vis as an advanced air base; but on 3 May, action was still suspended awaiting a decision by General Baker, C.-in-C. M.A.A.F.(7) But events such as the use of the strip by Spitfires supporting amphibious operations in May and June, the refuelling, signals and radar services and the anti-aircraft defence all justified its operation, defence and growth; and, in the autumn of 1944, it was formally handed over to the control of the Balkan Air Force.

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- (1) Their controlling formation.
 - (2) No. 242 Group O.R.B.
 - (3) With 150 yards overrun at each end of 150 yards wide.
 - (4) Reported fit for emergency wheels down landing
1 May (Signal No. 242 Group to M.A.A.F. 1 May.
(A.H.B.IIJ1/273/7/42 Encl. 6A).
 - (5) M.A.C.A.F. Ops. O.R.Bs/Appendices.
 - (6) File JCS.2045 Encl. 6A (A.H.B.IIJ1/90/39).
 - (7) M.A.A.F. File J.L. 99 Encl. 1a, 1b, 2a, 6a, 7a, 8a,
9a. (A.H.B. IJ1/273/7/42).

THE ADRIATIC SEA



German plans to recapture Vis(1)

The Germans, their Navy in particular, regarded the Southern Dalmatian islands as a bridgehead for a possible Allied invasion of the Eastern Adriatic coast, an idea which haunted certain command quarters until a late stage of the war. Everything seemed to some to point to the need to occupy all the big strategic islands. In spite of the great Allied air superiority, the major part of this conception was carried out. It has been seen how their scanty naval forces were being worn down in the unequal struggle with the Allied Air Forces and Navies to supply their armies and retain their bases. The German efforts suffered from internal misunderstandings between the three branches of the Wehrmacht, particularly between Naval Group South and C.-in-C. South East. The German Air Force was never able to provide anything like adequate support.

Most of the islands were occupied by the Germans by the end of January, at the cost of some shipping to aircraft and surface craft. Planning for Operation 'Freischutz', the capture of Vis (the Germans always referred to it as Lissa) began on 1 Jan. 44. Within a fortnight, the difficulties were thrust upon Admiral Adriatic by the loss to Allied fighters of an E-boat and the prize vessel it was towing. There was no fighter cover for convoys and the anti-aircraft defences, as already related, were lamentably weak. After some wrangling as to how far the Army and Navy should go in maintaining the hold on Vis if it were captured, Admiral Adria managed to gather a small fleet consisting of 2 large and 2 small torpedo boats, 1 escort vessel, 2 corvettes, 6 E-boats, 3 R-boats, 4 - 6 Siebel ferries, 14 I landing craft and 25 other landing craft.

The plan to land on the south-east coast of Vis was postponed, first to 17 March and then to 4 April. Over all their deliberations and movements hung the ever-present threat of Allied fighter operations, which made any movement most difficult to conceal. The German Naval Staff gradually realised that Allied air superiority was likely either to kill the execution of the plan or to render it impossible to maintain any forces landed. Matters grew steadily worse. The Luftwaffe failed to co-operate: losses increased steadily. On 25 April, O.K.W. announced the Fuhrer's decision that, owing to lack of forces, the capture of Vis was to be postponed, although the Luftwaffe was to continue to bomb the island to the limit of its power. This amounted in fact, to the final abandonment of the idea. The few air attacks that could be staged were on a low scale and futile.

Allied plans to recapture Vis if lost

Allied Intelligence was aware of the German intentions: reconnaissance of their shipping, a study of their progress among their islands and consideration of the

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- (1) Refer to Appendix 31 for an exhaustive study by the Foreign Documents Section, Admiralty from German sources of German reactions to the Allied occupation of Vis and their plans for its capture.

obvious advantages the tenure of Vis afforded to the party in control led to a series of planning conferences. In late January, No. 242 Group planned to provide air defence for the island and shipping operating in its defence, and air support for the naval and land forces engaged in its recapture by attacking enemy shipping, troop concentrations and so forth. No. 323 Wing, reinforced by Nos. 80, 274, 249 (or 126) Squadrons and 57th Fighter Bomber Group of Desert Air Force were to be made available. On news being received at Combined Headquarters that a German invasion had started, the code word 'Prang' was to be issued. Desert Air Force was to maintain a patrol over Vis under the Forward Fighter Control and No. 323 Wing (of No. 242 Group, M.A.C.A.F.) was to provide escort for naval forces and operate 57th Fighter Bomber Group in direct support. Desert Air Force was to provide defensive shipping patrols up to a radius of 100 miles of Vis.(1)

On 18 Feb. 44, a conference of air and naval officers was held and it was confirmed that the A.O.C. No. 242 Group should be the responsible air officer in command. Planning on the highest level was proceeding at the same time, and among the suggestions put forward was that of an airborne landing as well as direct air support if operations in Italy allowed.

On 10 April, the Joint Intelligence Committee at Allied Force H.Q. considered the invasion of Vis did not appear imminent and pointed out the folly of any attempt to capture it without adequate air cover before, during and after the landing. Even a destructive raid in force was an extremely doubtful proposition. But while the possibility of any form of attack existed, air cover was essential. On 15 April, Slessor thought the A.O.C. No. 242 Group should be authorised to keep on Vis during the day any aircraft he thought necessary or desirable without permanently locating any squadrons there.(2)

C

THE CLIMAX OF THE SUBMARINE WAR
(JANUARY TO MAY 1944)

Introduction

The method adopted in the following account of the decisive Allied anti-submarine operations in early 1944 is designed to cover each of the most important aspects separately, avoiding undue repetition.

The first section gives a progressive account of U-boat reinforcements, statistics of the air effort devoted to reduce them, and of U-boat tactics. Details follow of U-boat successes against Allied naval and merchant shipping, so that an exact measure of the menace from this quarter emerges. Counter-operations by Allied air and naval formations do not figure at this stage.

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- (1) No. 242 Group Operation Order No. 1 (undated) in No. 242 Group O.R.Bs January 1944.
 - (2) Signal JCS.597 to H.Q. N.A.A.F. (File J.C.S. 2045 Encl. 7a, A.H.B. IIJ1/90/39).

The second section deals with the reorganization and re-equipment of the air anti-submarine forces.

The third section deals exclusively with the series of fourteen combined 'Swamp' hunts in 1944. It is here that many operations arising from sinkings mentioned in the first section will be found. The method adopted is the logical one for dealing with the organic development of this most interesting example of air/naval co-operation from crude beginnings to a formula proving successful under given conditions.

The fourth section covers the destruction of U-boats by methods other than the 'Swamp' hunt, and 'Fence' operations in the Strait of Otranto.

The fifth and last section records the advent of the German Small Battle Units with their midget submarines and one-man torpedoes into the field of submarine operations.

German policy and operational successes

Reinforcements (January to May 1944)(1)

When 1944 opened, fifteen U-boats were stationed in the Mediterranean. During January, three boats - U.455, U.952 and U.343 - succeeded in passing through the Strait by night in deep dives in spite of the Gibraltar air patrols, (2) (which now included a U.S.N. Catalina Squadron, equipped with the Magnetic Air Detector) and naval vigilance. The total inside by 22 January 1944 was fifteen. Of the four boats detailed in January one (U.455) got through in January. Three got through in February. These were U.969, U.586 and U.967. Gibraltar patrols were temporarily weakened during

(1) For a detailed account of operations centering on U-boat transit of the Strait of Gibraltar refer to Vol. IV of this series, pp.487-495.

(2) Analysis of flying hours from Gibraltar in January 1944.

	Effective Hours	Total Hours	A/C Loss	Sights	Attacks	Results	U-boats getting through the Strait
Ocean Convoy Escort	Day 121	188	-	-	-	-	
	Night 32(N)	104(N)	-	-	-	-	
Patrols off Gib. Strait including U.S.N. Sqns.	Day 1,562	2,018	-	2	-	-	U.952 U.343 U.455
	Night 557(N) 934(L/L)	707(N) 1,058(L/L)	1 N 2 L/L	1 N 4 L/L	1 N 3 L/L	U.343) damaged)	
Patrols off Cape Finisterre	Day 206	306	-	-	-	-	
	Night 176(N) 90(L/L)	233(N) 130(L/L)	- -	- -	- -	- -	

this critical period by the loss of Hudson Squadrons Nos. 48 and 233, withdrawn to the U.K.(1)

Five U-boats were detailed in February to make the passage. These were U.761, U.421, U.618, U.302 and U.466. Two of them got through (U.421 and U.466) in March: two (U.761 and U.392) were sunk in the Strait in combined operations by M.A.D. equipped aircraft and H.M. Ships and one gave up the attempt. Five U-boats were destroyed during March. The total inside at the end of March 44 was fifteen boats. Only one reinforcement - U.471 - was detailed in March and it got through on the night 30/31. The air patrols during March(2) were denser in February, as more aircraft became available and made the passage increasingly hazardous. The new M.A.D. attacks were being carried out more smoothly in what was an ideal zone for its operation. Wellingtons profited by the slowly increasing flow of Leigh Lights to extend the hours of night patrols.

Two more boats were detailed to enter in April - U.731 and U.960 - U.731 was sunk in the Strait on 15 May by M.A.D. aircraft and H.M. ships and U.960 got through. Thus, of the twelve boats detailed to enter in 1944, eight got through, three were sunk in the Strait and one gave up the attempt.

(1) Analysis of flying hours in the Gibraltar area for February 1944.

	Effective Hours	Total Hours	A/C Loss	Sights	Attacks	Results	U-boats getting through the Strait
Ocean Convoy Escort	Day 22	27	-	-	-	-	
	Night 3(N)	5(N)	-	-	-	-	
Patrols off Gib. Strait including U.S.N. Sqns	Day 1,828	2,255	-	5	3	<u>U.761 shared</u>	<u>U.586</u>
	Night 165(N) 1,046(L/L)	320(N) 1,210(L/L)	- 1 L/L	- 2 L/L	- 2 L/L	<u>sunk</u>	<u>U.969</u> <u>U.967</u>
Patrols off Cape Finisterre	NIL			NIL			

(2) Analysis of flying hours in the Gibraltar area for March 1944.

	Effective Hours	Total Hours	A/C Loss	Sights	Attacks	Results	U-boats getting through the Strait
Ocean Convoy Escort	Day 52	97	-	-	-	-	
	Night 25(N)	75(N)	-	-	-	-	
Patrols off Gib. Strait including U.S.N. Sqns	Day 1,035	1,374	-	4	3	<u>U.392 shared</u>	<u>U.466</u>
	Night 811(N) 862(L/L)	964(N) 1,000(L/L)	- -	- -	- -	<u>sunk</u> <u>U.618 returned</u>	<u>U.421</u> <u>U.471</u>
Patrols off Cape Finisterre	Day NIL	44	-	-	-	-	
	Night 16(N) 43(L/L)	33(N) 66(L/L)	- -	- -	- -	- -	

Doenitz abandons reinforcement

Nothing had been heard of U.731 at U-Boat Command (B.d.U.) since 22 April, four days after sailing. U.960 reported clearing into the Mediterranean on 17 May, but all efforts to raise U.731 on radio failed, for she had been sunk on 15 May. On 20 May, she was given up as lost and posted missing.

This loss, added to recent ones, underlined the increasing threat from the strong air surface defences in the Strait of Gibraltar. Doenitz ordered that no more U-boats were to attempt the passage. Sinkings inside the Mediterranean during May reduced the total inside to eleven boats.

Anzio(1)

The German Naval Command Italy was caught unprepared when the Allies effected their surprise landing at Anzio on 22 Jan. 44: the only part they could play in the counter offensive was in laying mines, in light attacks with a few small surface craft and in the employment of submarines. There were on that date 15 U-boats in the Mediterranean (including the one which had passed through Gibraltar Strait the previous night) and about three-quarters of them were in the western area. But none were in the vicinity of Anzio. January was a particularly unfortunate month for the U-boat command, for the number of U-boats laid up for repair was very high. On 12 January, there was only one effective boat (U.616) in the western basin and there were none in the eastern basin. One was expected to be ready in Pola by 12 January and five in Toulon by 21 January. By scraping the barrel, two boats were expected to arrive in the assault area on the 24th, (2) but a third boat which left Toulon on the 22nd to join them was forced to return the following day. By the end of January, all three were on patrol in the beach-head area, while a fourth was to leave Toulon on the 30th. This was the limit; in answer to the urgent demands of German Naval Command Italy for more U-boats, none were forthcoming, as there were no more operationally effective boats in the western Mediterranean.

Cautious tactics

The Submarine Tracking Room at C.-in-C. Mediterranean H.Q. reported at the end of January that U-boats were displaying less determination in pressing home their attacks and that, except in isolated instances, self-preservation appeared to be the primary characteristic of U-boat commanders. (3) For the reasons for this pessimistic attitude one must look to several developments. These included the Allied

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- (1) Captain U-Boats Mediterranean war diary January 1944. (F.D.S./Admiralty).
 - (2) The first D/F of a U-boat occurred on 26 Jan. 44 - (Admiralty CB.04050(44)(1)).
 - (3) Submarine Tracker's Log C.-in-C. Med. (Admlty Hist. Sec.): Admiralty CB.04050(44)(4).

superiority in radar devices, a slow but steady increase in Allied surface craft escorts for convoys, the weight of air patrols, the efforts towards improving co-ordination of Allied air and sea anti-submarine operations and a formidable backlog of repairs and re-equipment projects in the U-boat flotilla.

Yet the U-boat menace had by no means been overcome in January. The utmost vigilance and radical improvements in air/sea co-operation were still needed. Caution and ingenuity continued, however, to be noticeable in U-boat operations. Survival was not only important for its own sake, but because the great array of Allied shipping offered unrepeatable opportunities for enterprise.

On 2 June, conclusions from U-boat tactics were summarised by the C.-in-C. Mediterranean.(1) When hunted, the U-boat would seek to surface soon after dark to charge. If forced to dive by aircraft, it would probably surface again within 30 minutes to withdraw from the area before the arrival of surface hunting forces. It would not dive deep until the surface forces gained Asdic contact, but then it would dive to about 500 feet. It would hide below density layers if they were present. U-boats were probably aware of the principles of creeping attack and could be expected to seek evasion by a burst of speed under helm. Except when evading attacks, they would maintain the minimum speed, probably 2 knots or less. They would be dangerous when surfacing and could be expected to fire a torpedo then. Contact was growing more difficult owing to a noticeable decrease in radio signalling from U-boats.

U-Boat successes against Allied warships(2)

It was not until 16 February that a U-boat scored the first success of the year against Allied warships with the sinking of L.S.T.418 off Anzio. This was quickly followed by a much more spectacular effort. On 18 February, the cruiser H.M.S. Penelope was torpedoed by U.410(3) in 40° 55' N, 13° 25' E., in the swept channel some 35 miles west of Naples and sank 10 minutes later after a violent explosion. There were about 250 survivors, but the great part of her officers and ship's company, including the Captain and Commander, were lost. She had been operating off Anzio in support of the land forces and was the second cruiser lost in operations off the beachhead: the first was H.M.S. Spartan sunk by aircraft on 29 January. To the naval losses off Anzio were added those of the destroyers H.M.S. Janus, sunk by aircraft on 23 January, and H.M.S. Inglefield, sunk by aircraft on 25 February, and of five major assault vessels. L.S.T.348 was sunk on 20 February by U-boat.

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- (1) File MACAF/106/AIR Encl. 36A (Ref. AFHQ/292 at Cabinet Historical Archives).
 - (2) Major British warships and Allied (other than U.S.) warships lost in the Second World War (Admiralty (A.H.B.IIK/113/2(A))).
 - (3) Commander Horst - Arno Fenski, Ober Leut. Zur-See; (Knights Cross), an ace credited with the sinking of 70,000 tons of shipping, including H.M.S. Penelope. Transferred to U.371, sunk on 3 May 44.

The next important success came on 30 March, when U.223, cornered in a 'Swamp' hunt, torpedoed the destroyer H.M.S. Laforey in 38° 50' N, 14° 18' E.

April was a quiet month in the Western Basin, but, in May, operations flared up. On 3 May, U.371, with Fenski in command, sank the U.S.N. destroyer Menges and the French destroyer Sénégalais on the 4th, both off Djidjeli; on 5 May, U.967 sank U.S.N. destroyer Fechteler off Alboran; on 9 May, U.230 sank the U.S. P.C.558 north of Palermo.

Most of these sinkings were only isolated incidents in extended operations which will be fully related in the following section. The point made here, as in the record of U-boat successes in sinking Allied merchant vessels, is the high potentiality for destruction retained to the very limit of their resources and strength by the small, but very determined force of U-boat commanders and crews in the spring of 1944. When the full measure of the handicaps mounted against them in this period is weighed against their achievements and their will-to-survive, the historian is forced to allow them unqualified praise.

U-boat successes against Allied merchant ships(1)

January 1944 was the first month of the Mediterranean war during which there were no merchant shipping casualties to U-boats. On two occasions, however, ships reported underwater explosions in their vicinity: these were probably torpedoes exploding at the end of their run. The first was reported by H.M.S. Cleveland on 9 January off Bougie, while she was escorting five surfaced Italian submarines to Gibraltar. Although no damage was inflicted, a German communiqué claimed the sinking of two Allied submarines.(2)

In February, U-boats sank six ships of a total tonnage of 21,706 G.R.T. Several merchant ships were damaged, two off Bone and one off Latakia.

In March, U-boats(3) sank four ships (two in convoy) of a total tonnage of 33,724 G.R.T.

- (1) Submarine Tracker's Log, C.-in-C. Med. (A.H.S./Admty): British, Allied and Neutral Merchant Shipping losses 1939-1945 (A.H.S./Admiralty:B.F.114/A.H.B.(1))
 (2) Ibid.
 (3) British, Allied and Neutral merchant ship losses to U-boats - Mediterranean, January to May inclusive 1944.

Month	Flag	G.R.T.	Ships
Jan.	British	nil	nil
	Allied	nil	nil
	Neutral	nil	nil
	Total	nil	nil
Feb.	British	7,154	1
	Allied	14,352	2
	Neutral	200	3
	Total	21,706	6
March	British	nil	nil
	Allied	30,365	3
	Neutral	3,359	1
	Total	33,724	4
April	British	nil	nil
	Allied	14,386	2
	Neutral	nil	nil
	Total	14,386	2
May	British	7,147	1
	Allied	nil	nil
	Neutral	nil	nil
	Total	7,147	1

For details of sinkings due to aircraft and mines refer to Appendix 30.
 Source: Admiralty Historical Section, 23 Jan. 57.

In April, a U-boat, based on Salamis, torpedoed two ships off Derna - S.S. Meyer London and S.S. Thomas Masaryk - sinking the first, damaging the second. Total losses that month to U-boats were two ships - 14,386 G.R.T. In May, U-boats scored their last successes. On 9 May, U.435 sank S.S. Fort Missenabie (7,147 G.R.T.) off Calabria and on 14 May, U.616 torpedoed S.S. Waldron and S.S. Fort Fiddler off Cape Tenez, damaging them both.

Total sinkings in the first five months of 1944 from all causes are given in footnote (3) of the previous page.

When punitive operations by aircraft and/or surface craft followed any of the above-mentioned sinkings, full details will be related later in one of the two sections on Allied anti-submarine operations.(1)

Allied policy (January to May 1944)

Anti-submarine aircraft units move forward and re-equip(2)

To meet the needs of Anzio convoys and adjust the Coastal Air Force to changing conditions, a series of forward moves and programmes of re-equipment was initiated. First came a setback. On 7 Jan. 44, No. 219 Beaufighter Squadron was ordered to return to the U.K. This left No. 153 (R.A.F.) and the 417th (U.S.) Squadrons the only night Beaufighter squadrons on the Northwest African coast. A small detachment of No. 153 Squadron was maintained at Bone while other detachments were moved up and down the coast-line as required.

On 11 Jan. 44, No. 458 Squadron commenced re-equipping with Leigh Light Wellingtons to replace their Mark XIII Wellingtons. On 22 January, to counter the U-boat threat off Anzio, eight Leigh Light Wellingtons of No. 36 Squadron were detached to the 62nd Fighter Wing to operate from Montecorvino; all serviceable Hudsons of No. 608 Squadron were moved there from Grottaglie (in the Heel) to maintain day and night patrols off the beach-head. In Corsica, a detachment of four Marauders was held at Ghisonaccia for reconnaissance for the Mitchell G's and Spitfires on medium altitude strikes.

On 5 Feb. 44 the operational boundary between Malta (now under the operational command of the Coastal Air Force) and the 62nd Fighter Wing was altered so that the whole of the Tyrrhenian Sea (except the area near the coastlines of Corsica and Sardinia) was under the control of 62nd Fighter Wing. M.A.C.A.F. Command Post closed down. No. 325 Wing was moved from Borizzo (in Sicily) to Montecorvino and absorbed Nos. 69 and 608 Squadrons. Gibraltar lost two Hudson Squadrons to the U.K. The Coastal Air Force was instructed to give up one General Reconnaissance Squadron as part replacement. They sent No. 52 Squadron to Gibraltar, partially replacing it at Borizzo by a Flight

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- (1) 'Swamp' operations and other operations (including port bombing) against submarines.
 - (2) M.A.C.A.F. O.R.Bs.

of No. 500 Squadron (Hudsons). On 22 Mar. 44, No. 6 Squadron was transferred from Middle East to M.A.C.A.F. It was equipped with Hurricanes with rocket projectiles and detached to Borgo and Grottaglie.

It had been found that the Baltimore was an extremely inefficient type of general reconnaissance aircraft, with inadequate range and depth charge load and no A.S.V. Two squadrons (Nos. 52 and 69) were therefore sent back in April to the U.K. A welcome reinforcement was that on 15 April of No. 17 S.A.A.F. Squadron from the Middle East. Equipped with 16 Venturas, it began operations at C.A.F. Bone to relieve No. 458 Leigh Light Wellington Squadron for service in Sardinia.

The Mediterranean network of D/F Stations was steadily improved in this period; U-boat commanders' caution in the use of radio was doubtless largely traceable to this fact. No opportunity was lost of covering the area of a D/F fix with aircraft in order to deny the U-boat all but the briefest periods on the surface. In March, new stations were opened at Alghero and Naples, both in good strategical positions for fixing U-boat transmissions.

Two hunting groups of destroyers were formed in January and did yeoman service during the Anzio operation. American patrol boats (P.C.s) were also used to good effect in that area and, on 29 April, frustrated the first offensive operations of the German Small Battle Units employing one-man torpedoes.

Magnetic Air Detection and retro-bombs(1)

The 63rd U.S.N. Catalina Squadron, which formed part of the U.S. reinforcement to the Bay of Biscay operations in July 1943, was fitted with M.A.D. The characteristics of this equipment were not suitable for the extended patrols in the deep open waters of the Bay. In January 1944, the squadron was moved to the Moroccan Sea Frontier and immediately proved the full advantages of M.A.D. and retro-bombs when used against submerged U-boats attempting to penetrate the Strait of Gibraltar. Three U-boats had been sunk or shared with surface craft by mid-May 44: the block patrols carried out by this Squadron were a major contribution to Doenitz's decision to abandon attempts to reinforce the U-boat strength in the Mediterranean.(2)

Drop in ship losses to U-boats among increasing convoys

The number of merchant vessels convoyed in the Mediterranean increased from 1160 in January to the record figure of 1294 in March. The figures were maintained in April and May, when 1266 and 1244 vessels respectively passed in the main convoys.

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- (1) A detailed account of these weapons and equipment is to be found in Appendix V of Volume IV of this series.
 - (2) Appendix V in Vol. IV of this series.

Against these massive totals, the complete absence of casualties to U-boats in January was a welcome relief. January was the first month, indeed, of the entire Mediterranean war, with a clean sheet. The figures from February to May exclusive were well below the average, and provided evidence of the efficacy of the air force and naval methods then in current use.

Allied 'Swamp' operations (1 January to 31 May 1944)

The 'Swamp' of 7 to 12 Jan. 44(1) - the Oran hunt

On 7 January, at 0035 hours, in a position approximately 30 miles north-west of Oran (Algeria), the biggest 'Swamp' hunt yet undertaken in the Mediterranean was begun. Four main areas were involved. These will be referred to as the Oran, Cape de Gata, Alicante and Balearic Hunts. Mediterranean Allied Coastal Air Force (the new title dating from 1 Jan. 44 of Northwest African Coastal Air Force) - which with 50 aircraft flew 150 sorties and nearly 1,000 hours in five days, played the largest part, but generous aid was given by Gibraltar-based aircraft and surface craft of the Royal Navy.

The Oran hunt started with a D/F fix at 0035 hours on 7 Jan. 44, in the position 36° 00' N, 01° 00' W.(2) A Hudson on convoy escort was signalled to proceed to this position, but the aircraft was not contacted owing to atmospheric conditions and so a valuable period was lost. It was known that a U-boat had been patrolling in the area(3) and that two others (U.343 and U.952) were attempting the passage of the Strait at about that time. The issue was therefore confused at the outset and the fix was a false one. Operation 'Swamp' was ordered from La Senia, with three Hudsons of No. 500 Squadron covering the first area of the search. Two destroyers and one minesweeper were ordered out from Oran to co-operate. Although the area was covered by them within two and one-half hours of the first sighting, naturally no contacts were made. At 0900 hours, the hunt zone was extended and four more destroyers ordered out from Oran. The sweep continued through the hours of daylight, with Hudsons searching and four Latecoeres of 2S Squadron patrolling the perimeter of the area. At 1700 hours, four Leigh Light Wellingtons of No. 36 Squadron widened the field and extended the search into the night. In the meantime, Gibraltar-based Wellingtons were dispatched to search the waters off the southern Spanish coast for the U-boats suspected of having forced the Strait. This expansion of the net led the Allies into the actual area of possible contact.

At 2225 hours on 7 Jan. 44, the first aircraft attack was made. Wellington 'H'/No. 36 Squadron made a contact at 6 miles in a position 15 miles E.S.E. of Cape de Gata

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- (1) File CAF/3/4/AIR Encl. 3A and 6A (A.F.H.Q./277/3 at Cabinet Historical Archives
 - (2) There was no U-boat in this position at the time according to the logs of the three U-boats and F.d.U. (Foreign Docs./Admiralty).
 - (3) This was U.380, lying close off the Southern Spanish coast at the time.

on the Spanish coast.(1) The pilot turned away, keeping contact at 4 miles range, manoeuvred for an approach and an attack up-moon. At 2290 hours, U.343 was sighted on the surface, travelling at 18-20 knots: she had machine guns and 20 mm guns on and abaft the conning tower. Then followed an attack to which the U-boat fought back energetically. Some depth charges undershot; two straddled the U-boat's stern and two exploded on the starboard quarter. U.343 opened up with tracer fire which increased in accuracy as the range closed and continued after the attack. The Wellington rear gunner returned the fire, scoring hits on the conning tower. The U-boat remained on the surface for 14 minutes after the attack, during which time 'H'/36 dropped markers. Contact was then lost, probably during the few seconds of the crash-dive. At 2358 hours, three destroyers were making for the position of attack.

At 2244 hours, approximately 15 minutes after aircraft 'H'/36's attack, Wellington 'P' of No. 179 Squadron from Gibraltar made an A.S.V. contact 10 miles west of the position reported by 'H' and, switching on its Leigh Light, discovered a surfaced U-boat - U.380 - which had moved westward and southward, with decks awash. Subjected to heavy fire, which damaged the port wing and compelled his return to base, the pilot pressed home his attack and saw six of his depth charges(2) explode across the U-boat's stern: he left her with bows high and stern submerged. It was first thought, but later disproved, that this was U.343, attacked earlier by 'H'. From this period, the whole of the extended operations were concentrated off the Spanish coast, with a gradual drift to the north-east towards Ibiza Island and Toulon, the U-boat base.

The 'Swamp' of 7 to 12 Jan. 44: the Cape de Gata hunt

Two Leigh Light Wellingtons of the four already airborne on the original 'Swamp' were diverted to the position of the attack by 'H', both having intercepted the sighting report; and three more Wellingtons were dispatched to re-start a 'Swamp' with the position $36^{\circ} 40' \text{ N}$, $02^{\circ} 05' \text{ W}$ as datum. This second hunt became known as the Cape de Gata Hunt. The Navy reported that five destroyers would be in the area by 0300 hours on 8 January.

At 2340 hours/7th, aircraft 'G'/36 made an Asdic contact in $36^{\circ} 41' \text{ N}$, $02^{\circ} 17' \text{ W}$, which disappeared on homing. At 0126 hours/8th, the Polish destroyer Slazak signalled that she had witnessed an attack in the position $36^{\circ} 34' \text{ N}$, $02^{\circ} 50' \text{ W}$. and proceeded to hunt this position. At 0530 hours/8th, she found U.380 surfaced in $36^{\circ} 28' \text{ N}$, $02^{\circ} 53' \text{ W}$, but, before she could attack the U-boat submerged: a Hudson was diverted to co-operate with the Slazak. No further contact was made with U.380.

At 0340 hours, 8 January, Wellington 'R' from Gibraltar reported a fully-surfaced U-boat approaching Alicante. This was U.952, which sighted the aircraft.

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- (1) $36^{\circ} 40' \text{ N}$, $02^{\circ} 05' \text{ W}$.
 (2) Mark XI, 250 lb.

The aircraft passed over at 1,000 feet altitude; but while it was preparing to attack, the U-boat dived and was lost. A Leigh Light Wellington on transit from Blida to La Senia was immediately diverted to the area to carry out a square search, but U.952 completed its journey to Toulon without further incidents.

There were now three distinct centres of hunt - the Cape de Gata area, the Alicante area and the 'Slazak' position. The Coastal Air Force, realising that its available aircraft could not effectively cover all three, requested A.H.Q. Gibraltar to assume responsibility for U.380, sighted by the destroyer Slazak.

The first flight of Wellingtons on the Cape de Gata hunt was relieved by three Hudsons. Two more Hudsons extended the search during the afternoon to the East and Northeast. Nothing materialised. At 1930 hours, the zone was again widened and three Leigh Light Wellingtons of No. 36 Squadron were added to the search party along the Spanish coast. U.380 pursued a zigzag course, reaching Alboran Island on 12 January without molestation.

U-boat movements 7 - 12 January off Southern Spain(1)

The record of this long series of hunts becomes intelligible as soon as the U-boat logs are examined. The following brief outline of the movements of the three U-boats involved will underline the value or otherwise of the Allied effort and throw light on the reasons why dispersal of that effort led to failure.

On 7 January, all three U-boats were lying close in to the Spanish coast. The two boats, U.952 and U.343 which had recently forced the Strait were making for their new base at Toulon; and they never deviated, except for tactical submer-sion, from that course. U.952 was several hours ahead of U.343 and this difference in time itself was one of the causes why the tenuous Allied search pattern was stretched beyond the capabilities of the combined Allied hunting forces as time proceeded.

U.380 left Spanish waters early on the 8th. By 1000 hours, she was already aware of the presence of destroyers and aircraft and from thence on to 12 January, she pursued an intricate zigzag pattern, mostly submerged, which led her to the area of her normal billet off Alboran Island, on the convoy route. Indeed, at 0728 hours on 11 January she felt safe enough to fire a torpedo at a ship in convoy, well aware that the pattern of 'Swamp' had by then moved up towards Ibiza. Obviously, a few aircraft from Gibraltar, with no co-operating surface forces, could not inaugurate a 'Swamp'.

With this general view of the three U-boats working in three distinct areas, the Allied confusion, heightened by a number of misleading fixes, tactical errors, long gaps in communications and lack of practice in co-operation on that scale is easier to understand. It is not apparent why when three separate hunts were developing simultaneously,

(1) War Diary of F.d.U. Mediterranean and logs of U.343, U.380 and U.952 (F.D.S./Admiralty).

all resources were not pooled and concentrated on one datum; but due allowance must be made for the fact that Spanish territorial waters and the presence of numerous fishing craft in the area constituted a very severe handicap.

The 'Swamp' of 7 to 12 Jan. 44: the Alicante hunt

The third of the three hunts, each of which constituted a 'Swamp' in its own right, began at dawn on 8 January. As the three U-boats changed position, and as new datum points were used after nearly every sighting, the hunts soon lost their identity and merged into one too vast in extent for a reasonable prospect of success.

The Alicante Hunt, started at dawn on 8 January by two Leigh Light Wellingtons, was extended at 1500 hours with four more Wellingtons. No sightings were made. At 0100 hours on 9 January, a further five Wellingtons were airborne to extend the search still further. There was one fading contact, a report of a blue oil-patch and a report(1) at 1021 hours of a long thin streak of brown oil.

In the closing hours of 8 January, U.343, discovered a few miles East of Cape Gata, fought out a battle with six aircraft, shot down two and escaped. The contest opened at 2114 hours on 8 January, when Wellington 'N'/No. 36 Squadron made an A.S.V. contact and, at 2 miles range, found U.343 fully-surfaced in the position 36° 54' N, 01° 45' W. A good deal of fire was exchanged, but the U-boat remained surfaced. Wellington 'N', which had expended 600 rounds of ammunition, broke off action and commenced to shadow. Twenty minutes later, Wellington 'Y' made a contact and reported the U-boat at 36° 52' N, 01° 50' W. As the aircraft closed in to attack U.343, it (the aircraft) passed over another unidentified vessel, which opened fire. The aircraft attacked U.343 and released a stick of depth charges. Moonlight was sufficient and the Leigh Light was not used. U.343 opened fire hitting 'Y's' port wing and setting fire to the aircraft. It was ditched; four of the crew were picked up by a Spanish cutter. The survivors' belief that there were two U-boats half a mile apart, one probably damaged, was incorrect. U.952 was already in the Alicante area.

The sighting signal broadcast by aircraft 'Y' was received by Wellington 'B' and 'M' of the same squadron. They located U.343 in the stated position. 'B' attacked first with eight depth charges spaced at 40 feet. Three minutes later, 'M', observing the U-boat still surfaced, attacked with eight depth charges. The first depth charge undershot. The result of the remainder was not observed owing to strong opposition from the U-boat, which wounded the rear gunner. A mile away, oil streaks a mile long could be seen. U.343 remained surfaced while 'B' was homing and dropping markers.

Two more attacks were made against this highly resistant U-boat. Catalina 'J' (from Gibraltar) having intercepted a radio message, sighted flak at 6 miles. At

(1) Receipt unconfirmed.

2245 hours/8th, U.343 was seen circling at 10 knots, apparently disabled, in $36^{\circ} 53' N$, $01^{\circ} 45' W$. The Catalina attacked immediately with depth charges, estimating a straddle or slight over-shoot: the front gunner got a burst of 100 rounds into and around the conning tower. The aircraft sustained damage from cannon fire which forced it to return to base. U.343 still remained surfaced.

The last to attack was Wellington 'R', who arrived a few minutes after the Catalina attack. Heavy accurate fire met the aircraft when it was a mile away: at 80 feet - immediately before the depth charges were released - the port wing was hit and set on fire and the elevator control put out of action. The aircraft came down in the sea. The captain, the only survivor, on regaining consciousness in the water, found a dinghy afloat, but no sign of the Wellington or crew. Some three or four minutes after he boarded the dinghy, it was rammed by the U-boat. Feigning unconsciousness, the captain saw six members of its crew in the conning tower. They ignored him. He watched U.343, still surfaced, head off on a westerly course.(1) He was picked up and taken to Gibraltar.

Wellington 'N' had remained over its U-boat until 2303 hours, when it left to contact destroyers, thereby committing an error of judgement. Failing in this attempt, it returned to the scene, but the U-boat had vanished. At 0100 and 1424 hours/9th, destroyers reported that they were hunting the position. These destroyers had first been ordered to hunt the U-boat sighted by 'Z'/No. 458 Squadron at 0808 hours on the 9th: then, at 1250 hours, they were ordered to abandon this hunt and to proceed to the position of the sighting by 'N'/No. 458 Squadron.

At 2320 hours/8th, La Senia was ordered to dispatch a Wellington to make a square search and to drop markers. At midnight, two Hudsons were airborne to attack with rocket projectiles. Neither destroyers nor aircraft made any contacts or sightings.

Operation 'Swamp' was recommenced with $37^{\circ} 01' N$, $01^{\circ} 47' W$, as datum. Two Wellingtons of No. 36 Squadron were airborne to cover the first 8-hour phase. This closes the account of the six attacks which formed part of the Cape de Gata hunt. The course of the Alicante hunt, which had started at dawn on the 8th, can now be resumed.

It is worthy of note that at the time, the Group Captain in charge of General Reconnaissance Operations recorded that neither the Submarine Tracker with the Operations and Intelligence Centre of C.-in-C. Mediterranean nor anyone else had anything but a very vague idea of the identity and movements of the various U-boats.

At 0751 hours on 9 January, Wellington 'N'/No. 458 Squadron found a submerging U-boat in $38^{\circ} 00' N$, $00^{\circ} 07' E$, straddled it with depth charges, without observing any results, dropped a smoke float and continued to search the area for two hours. This was U.343.

(1) Repeat westerly. But, with long periods of submer-
sion and resting on the bottom U.343 followed a
general north-easterly course and eventually reached
Toulon, badly damaged.

At 0808 hours, Wellington 'Z' of the same squadron sighted a U-boat three miles away with decks awash in the position 37° 34' N, 00° 35' W, but lost it. A Gibraltar Catalina saw the same U-boat, but, again, it had submerged before attack was possible. Homing was carried out. At 1400 hours, destroyers arrived and were given search bearings by the Catalina.

To follow the sighting of aircraft 'Z' and 'N', another Wellington was sent at 1008 hours on 9 January, and two more Wellingtons before mid-day, to search the area. In the evening, two further Wellingtons were dispatched to continue the hunt. Meanwhile, five Wellingtons of No. 36 Squadron carried out a new area search extending from Alicante to the South-West approaches to Ibiza Island. This search joined up with the North-Easterly extension of the hunt between Cape de Gata and Cape Palos.

At 0100 hours on 10 January, a signal was received from the destroyer H.M.S. Atherstone that she had attacked a good contact in position 38° 36' N, 00° 30' E, that is in the most north-easterly search area covered by aircraft. She remained in contact for some time and dropped a considerable number of depth charges. Wellingtons were in the area and aircraft 'L' of No. 36 Squadron established a contact in 38° 02' N, 00° 24' E, which disappeared. The aircraft signalled to two destroyers in the vicinity and to base. These contacts were in fact, misleading, for neither U.952 nor U.343 were in those positions at the time quoted.

The 'Swamp' of 7 to 12 Jan. 44: the Balearic hunt

As a result of declining aircraft serviceability and accumulating evidence of the north-easterly progress of the U-boats, it was decided at 1415 hours on 10 January to abandon the southerly searches around Cape de Gata and Cape Palos, and to concentrate on an area South-West, West and North-West of Ibiza (Balearic Islands). At 1430 hours/10th, Hudsons were withdrawn from the Cape Palos hunt, and later, Wellingtons were recalled from their search off Cape de la Nao. They were replaced and two further search areas North and South of Ibiza were initiated: Blidah station was instructed to cover those two zones until dawn of the 11th. From the time when aircraft acted on H.M.S. Atherstone's attack, through the remainder of the night 9/10 and the following day, the 10th, a total of seventeen Wellingtons and twelve Hudsons were engaged on the two searches.(1)

The final sighting in these protracted operations was reported by Wellington K/No. 458 Squadron at 1706 hours on 10 January due West of Ibiza. The conning tower of a U-boat was reported sighted at 4 miles in the position 39° 00' N, 00° 53' E. By the time the aircraft had reached the position, the U-boat had submerged, it was stated. There was, in fact, no U-boat there. For four and one-half hours, 'K' searched the area. The naval forces were still, as they had been since the first hunt began, insufficient in numbers and those engaged gave insufficiently frequent situation reports. For some reason unexplained, perhaps by

(1) Alicante to the S.W. approaches of Ibiza: and the N.E. extension of the Cape de Gata and Cape Palos area.

reason of ignorance of the composition and whereabouts of the co-operating surface force, it was not until 2008 hours/10th that 'K' signalled the position to two destroyers on patrol and to two of the returning Wellingtons. These latter aircraft returned to the area and the patrolling Wellington was diverted to it, but no further incidents occurred.

A total of eighteen Wellingtons patrolled the waters round Ibiza during the night and the following day - 11 January. In the morning of 11 January, the searches South and South-West of Ibiza were abandoned and the search continued in the area of the last sightings and North of it. During the night 11/12 January, three Wellingtons searched along the estimated track of the U-boat for 180 miles towards the base at Toulon, flying very low and switching off their A.S.V. whenever moonlight was sufficient for a sighting. But they saw nothing. At 1015 hours on 12 January, the hunt was terminated.

In addition to the few sorties flown by Gibraltar aircraft, a total of 150 sorties amounting to 984 hours was flown by aircraft of the Coastal Air Force.(1)

Improvements in combined hunting methods after the 'Swamp' of 7-12 Jan. 44.

Full vent was given to the universal disappointment felt at the escape of the U-boats after such an expense of effort. A meeting was held on 14 January at Coastal Air Force Headquarters in Algiers. The Naval and Air members called were those most directly concerned in co-operation against the U-boat threat.(2) From their deliberations and some constructive internal criticism, the following appraisal of the problems involved and decisions directed to the radical improvement of combined anti-submarine operations were made.(3)

(1)	Squadron	Type	No. of Sorties	Hours Flown	
	No. 36	Wellingtons	59	412 hours	33 minutes
	No. 458	Wellingtons	36	267 "	25 "
	No. 500	Hudsons	45	261 "	24 "
	No. 14	Marauders	4	27 "	15 "
	2.S.	Latecoeres	6	15 "	45 "
	Totals		150	984 hours 22 minutes	

(2) Naval Members:

Captain R.M. Dick (C.O.S. to C.-in-C., Med.)
 Commander W. A. Adair, R.N. (S.O. Operations)
 Prof. E. J. Williams (Scientific Adviser A.C.M.S.(U.T.))
 Mr. W. H. Way (U-Boat Tracking Officer)
 Lieut. Cdr. J. Clutton-Baker, R.N. (F.A./S.O.)
 Lieut. Cdr. P. A. Aubrey, R.N. (F.S.A.)
 Lieut. Cdr. H. B. Pollock, U.S.N. (A/S Officer Staff of Com. Nav. New)
 Lieut. (Sp.) W. D. Wilkenden, R.N.V.R. (S.O.(Y)).

Air Members:

A. V. M. H. P. Lloyd, R.A.F. (A.O.C., M.A.C.A.F.)
 Gp. Capt. J. H. Edwards-Jones, R.A.F. (D/S.A.S.O.)
 Gp. Capt. L. J. Bates, R.A.F. (Gp. Capt. G.R. Ops)
 Gp. Capt. T.R. Vickers, R.A.F. (C.Sy.O.)
 Wg. Cdr. D. P. Marvin, R.A.F. (C.O. No. 36 Sqn.)
 Sqn. Ldr. L. L. Pearman, R.A.F. (Ops. Research)
 Sqn. Ldr. C. J. Williams, R.A.F. (Air Training)
 (3) File CAF/3/4/AIR Minutes and Encl. 3A and 6A (A.F.H.Q.277 - at Cabinet Hist. Archives).

The main problems were realised to be:-

- (a) The reconciliation of time-lag between sighting and attack.
- (b) The difficulty of maintaining air patrols at sufficient altitude for wide-arc observation, yet positioning for low-level action before the aircraft is seen and the submarine allowed an opportunity to submerge.
- (c) Securing quick and efficient co-operation with surface craft at a period when convoy escort has a priority call on the Navy's resources.
- (d) Communications.
- (e) The drain on serviceability provoked by an extended hunt.
- (f) The necessity for exact judgement directed on the attainment of maximum intensity and accuracy of attack.

A short, sharp combined operation resulting in success would have left the major part of these problems unexposed and hence unresolved. But this was a different matter. Eight sightings and three disappearing Asdic contacts were made by aircraft; (1) and one sighting and one Asdic contact were made by surface vessels, with depth charge attacks following the contact. Nine aircraft (2) had attacked with depth charges; eight of the attacks were against the same U-boat and three were by single aircraft. The U-boat attacked by six aircraft (U.343) had remained surfaced for about 2 hours and fought out a gun battle, shooting down two aircraft and escaping. Aircraft had flown for about 1000 hours. Allied naval forces were too thinly spread and inadequate communications had prevented them coming into full play. The hunt had lasted 5 days, 9 hours, 40 minutes.

The U-boats had been very successful in their evasive measures. The question of aircraft camouflage was therefore seen to have an important bearing on the period of warning available to the U-boat. Up to this date, the majority of Mediterranean anti-submarine aircraft had been painted black, both on day and night operations, whereas, in the U.K., Coastal Command had used white paint since 1941. Black was the accepted camouflage for night bombers as a protection from searchlights, but clearly not the best for flying over the sea either by day or night. It was decided after the conference to paint the undersides of aircraft white and the sides matt white or light blue, so as to reduce materially the range at which an aircraft could be picked out by eye in daylight. It should not make the aircraft more visible at night. A start was made on 15 March on Wellingtons and Venturas. (3)

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- (1) 5 by M.A.C.A.F. aircraft and 3 by Gibraltar aircraft.
 - (2) 5 M.A.C.A.F. and 4 Gibraltar aircraft.
 - (3) M.A.C.A.F. Air Staff O.R.Bs.

Important increases were made in the altitude of flying, so as to give greater chances of sighting a U-boat while remaining undetected. Before this 'Swamp', hunting aircraft flew at 1,500 feet by day and 500 feet by night. After it, they flew at 5,000 feet by day (subject to considerations of cloud height and cloud cover) and at 500 feet at night: but this latter average was 500 to 800 feet in the case of Leigh Light aircraft with radio altimeters.

In the attack by No. 36 Squadron, all the aircraft dropped sticks of eight depth charges spaced at 40 feet. This, although intended to inflict the maximum damage, went beyond the contemporary instructions for six charges at 60 feet spacing. Such a pattern had been found to give a longer stick and more lethal attack, and, if it had been used, would have left the aircraft with a reserve of depth charges and probably deceived the U-boat crew into surfacing in the belief that the aircraft had dropped its full load.

Some of the most far-reaching decisions affected co-operation between aircraft and surface vessels. Besides tightening up signals procedure and increasing the speed, volume and circulation of reports both by aircraft and surface vessels, it was decided that aircraft should drop groups of three marine markers for the guidance of surface craft to a reported position. The issue had been confused by the presence at night in Spanish territorial waters of numerous fishing vessels carrying lights. The old Mark I and II markers were still in use, but the improved Mark III markers would soon become more plentiful. Each aircraft was to carry twelve markers in future.

The whole machinery of operational control of naval vessels was improved so that a tight hand could be kept on their movements and continuous, up-to-date information be at the disposal of the controlling unit. A combined war room at Allied Force Headquarters, manned by officers of the two services, was to establish and maintain a combined air/sea tactical plot of the situation. In this way, instead of aircraft having to leave a U-boat to find destroyers, the war room would be able to direct units to the critical position without delay.

The 'Swamp' of 20-22 Feb. 44 off Ischia Island(1)

The second 'Swamp' of 1944, (and the seventh since their inauguration on 15 Oct. 43), took place under completely different conditions. The area was the Neapolitan coast and the seas round Ischia. The time was in late February. Suitable aircraft, although mostly conveniently located, were under strength. Enemy aircraft were active in the area. Naval surface forces, although denser and more highly organized, did not act on the assumption of the presence of U-boats until it was too late. It developed in the proximity of broken enemy coastline, of minefields and a constant stream of Allied vessels plying to and from the Anzio beachhead. Communications between Coastal Air Force H.Q. in Algiers and the controlling local air unit - 62nd U.S. Fighter Wing, were poor, owing to the great

(1) File CAF/3/4/AIR Encl. 7a and 11a (Cabinet Hist. Archives AFHQ/277/3).

intervening distance. About the only constant factor was the ingenuity of the U-boat commander, who completely deceived the hunt organizers by operating among the mine-fields inshore of the 'Swamp' area.

From October 1943 to 15 Feb. 44, there had been no U-boat attacks in the Tyrrhenian Sea, although the presence of as many as three boats patrolling had been observed. It had not been reported to him, stated the Commanding Officer of the 62nd Fighter Wing, that midget submarines, night fighters and torpedo bombers were operating in the Anzio area. For those reasons, air activity had been confined for some weeks preceding mid-February to a dog leg patrol by day by Baltimores and Hudsons running roughly from Ischia Island outside (West) of Ponza Island, thence bending North to come within about 15 miles of the coast, just on the parallel of Anzio. By night, this patrol had been carried out by Hudsons, reinforced, when a threat from submarines seemed immediate, by a parallel dog leg 10 miles westward by Leigh Light Wellingtons of No. 36 Squadron.(1) In addition, Naval patrols had been operating in that area with Asdic searching.

It cannot be said that Coastal Air Force was unprepared for surprise U-boat attacks, for only ten days previously, i.e. on 12 Feb. 44, they had issued a directive to the Officer Commanding 62nd Fighter Wing assigning him No. 325 Wing, (stationed at Monte Corvino), for general reconnaissance and anti-submarine operations in the area:-

Civitavecchia coastline via Naples and the Strait of Messina to 38° 40' N, 10° 30' E. to 40° 00' N, 10° 30' E. to Civitavecchia.

No. 325 Wing comprised No. 608 Squadron (equipped with Hudsons with rocket projectiles and A.S.V. Mark II), and No. 69 Squadron (equipped with Baltimores Marks III and IV, without A.S.V., armed with 250 pound depth charges). No. 52 Squadron, based at Bo Rizzo in Sicily, (equipped with Baltimores Marks III and IV, armed with 250 pound depth charges and expected to be supplied shortly with Mark II A.S.V.) was assigned to him for operations only and administered by the A.O.C. Malta. Its role was to be naval co-operation and anti-submarine warfare by day until such time as, equipped with A.S.V., it could undertake night, in addition to day operations. The prior importance of 'Swamp' operations was emphasised and the basic instructions recalled. When his resources were insufficient to carry out a 'Swamp' on a good sighting, he was to ask Coastal Air Force Headquarters for reinforcements. The co-operation of surface craft was essential and he was to maintain the closest relations with the naval authorities.(2)

On 20 February, No. 36 Squadron (the 'travelling circus') flew from Blidah to Monte Corvino as reinforcements. The totals of aircraft available during this 'Swamp' were

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- (1) Based then at Blidah in Algiers and functioning as a flying circus for 'Swamp' hunts.
 - (2) File CAF/3/AIR Encl. 61a (A.F.H.Q.276/3 at Cabinet Historical Archives).

11 Hudsons, 9 Baltimores and 8 Wellingtons. Both Nos. 608 and 69 Squadrons were below establishment in aircraft; No. 608 was below establishment in crews. There were only eight Leigh Light Wellingtons if a long hunt should develop.

The naval craft available were, according to the 62nd Fighter Wing:-

- 5 destroyers on patrol, co-operating.
- 2 trawlers on a Ponza-Ventotene patrol.
- 3 M.L.'s on an Ischia - Ventotene patrol.
- 2 M.L.'s (Harbour Defence) on a search inshore.
- 2 M.L.'s and 2 P.C.'s(1) on a Ponza-Anzio patrol.
- 2 further destroyers in the North area as the 'Swamp' extended.
- 7 Sweepers on anti-submarine patrol seaward of Ponza-Ischia and in the Gulf of Gaeta.

Some important shipping had been proceeding without air cover. This was because of the bad weather and the strong, gusty cross wind over the Monte Corvino runway, both of which occasionally prevented aircraft from leaving and operating.

At 1715 hours on 15 February, the motor vessel Fort St. Nicholas(2) was reported torpedoed in the Gulf of Salerno(3) At the Navy's request, a 'Broom'(4) was begun, which continued until 1035 hours on the 16th, when the Naval Authorities expressed the opinion that the sinking was not the result of a torpedo. North and South air patrols were reintroduced, but at 1815 hours on 16 February, the aircraft were recalled owing to bad weather. At 2020 hours on 16 February, L.S.T.418 was sunk 15 miles south of Anzio from an unknown cause, but bad weather precluded any investigation by aircraft.

At 0415 hours on 17 February, a signal from Coastal Air Force was intercepted, giving a fix(5) on U-boats about 140 miles W. by S. of Salerno(6) at 2333 hours on 16 February. Thus, 4 hours 42 minutes had elapsed since the actual fix and reception of its data by 62nd Fighter Wing. No air patrols were up at the time. Two Hudsons were airborne at 0700 hours/17th. At 0935 hours/17th, at the request of the Navy, the search area was altered. The search continued until 1506 hours/17th when, owing to uncertainty as to cause of sinking and failure to make contacts or sightings, the hunt was abandoned.

At 2330 hours/17th, a Coastal Air Force signal to all No. 608 Squadron aircraft still airborne was intercepted, giving a U-boat fix about 90 miles N.W. by N. of Palermo.(7) The strike aircraft of No. 608 Squadron, airborne at 0008 hours on the 18th, found nothing.

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- (1) U.S. submarine chaser.
 - (2) 7,154 G.R.T.
 - (3) In 40° 34' N., 14° 37' E.
 - (4) A search operation applied when the presence of a U-boat was suspected, but no definite position could be given as datum.
 - (5) A 3rd class D/F fix.
 - (6) In 40° 40' N., 11° 40' E.
 - (7) In 39° 30' N., 12° 10' E.

News that the cruiser H.M.S. Penelope had been sunk⁽¹⁾ at about 0740 hours/18th in the swept channel some 35 miles West of Naples was received at 0835 hours. At 0904 hours, a Hudson was diverted to search the area for U-boats and, at 1031 hours, a 'Broom' was started with Baltimores. At 1630 hours, all aircraft were again recalled to base owing to bad weather. It was not until 0300 hours/19th that flying became practicable; three Hudsons were airborne on a sweep which lasted until 1750 hours, when a strong wind across the runway forced the cancellation of sorties due to begin at 1915 and 2050 hours. The clues up to this time will be noted as confusing and patternless.

Up to the close of 20 February, Naval Intelligence (stated 62nd Fighter Wing) were prepared to attribute the sinkings to either floating mines, sabotage or E-boats (several of which were known to be operating). The situation changed abruptly after 0035 hours on the 20th, when a ship was torpedoed about 5 miles S.W. by S. of Ventotene Island.⁽²⁾ Strike crews from No. 3 General Reconnaissance Operations were ordered off the windswept runway. They were finally airborne at 0525 hours on 20 February. It was then decided to organize a modified 'Swamp'. It was agreed that most, if not all, the recent sinkings had been due to U-boats and that, despite difficulties of operating along broken enemy coastline and consequent irregularities of the 'Swamp' areas, this agreement made a 'Swamp' imperative.

One handicap was that the D/F fixes from Coastal Air Force H.Q. did not usually arrive in the Operations Room at 62nd Fighter Wing for at least one hour and, more often, two hours after the time of origin, a factor likely to lead air units to exaggerate the area of search. Another handicap (already mentioned) was the Allied surface vessel traffic in the vicinity. A shore line had to be assumed to begin a 'Swamp', so the 50 fathom line was taken as the edge of the swept shipping route. No attempt was to be made to sweep shoreward of this area during the night, but by day, an aircraft was detailed for a standing search of this area in addition. As datum, the point just outside the shipping lane and minefields nearest to the point of sinking of the latest casualty was chosen, the base line running along the Allied shipping route in a general Northwest-Southeast direction. Later, in the third stage, an additional slice of area was added to cover the area alongside the shipping route.

An initial premise for inauguration of the 'Swamp' was the assumption that the U-boat would run seawards and not shorewards among the minefields. The Navy was reasonably sure that no extensive enemy sweeping had taken place along the coastal area.

The 'Swamp' developed in six phases. In the first four phases, which lasted from 0920 hours on 20 February until 1100 hours on 21 February, Hudsons flew 9 sorties, Wellingtons 8 and Baltimores 6. In the last two phases,

(1) By U.410

(2) In 40° 56' N., 13° 20' E.

Hudsons flew 8 sorties, Wellingtons 4 and Baltimores 6. They flew to the limit of their capacity, as the flying times will confirm.(1)

The only positive results achieved were as follows. At 2125 hours on 20 February, the area was enlarged from the position 16 miles S.W. of Anzio where the Fighter Direction Ship L.S.T.305 was torpedoed. A second class fix was obtained on a reported U-boat in the vicinity of this torpedoing. At 1944 hours on the same day, surface craft found and attacked with depth charges a contact in the vicinity in the position 41° 17' N, 12° 20' E, but lost contact after the first attack. At 0015 hours on 21 February, surface craft reported the sighting of a possible midget submarine to the northward of Anzio. This was all. The air units engaged had put out an admirable effort against heavy odds, but the weather and exhaustion ruled out any chance of success.

On the night 21/22 February, 62nd Fighter Wing, who had perhaps prematurely expanded the search phases, signalled to Coastal Air Force that, for the successful prosecution of the 'Swamp' a second night, more Leigh Light Wellingtons were needed. During this night of 21/22 February, one aircraft force landed away from base, leaving only seven for the second night. The Hudsons, flown to exhaustion, could not assist at night to any appreciable degree: but when five additional reinforcement aircraft were asked for, they were not available. It was decided, in view of the shortage of aircraft at the conclusion of the first full night sortie of the Leigh Light Wellingtons, to relieve them by a 'bastard' patrol covering the northern portion of the full 'Swamp' area, consisting of three Wellingtons and one Hudson. One Wellington went unserviceable; therefore this plan was abandoned and North-South patrols resumed as 'Swamp' relief at 2300 hours on 21 February.

The 'Swamp' areas, all six phases, had been covered according to plan. But lack of aircraft, bad weather and the state of exhaustion of the crews led to abandonment of the hunt after 38½ hours. Phase 6, the last, ended at 0300 hours on 22 February.

Enemy air opposition during the 'Swamp' of 20-22 Feb. 44

On 21 February, eleven Baltimores (of No. 69 Squadron) were searching in the Gulf of Gaeta area when one of them was attacked by a German fighter. The turret gunner replied, reporting hits on the enemy aircraft, which broke off smoking and disappeared. The same Baltimore was fired on and hit by an Allied merchant vessel, in spite

(1) Phases One to Four

Hudsons 9 sorties 53 hours, 22 mins. total flying time.

Wellingtons 8 sorties 59 hours 33 mins. total flying time.

Baltimores 6 sorties 25 hours 10 mins. total flying time.

Phases Five and Six

Hudsons 8 sorties 47 hours 35 mins. total flying time.

Wellingtons 4 sorties 25 hours 21 mins. total flying time.

Baltimores 6 sorties 17 hours 25 mins. total flying time.

of identification signals being given. On 22 February, when normal patrols had been resumed between Ischia and Ponza Islands, a Baltimore sighted a Ju.88 off the coast West of Rome and attacked it until the feed belt fell out of the gun. Fortunately the Ju.88 made no attack. Two other Ju.88s sighted West of Ponza made no attacks.

Unsensational as these encounters were, they were a sharp reminder of what would have to be written into the formula for the perfect 'Swamp', if air opposition and fire from own ships were likely. Coastal Air Force agreed with 62nd Fighter Wing that if the 'Swamp' area spread to the area of enemy coastline, Tactical Air Force should be asked to provide fighter cover.

Lessons from the 'Swamp' of 20-22 Feb. 44

It was unwise to extend the air search area on any but firm evidence of U-boat positions: otherwise the maximum area involving six aircraft would be reached too soon (i.e. before 24 hours had elapsed) and squadrons involved fly themselves to exhaustion. Although not admitted at Headquarters, Coastal Air Force, it seemed clear that more Leigh Light Wellingtons would have helped in a long 'Swamp'. But this was another case of supply shortage. It was agreed that the 50 fathom line was the best base to adopt. The suggestion that it should never be necessary to sweep closer inshore was due to a lack of appreciation of the U-boat commander's tactical skill, for he evaded the search by retreating inshore deep into the Gulf of Gaeta.(1) Aircraft and aircrews should be up to establishment.

Facilities for establishing fixes must be the best obtainable and adequate installations within range. Where great distances were involved, some form of disestablishment of control with improved local inter-exchange of service intelligence was advisable. Area Combined Headquarters at Naples was not yet functioning.

The 'Swamp' of 22-24 Feb. 44 off Bone(2)

The next 'Swamp' followed almost immediately, again in different conditions, off Bone (Algeria). Owing to a series of mishaps, bad weather, the presence of a British submarine and technical deficiencies in the organisation at Bone air station, it failed. From the following brief outline of events, the lessons will emerge without any underlining.

It was nobody's fault that the 'Swamp' got off to a bad start from a clean datum point. It so happened that, on the very day it opened, H.M. submarine Universal was returning from repairs in Malta to the Flotilla base at La Maddalena off north-east Sardinia by a very roundabout route.(3) This route cut into a rectangular area between

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- (1) Log of U.410 (F.D.S./Admiralty).
 - (2) File CAF/3/4/AIR. Encl. 8a and Min.6 (At Cabinet Hist. Archives. AFHQ/277/3).
 - (3) Naval Staff History: Submarines, Vol II p.193 (C.B.3306(2) A.H.B. Copy).

07° 23' E. and 07° 50' E. which was declared a total bombing restriction area northwards during her transit.

At 1215 hours on 22 Feb. 44, two merchant ships - S.S. Peter S. Ogden(1) and S.S. George Cleave(2) in the west-bound convoy "Rump" (G.U.S. 21) were torpedoed by U.616 in the position 37° 22' N, 07° 12' E, (just North of Cape de Fer (Algeria)). A "Swamp" was ordered forthwith, to be carried out from Coastal Air Force Station Bone, on the above-named position and with 1200 hours as datum time: but owing to the bombing restriction covering the movements of H.M. submarine Universal, aircraft were not to bomb before dusk(3) - a serious setback during a critical period. Earlier in the day, at 1016 hours, the pilot of a Dakota aircraft of 267th Squadron had reported sighting a north-bound submarine, surfaced in a position well within the restricted area, which let off a white magnesium flare and was assumed to be H.M. submarine Universal.

In Phase One, six Wellingtons/No. 458 Squadron covered in stages the patrol from 1405 to 2200 hours. One of these aircraft returned to base with Asdic and radio receiver trouble; the first replacement aircraft went unserviceable on the runway; the second went unserviceable while airborne en route to the area; the third did not arrive on patrol until 0230 hours/23rd. The area was thus left uncovered by aircraft for 4 hours, 40 minutes. Phase Two came into force at 2200 hours/22nd and ended at 0600 hours/23rd. During these two phases, one frigate and three corvettes carried out a triangular search to 30' North of the datum point and four motor launches patrolled inshore of the 'Swamp' area. Surface craft were in the area for 3½ hours of the period not covered by aircraft. So far, the continuity of air/sea co-operation had hardly existed in the full sense required for the perfect 'Swamp'.

The third 'Swamp' phase came into force at 0600 hours/23rd. At 0607 hours, a U-boat was reported by ships to have signalled. A fix was obtained on the position 37° 50' N, 07° 00' E, well within the area of two aircraft patrolling one of the four legs. The 'Swamp' area was moved further West; when the fourth 'Swamp' phase was introduced at 1400 hours, the datum point was moved to 7° E. During this fourth phase, three of the six legs were left uncovered by aircraft for varying periods of 1 to 1½ hours, owing to engine and/or Asdic defects.

The naval search units, reinforced by H.M. destroyer Blankney, continued patrolling. At 2200 hours, the fifth 'Swamp' phase was brought into force: during its duration, one area was uncovered for 2½ hours when one aircraft ran out of fuel and had to land at Taher. At 0600/24th, Phase Five was enlarged by 15 miles in all directions (except eastward) to form Phase Six. At 0615 hours, a Wellington (No. 36 Squadron) received a suspicious disappearing contact.(4) At 0622 hours, a poorly defined D/F fix on a

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- (1) Which sank at Herbillon port, Cape Tukulsh.
 - (2) Towed into Bone.
 - (3) When the T.B.R. for the Universal was removed South of 38° 20' N.
 - (4) In 38° 07' N., 06° 12' E.

U-boat was obtained(1) and the hunt was modified: at 0950 hours, four of the six aircraft were recalled and the remaining two instructed to carry out a square search. Later, at 1015 hours/24th, a new phase was signalled - Phase Seven - and enlarged at 1400 hours, (still covered by two aircraft), to become Phase Eight. The naval search (codename 'Tonic') continued. At 0700 hours, the naval unit signalled its intention to remain in the vicinity of a westbound convoy route during the day and its search was divided.

Phase Nine was a failure. At 2000 hours/24th, six more aircraft were intended to relieve the two and open Phase Nine. Owing to a series of mishaps at Bone, it was not until 2100 hours that all six were airborne. Two landed with instrument trouble, two were forced back by bad weather, and the remainder were recalled at 2355 hours. Rain fell continuously: cloud base was at 500 - 1000 feet. During the night, the front passed and two aircraft covered the two northernmost sectors of the last patrol over the pre-dawn period of 25 February. Thereafter, the hunt was abandoned and the aircraft recalled at 0750 hours.

The squadrons involved - Nos. 36, 293, 458 and 500 had flown a total of 49 sorties, but bad weather and faulty equipment had defeated the object of the effort by creating blanks in the cover.

Throughout the search, U.616 was in the area and thereafter proceeded to the Salerno area. The U-boat headquarters recorded its movements without any comment suggesting any strenuous operations.(2)

Lessons from the 'Swamp' of 22-24 Feb. 44.

Bad weather could defeat a 'Swamp'. The critical period of this hunt, reported the O.C. No. 458 Squadron (when pressed for explanations of the numerous mechanical breakdowns), was immediately after the contact by aircraft T/No. 36 Squadron during the sixth phase. The contact was believed genuine; the U-boat was held down in a definite area. It was fair to claim that had the weather not deteriorated the U-boat would have been forced up and attacked. As it was, she probably surfaced at about midnight and left the area during the bad weather. Aircraft were flying in very bad navigating conditions, bumpy air, bad visibility and shifting winds. They could not check by astro; high frequency radio was almost useless.

It had been a continuous battle for serviceability. The actual concentration of forces had been speedy. No. 500 Squadron Detachment brought skeleton ground crews and were largely self-supporting for maintenance. No. 36 Squadron (the 'travelling circus') did not bring ground crews in their aircraft; this resulted in a lack of specialised fitters. No. 458 Squadron was caught at a very awkward juncture from 22 to 25 February in the middle

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- (1) In 38° 00' N., 07° 00' E. approximately.
 - (2) P.G./30982/(F.D.S./Admty) and F.d.U. war diary.

of conversion to superior equipment. Some four to six aircraft were detached and two or three were unserviceable. The Special Equipment Section had to repair No. 36 Squadron's A.S.Vs for them. More trained personnel, more reserves of equipment, more aircraft and self-contained mobile squadrons were some of the solutions indicated.

The Swamp of 17 - 20 Mar. 44 off Bougie(1)

The next 'Swamp' lasted from 17 until 20 Mar. 44. Several lessons learned from previous 'Swamps' were applied. The U-boat U.371 was fixed, seen and attacked twice by aircraft and several times by naval vessels, but escaped.

In this case, it is proposed to dispense with complete chronological treatment, confine attention to a bare outline of the pattern of the 'Swamp' and briefly recapitulate the reasons for its failure: for it was through careful study of the residual faults in the series culminating in this 'Swamp', added to a modicum of good luck, that an almost unbroken series of successes followed thereon.

It began at 0947 hours on 17 March, when two ships(2) in the convoy UGS.34 were torpedoed by a U-boat off Bougie, Algeria.(3) A Wellington(4) escorting the convoy reported the attack at 1013 hours and proceeded to hunt. A Ventura(5) making an anti-submarine sweep ahead of the convoy was diverted to the scene and Coastal Air Force Bone were ordered to dispatch two strike aircraft on Operation 'Swamp'. Aircraft were transferred from La Senia to Blidah. The search was divided between Blidah Station, who covered the western half, and Bone Station, who covered the eastern half. This was a logical arrangement, as the datum lay roughly between the two sectors.

The weather was generally satisfactory. The area of search was only left uncovered for a few and insignificant periods.

Naval surface craft were in some strength and very active in following up the periodic, and often delayed, information received. The Polish destroyer Slazak (carrying the Senior Officer of the convoy escort) first reported the torpedo attack. H.M. destroyers Catterick and Mendip were immediately detached from the escort to hunt. In succession, light surface forces from Bougie, Bone, Algiers and Bizerta joined the hunt.

The material circumstances of the start were therefore favourable. Moreover, the briefing was an advance on anything that had preceded it. The air controllers at Bone and Blidah were given the following special instructions:-

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- (1) File CAF/3/4/ATR Encl. 15A (A.F.H.Q. 277/3 at Cabinet Hist. Archives).
 - (2) S.S. Dempo (17,000 G.R.T.) and S.S. Maiden Creek (5,000 G.R.T.)
 - (3) In 37° 08' N., 05° 27' E.
 - (4) No. 458 Squadron
 - (5) No. 500 Squadron.

- (1) All aircraft were to establish radio telephone contact with surface craft when arriving in the area.
- (2) Aircraft were to remain on patrol in the case of Asdic failure and ask for instructions.
- (3) Lavish use was to be made of marine markers.
- (4) When homing surface craft, aircraft were to drop parachute flares when ships approached within about 15 miles.

Some of the surface forces operated to seaward, but some (remembering the U-boat off Anzio in the 'Swamp' of 20 to 22 February) operated close inshore. Surface craft were to report their position, course, speed and intentions every 4 hours. Night destroyer patrol lines were given to the aircraft. Surface craft displayed a red light screened in a drum on the quarterdeck to assist in recognition by aircraft.

The 'Swamp' failed for the following reasons. Aircraft navigation was sometimes faulty, inasmuch as the lines followed were not those mathematically calculated to give the best cover. There were omissions in reporting by aircraft and, owing to poor communications, there were failures in reception by surface craft, whose radio watches, it was suggested, should be reorganised. The spacing of the depth charges dropped was 40 feet, instead of the regulation 60 feet and this shortening of the length of the stick may have resulted in over or undershooting. The red recognition lights on deck were a failure. The pith of these shortcomings resided, then, in instrument trouble, lack of practice by signals staff in highly mobile combined operations and the failure to achieve the ideal navigational pattern of air search and the true tempo of its expansion.

U.371 remained in the Philippeville - Bougie area throughout the operations.(1)

The 'Swamp' of 29 to 30 Mar. 44 and destruction of U.233(2)

The next 'Swamp' differed from all those preceding it. Although a few aircraft participated and assisted in keeping the U-boat submerged, most of the credit for the successful conclusion goes to the four hunting ships. H.M.S. Laforey, leader of the 14th Destroyer Flotilla, held the contact for 20 hours, practically without a break and passed invaluable information to other ships when they had lost contact.

U.223, commanded by Ober-Leutnant zur See Peter Gerlach,(3) left Toulon on 16 March for the Tyrrhenian Sea. In the middle watch of 29 March. 44, H.M. Ships Laforey, Tumult and Ulster were carrying out an anti-submarine sweep off the northern Sicilian coast between Ustica and

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- (1) PG/30982 (F.D.S./Admlty.)
 - (2) Admiralty C.B.04050/44(7): M.A.C.A.F., M.A.A.F. Nos. 36, 39 and 608 Squadrons O.R.Bs.
 - (3) A very skilled and experienced officer.

Alioudi Islands. At 0450 hours, H.M.S. Ulster obtained an Asdic contact.(1) A series of attacks began which attained an ultimate total of twenty-two. The number of ships engaged increased with the arrival of R.N. and U.S.N. reinforcements and the hunt continued until the approach of darkness, with contact retained with hardly a break. Air patrols helped to keep the U-boat down, although they were not so dense as the occasion demanded.

U.223 went deep when first detected: she remained at about 700 feet throughout the hunt; but this was unknown to H.M. Ships, who had difficulty throughout for this reason in carrying out accurate attacks. Although Asdic conditions were average throughout, contact was lost at great range.

The determination and control of the Captain of H.M.S. Laforey and the excellent teamwork of the ships were the deciding factors leading to the final sinking of U.223 about 26 miles almost due North of Alioudi Island.

The moon set at midnight. H.M.S. Laforey correctly calculated the approximate time at which U.223 would surface to re-charge her batteries. Some degree of warning was obtained at 0050/30th hours, when fast hydrophone effect was heard. H.M.S. Laforey switched on her searchlights and, three minutes later, illuminated the U-boat as she surfaced. All ships opened fire. U.223 fired a torpedo at H.M.S. Laforey and sank her. Only 69 survivors were picked up. After being repeatedly hit by gunfire, U.223 was sunk at 0110 hours/30th.(2)

Coastal Air Force took little credit for this sinking. The position was a difficult one to cover at short notice. During daylight, only one Wellington of No. 36 Squadron (the 'travelling circus') was available, but at night two Wellingtons of that squadron and three Hudsons of No. 608 Squadron searched between Ustica and Alioudi in company with the four destroyers according to the principles of 'Swamp' and, in addition, six Hudsons of No. 608 Squadron and two Baltimores of No. 69 Squadron extended the pattern. The almost unbroken contact retained by the destroyers ruled out any spectacular intervention by the aircraft who made no sightings or attacks. The operation bore more resemblance to a "Strangle" than to a "Swamp".

The 'Swamp' of 1 to 2 Apr. 44 off Cape Tenez(3)

At 0310 hours on 1 April, a 'Swamp' opened off Cape Kalah (near Cape Tenez) following attacks on a contact by the surface escort of convoy "Temant". In spite of combined air/sea patrols the search was a failure and was abandoned at 1615 hours on 2 April.

U.S.S. Tominoh and H.M.S. Black Swan opened operations about 0300 hours with a depth charge attack on the U-boat contact in the position 36° 45' N., 01° 05' E (off Cape Kalah (Algeria)). Venturas of No. 500 Squadron(4) and

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- (1) In 38° 31' N., 13° 43' E.
 - (2) In approximately 38° 54' N., 14° 18' E.
 - (3) M.A.C.A.F. and Nos. 36 and 500 Squadrons O.R.Bs.
 - (4) Based at La Senia.

Wellingtons of No. 136 Squadron(1) carried out a 'Swamp' which lasted until 0615 on 3 April, the Wellingtons covering the nights. The operation never developed because contact was lost in the hours of darkness and neither aircraft nor ships were able to recover it. It may be that the U-boat dived very deep and lay on the bottom. It does not appear that surface forces hunted in any strength. Air attacks on another convoy were engaging greater interest and concentration. There is certainly no evidence of the intimate co-operation on a large scale that characterised some of the preceding 'Swamps'.

The 'Swamp' of 3-4 May 44 and the destruction of U.371(2)

By the time the month of May opened, most of the weak points in the 'Swamp' hunting methods had been noted and corrected and most of the enemy's evasion tactics allowed for. It was reasonable to hope, after a run of failures and a few successes, that a 'cast-iron' method might soon be evolved. This came about in the month of May in the Western Basin. It is of great importance, as well as of interest, to follow precisely the course of these operations. Where possible, diagrams(3) have been constructed as a guide to the understanding of the formulae for this ultimate triumph of combined operations against submarines in the Mediterranean.

In the evening of 23 Apr. 44, U.371 left Toulon for the African coast, where she patrolled for some days between Cape Bengut and Cape Sigli from 10 to 15 miles off shore. On 29 April, she received a signal from Control giving details of three convoys. On the night of 2 May at about 2000 hours, the Commander - F. H. Fenski(4) decided to surface and top up his batteries in preparation for an attack some hours later on the convoy. But screw noises were heard and before long the convoy was over him. Once the screw noises were inaudible, she surfaced to complete charging. This she never succeeded in doing. Shortly afterwards, realising that surface craft had detected her, she changed course and attempted to escape on the surface while re-charging. At about 0142 hours on 3 May, she torpedoed U.S. destroyer Menges (who had made a radar contact) off Djidjelli in the position 36° 57' N., 05° 26' E and dived. A fighter escort's report of the attack reached Coastal Air Force H.Q. at 0137 hours. Operation 'Swamp' was immediately initiated.

The air forces available were: No. 458 Squadron (Leigh Light Wellingtons) and No. 17 (S.A.A.F.) Squadron (Venturas), both at Bone; No. 36 Squadron (Leigh Light Wellingtons) at Reghaia and No. 500 Squadron (Venturas)

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- (1) Based at Blidah.
 - (2) M.A.C.A.F. Operations O.R.B. Appendix F/INT. 10 6 June 44: Admiralty C.B.04050/44/5).
 - (3) Figures 14 and 15.
 - (4) Who had sunk H.M.S. Penelope and had been transferred to U.371 when U.410 was seriously damaged in an air attack on Toulon.

at La Senia. The two Bone squadrons covered the eastern half of the 'Swamp' areas: (1) the Reghaia squadron, reinforced by five Venturas of the La Senia squadron, covered the western half.

Surface forces available were: firstly, U.S. destroyers Campbell and Pride (detached from the convoy to hunt); H.M. destroyer Blankney, U.S.S. Sustain and the French destroyers L'Alcyon and Sénégalais were ordered to the 'Swamp' area from Algiers, together with four M.L.'s (who were to patrol inshore of the 'Swamp' area). Four more U.S. destroyers were ordered from Oran to take over on 4 May. U.S.S. Medges was towed to Bougie to unload wounded.

It was at first assumed that U.371 would head North, away from the scene of its attack, to make a radio report to Flotilla H.Q. Operation 'Swamp' was intended to prevent this happening.

Immediately after receipt of the fighter's report, a Wellington of No. 458 Squadron was diverted from convoy A.C.F.28 and strike aircraft were ordered out from Bone and Reghaia; they covered Area I from 0335 hours. Although several A.S.V. contacts were reported by aircraft, they were quickly cancelled. No incidents took place until 0550 hours/3rd, when U.S.S. Campbell made creeping attacks on what she believed to be the U-boat. (2) U.S.S. Campbell and Pride and H.M.S. Blankney continued to hold the contact of a very deep submarine and made five attacks with depth charges. At 0834 hours, the contact was lost. (3)

At 1515 hours, a message from U.S.S. Campbell explained that it was thought that the first depth charge attacks had driven the U-boat into shallow water close inshore, and the Destroyer Force, six strong, was conducting the hunt parallel to the coast. The aircraft were patrolling north of the contact. In fact, Fenski had headed for the coast, on the assumption that her attackers would expect the opposite course and in the knowledge that Allied radar would be thereby confused. He lay on the bottom, unmolested and still in touch with the convoy until at about 2000 hours, when distant depth charges were heard.

'Swamp' Area I had been changed to Area II at 1130 hours; this was patrolled without incident, except for unreliable A.S.V. contacts. At 1645 hours, having received confirmation of the reliability of the ships' contacts, the 'Swamp' datum point was moved 10 miles eastward and the zero hour for the operation changed from 0130 hours/3rd to 0830 hours/3rd. In so doing, time on Area II was prolonged until 0230 hours/4th. (4) This shift

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- (1) No. 17 Squadron during the day and No. 458 Squadron during the night.
 - (2) In 36° 59' N., 05° 31' E.
 - (3) In 36° 53' N., 05° 37' E.
 - (4) Instead of changing to Area II at 1930 hours. It will be recalled that air units had been criticised for expanding the search phases prematurely.

of area was signalled successfully to aircraft of Nos. 17 and 500 Squadrons already airborne.

Phase II began at 0230 hours/4th, when a third area was opened, 16 hours after the new zero time. A.S.V. contacts were still being obtained, but were assessed as doubtful.

At about 0300 hours/4th, Fenski loaded his stern torpedo tube. The air inside U.371 was bad and he decided that his only chance lay in surfacing while it was still dark and escaping on his Diesels. They reached the surface with the batteries almost exhausted and headed for open water. On coming up, Captain Fenski soon found himself surrounded and gave the order 'Prepare to scuttle ship', but at the same time fired the torpedo in the stern tube at the Sénégalais, who had first illuminated her on a radar contact, and hit her. Gunfire of a half-hour's duration continued while the crew was abandoning ship. At 0358 hours, the U-boat was scuttled by some of her crew. Two more depth charge attacks were made on the wreck to make certain of the kill. The position was 238 degrees 3.5 miles from Ras Afia light. The first definite report of the sinking came from U.S.S. Campbell at 0635 hours, over two and one-half hours later. The 'Swamp' was cancelled at 0700 hours.

This 'Swamp' succeeded because all the material ingredients were present, namely, adequate surface and air forces in the vicinity and their rapid deployment to a sound plan; sound and well-maintained communications between aircraft and surface craft and between both and shore; unbroken continuity of air patrols, even when mechanical faults developed.

As a result of the air effort, which totalled 22 sorties entailing 133 flying hours, and the vigilance of the hunting ships, U.371(1) was forced to remain under water for 27 hours from the time of the initial attack.

The 'Swamps' of 5-7, 9-10 and 12 May 44.

Then followed three unsuccessful, unremarkable 'Swamps', to which only brief reference is intended.

On 5 May, convoy 'Numerator' was attacked by U.967(2) on its westward passage and the U.S. destroyer 'Techteler' was torpedoed and sunk about 25 miles N.E. of Alboran Island. A 'Swamp' was initiated from La Senia and five aircraft of No. 36 Squadron on the 5th, four on the 6th and eight on the 7th co-operated in the search with naval units hunting in four convoy routes north of Oran. Every night thereafter, four aircraft carried out sweeps. In spite of fleeting

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- (1) Her armament was 1 37 mm gun and 2 twin-mount 20 mm guns, 12 torpedoes. She was fitted with Maxos, no radar, no Schnorchel. She carried Thetis and anti-radar buoys and two 8-man, one 6-man and fifth-three 1-man boats.
 - (2) No special comment was recorded in F.d.U's war diary (F.D.S./Admlty.).

contacts, combined efforts of aircraft and surface craft were in vain. On 7 May, the 'Swamp' was abandoned.

On 9 May, a 'Swamp' hunt was carried out in the sea area North of Palermo for the U-boat(1) which sank U.S.S. P.C.558, but this hunt was in an awkward area and a failure. Late in the morning of 12 May, a Wellington of No. 458 Squadron located a U-boat about 80 miles N. of Cape Bon and attacked it, with a possible direct hit. It shadowed the U-boat, surfaced all the time, for one and a half hours, then returned to base. The 'Swamp' initiated was abortive owing to bad weather. There was no further contact with the U-boat.

Formation of a U.S.N. Hunting Group in the Western Mediterranean

Reports and logs concerning 'Swamp' operations were examined by the A.O.C. Coastal Air Force, his senior Air Staff Officer and the O.C. General Reconnaissance Operations and strenuous efforts arising from their criticism were made at all levels to eliminate what they referred to as "booberies" and to produce a foolproof, flexible plan on mathematical lines which must, so they strongly felt, lead to the inevitable destruction of any hunted U-boat.

It may be argued with some force that too great a reliance was placed on machines and insufficient allowance made for the very frequent absence of favourable circumstances or for the human element on both sides. The fairly frequent failures were often as much due to the ingenuity of the U-boat commanders as to non-conformity to the established rule by Allied personnel. The U-boat logs prove this. Notwithstanding, praise is due to the Service commanders of the period for their untiring improvements of the organisation and their successes in May 1944.

One especial move by the Navy cannot be passed over unrecorded. This was the formation of Task Unit 80.6.1, the Anti-Submarine Group under command of the Eighth U.S. Fleet in early May 44.(2)

Task Unit 80.6.1(3) operated in two groups of two ships each, so as to increase the probability of being very near areas in which contact with enemy submarines might be expected - notably by anti-submarine aircraft or by convoy escorts. Throughout the instructions issued on 12 May 44, the closest co-operation with air units was directed and the need for the most efficient signals system underlined.

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- (1) The evidence in F.d.U.'s war diary suggests that this was U.453, but the entries are laconic and do not suggest her awareness of any hunt proceeding.
 - (2) A similar group was formed in the Tyrrhenian.
 - (3) For the full Operation Plan for Task Unit 80.6.1 refer to the Eighth Fleet FC4-10/A4-3 of 12 May 44 (on File CAF/3/1/AIR Encl. 15A in AFHQ/276/6 at Cabinet Historical Archives).

Particular attention was to be paid to the areas near Alboran Island, near Tenez and between Bougie and Bone. The ships allocated to the group were U.S. Ships Ellyson (Flag-ship) Hambleton, Macomb, Rodman and Emmons.

Operation "Nutcracker"(1)

During the successful "Swamp" of 14-17 May 44, this force carried out a form of attack known as Operation "Nutcracker", dependent on, (among other things), close co-operation with the air forces, and a surfaced U-boat. The Admiralty considered that Operation "Nutcracker" held great possibilities for operations anywhere, especially as a defence against the "Gnat" acoustic torpedo.

The 'Swamp' of 14-17 May 44:(2) preparations

The morning of 14 May saw the opening of the most brilliantly executed 'Swamp' hunt of the submarine war in the Mediterranean.(3) To understand the reasons for its success, the evolution of this type of hunt related in the preceding pages must have been read and understood. From this point, it will be readily seen that the preparations, co-operation and execution were the fruits of much constructive thought at the Area Combined Headquarters of Coastal Air Force and a highly commendable degree of liaison between the crews of the aircraft and surface craft engaged. It may be fairly described as a near-perfect operation.

The Area Combined Headquarters was now fully functioning at Algiers, and it was here that the tactical plotting board in the Combined War Room was used to co-ordinate forces engaged. When a sighting by aircraft had been reported, a forecast was made of the time at which ships would arrive at the position and aircraft were instructed to illuminate and carry out homing procedure accordingly. Each A.S.V. contact was assessed at Headquarters and ships informed whether it need be investigated or not. To enable aircraft to know what ships to expect in their respective areas, Senior Officers of surface forces were instructed to report, every 4 hours, their positions and intentions to Control, which briefed aircrews accordingly.

The Senior Officer of the ships hunting U.616 carried an R.A.F. Signals Officer,(4) who rendered such valuable services in expediting air/sea communications that the Admiralty expressed their intention in future always to embark an air force Signals Officer or N.C.O. in ships of a hunting group.

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- (1) For full details refer to Annex to the file mentioned in Footnote (3)p.316.
 - (2) Admiralty C.B.04050/44(6): M.A.C.A.F. Operations O.R.B. Appendix F/INT.12: Nos. 36, 17, 500 and 458 Squadrons O.R.Bs.
 - (3) See Figure 14 for a complete diagram of the progress of this hunt, which was sometimes referred to as Operation 'Monstrous', an appellation taken from the codename for two groups of hunting destroyers engaged.
 - (4) F.O.R. Follers, Signals Officer of No. 500 Squadron.

The 'Swamp' of 14-17 May 44: operations and the destruction of U.616 off Cape Santa Pola(1)

At 0410 hours on 14 May, U.S.S. Bibb, one of the escort of convoy G.U.S.39, then off Cape Tenez, attacked an Asdic contact in the position 36° 46' N., 00° 52' E. with depth charges. U.616, which had left Toulon on 2 May, surfaced. She was engaged by ships and dived, torpedoing S.S. G.S. Walden and S.S. Fort Fidler as she did so.

At 0625 hours, a 'Swamp' was laid on, the datum point being the position of the attack and the base line orientated 22 degrees anti-clockwise to run parallel to the coast, as it was assumed that the submarine would try to head North and East towards Toulon, westward to the shelter of Alboran or Northwest to Cartagena, where she would hide among the fishing craft, so preventing contact.

The available air forces at that time were stretched all along the Northwest African coast. They were quickly concentrated as follows:- No. 36 Squadron's Wellingtons were divided between Reghaia and Senia; No. 17's (S.A.A.F.) Venturas between La Senia and Bone; a flight of No. 500 Squadron lay at La Senia, detachments of No. 458 Squadron's Wellingtons (one from Malta) at Bone and Reghaia. The three preceding abortive 'Swamps' had proved what happened when there were insufficient aircraft to saturate the area.

Surface forces at the time (apart from the four U.S. ships detached from the convoy and later relieved) were four destroyers(2) ('Monstrous 1') from Oran and three destroyers(3) ('Monstrous 2') switched from an anti-submarine sweep near Alboran Island.

No. 337 Wing dispatched its two strike aircraft and these were on patrol at 0730 hours and 0755 hours respectively, three hours after the attack. Weather was bad. Time had been lost, but the area had been well covered by destroyers since the attack. One of the hunting groups carried out an attack at 1226 hours without result. Half the force was diverted to make a square search on a likely contact by an aircraft of No. 500 Squadron. The first concrete action did not eventuate until 2139 hours/14th, when "X"/No. 36 Squadron sighted a U-boat in the position 37° 19' W, 00° 59' E. His report was relayed by "H"/No. 36 Squadron (a very timely move). 'X' attacked with depth charges which straddled the target, and estimated two hits. Survivors claimed no damage to U.616, which submerged to 20 metres. 'X' marked the position and homed other aircraft and surface forces to the area. The weather closed down; two aircraft experienced mechanical trouble and were recalled to base. This forced a gap in the air cover. U.S.S. Ellyson made an attack at 2243 hours in the position reported by aircraft 'X'.

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- (1) Refer to Figure 14 for a diagram of air and naval operations.
 - (2) U.S. Ships Ellyson, Hambleton, Rodman and Emmons.
 - (3) U.S. Ships Gleaves, Nields and Macomb.

This attack led to air Phase III. The previous 'Swamp' areas were temporarily abandoned. Two aircraft of No. 36 Squadron patrolled continuously a square of 40 miles centred round the attack position. At 0130 hours, a ship in 'Monstrous I' reported a strong smell of oil and a large oil slick in the area of the attacks; these both proved reliable pieces of evidence.

Phase III lapsed into Phase IIIA, at 0700 hours on the 15th; in this phase, Area I of the original 'Swamp' was recommenced with the datum point $37^{\circ} 20' \text{ N.}, 01^{\circ} 00' \text{ E.}$, and two French Latecoeres were laid on to sweep South of this area. More oil slicks indicated the slow northwesterly progress of U.616. Phase IV (Area II) came into force at 1230 hours/15th and Phase V at 2230 hours.

At 2330 hours, H/No. 36 Squadron followed up an A.S.V. contact, but arrived too late to attack the U-boat. The surface forces were informed. The position proved that the patrols had kept the U-boat down. Before the area could be reinforced, "T"/No. 36 Squadron homed on to a contact in the position $37^{\circ} 48' \text{ N.}, 00^{\circ} 10' \text{ E.}$ at 0210 hours on 16 May. His searchlight was slow in functioning and when it did, the beam pointed to starboard. U.616 opened fire immediately with 20 mm guns, but registered no hits on 'T'. When 'T' returned without his light, nothing was visible. In his excitement, he neither dropped markers nor carried out bombing procedure. Signals from the puzzled control were intercepted by other aircraft, who, on reaching the position, dropped markers.

Phase VI developed from these data and the search concentrated on the areas to westward off the Spanish coast and northwards towards the Ibiza Channel. The weather cleared, enabling the hunt by ships and aircraft to continue unbroken. On a dubious sighting by aircraft J/No. 500 Squadron, 'Monstrous I' moved to westward. Far from proving uneconomical, this manoeuvre actually extended the areas covered by the hunting forces. U.616 was boxed between the two groups to the extent that while trying later to escape from one it was illuminated on the surface by a ship of the other.

U.616 lay deeply submerged all the 16th. Areas in Phase VII were planned to cover during the night 16/17th a total area between $37^{\circ} 10' \text{ N.}$ and $38^{\circ} 20' \text{ N.}$ and $00^{\circ} 40' \text{ W.}$ and $00^{\circ} 50' \text{ E.}$ with six Wellingtons at a time. Surface forces were to patrol North and South of Cape Santa Pola (Southern Spain).

At 2150 hours/16th, A/No. 36 Squadron reported his A.S.V. unserviceable. He stayed in the area, correctly, according to instructions, until relieved. This was fortunate for the outcome of the whole hunt, for, at 2220 hours, U.616 betrayed her presence by firing on him. He saw the wake, was fired on again, and on losing the diving U-boat, dropped markers and commenced homing procedure. Surface forces 30 miles to the West and five other aircraft were directed to the area. After various manoeuvres, it was decided at 2340 hours/16th to concentrate the maximum possible aircraft over a 40 mile square. Five Wellingtons were now patrolling an area of 1,600 square miles. In this way every point in the area was covered once every 15 minutes.

At about midnight, the Captain of U.661 surfaced in a second effort to re-charge his batteries and made northeastwards at 11 knots. He was quickly caught by U.S.S. Macomb's searchlights(1) and engaged by gunfire. Surprised by destroyers approaching from two directions, U.661 crash-dived and was attacked by Macomb and Gleaves. They depth-charged her, forcing her to make short avoiding bursts of speed. At 0807 on 17 May, a depth charge attack by U.S.S. Hambleton forced the Captain to surface and scuttle the boat.

The "Swamp" of 17-19 May 44 and the destruction of U.960(2)

No sooner had U.616 been sunk than an other U-boat made its presence known in the area and a fresh "Swamp" was initiated.

Four hours after the survivors of U.616 were picked up, the "Monstrous"(3) force of seven destroyers was on its course for Oran. Some of the aircraft units mustered had been ordered back to their home bases. At 1250 hours on 17 May, U.S.S. Ellyson was missed astern by three torpedoes. The Force contacted No.337 Wing at La Senia, requesting anti-submarine patrols in the position 36° 43' N, 00° 33' W. This message was received at 1315 hours at the same time as a naval signal giving the information but quoting a slightly different position - 36° 40' N, 00° 23' W. The strike aircraft were soon airborne, the available units reorganized for action and a force of five destroyers was sent from Oran under the original code name of "Montrous" to relieve the returning units.

U.960, according to prisoners, left La Pallice on 27 April. She appears to have passed Gibraltar Strait on or about the night 14/15 May, so that she had no time to reach her new base at Toulon. It is probable that her Captain was aware of the previous hunt for U.616 and kept well out of the way during its progress, surfacing when he thought the coast was clear and making a "snap" decision to attack when he found himself close to the destroyers.

No. 17 (S.A.A.F.) Squadron detachment with nine Venturas, and No. 36 Squadron detachment of eight Wellingtons were held back at La Senia. There were already eight aircraft of No. 500 Squadron there and the remainder of that squadron at Gibraltar. Four unserviceable aircraft of No.458 Squadron at Reghaia were replaced by four Wellingtons from Bone.

While the two strike aircraft patrolled the attack area, a full-scale hunt was organized. It was not a "Swamp" according to the book, for the sighting was too far from the shore for that, but it was an improved version to meet a new set of conditions. The modified patrol areas ordered covered a circle, first of 35 miles and then of 40 miles radius, as, in the absence of exact information on the U-boat's recent history, its course was impossible to forecast.

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- (1) In 37° 58' N, 00° 07' E.
 - (2) M.A.C.A.F. Operations O.R.B. Appendix INT/F.14: Admiralty C.B.04050/44(6). Refer to Figure 15 for a diagram of air and naval operations.
 - (3) Force 80.6.1. (Capt. Converse, U.S.N.)

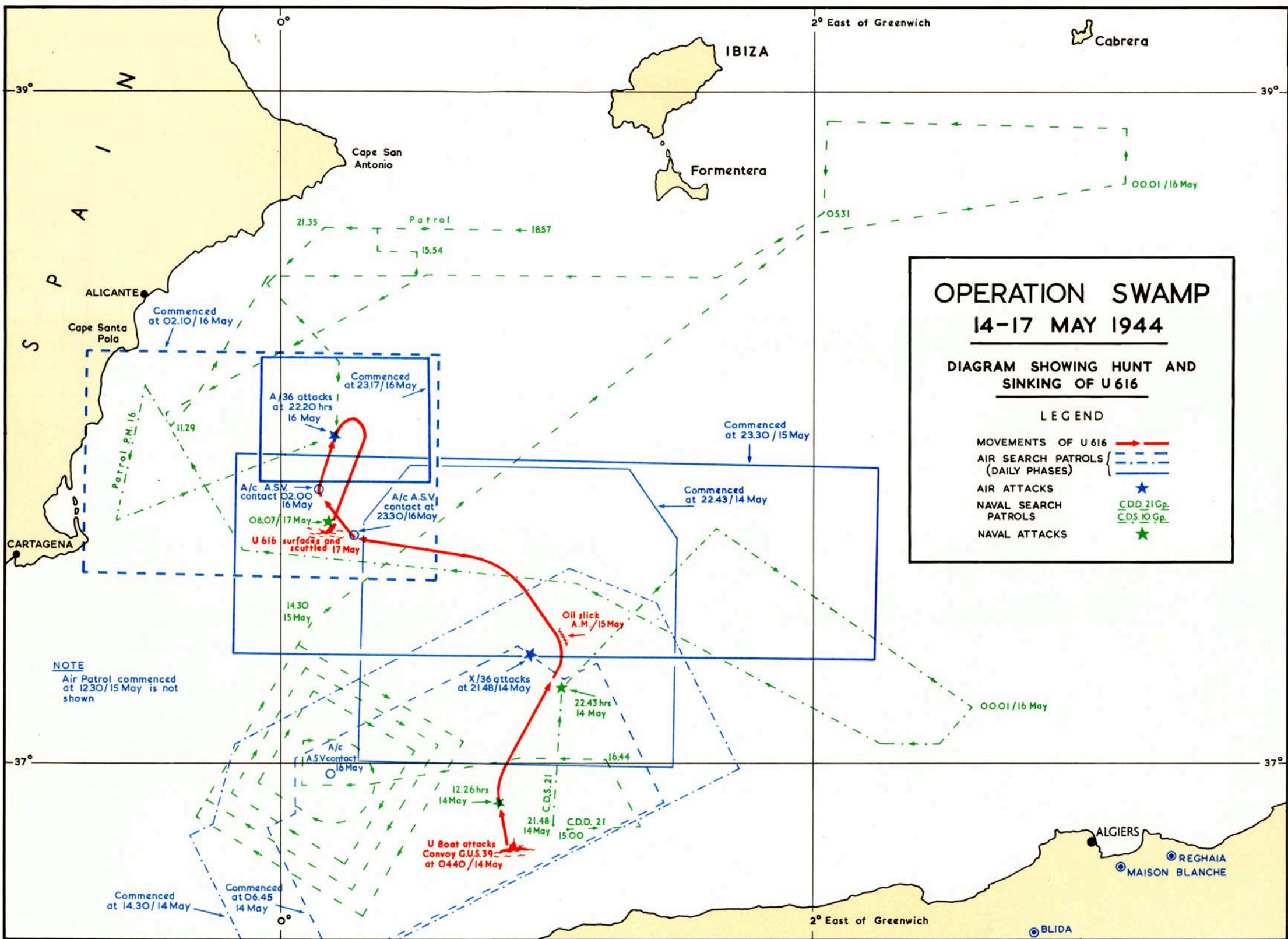


FIGURE 14

One aircraft suffered instrument trouble and left patrol at 2205 hours/17th. During the time of about one hour that his area was left uncovered, U.960 found the gap and, at 18 knots, might have escaped altogether had not a relief aircraft - M1No. 36 Squadron, on its course to one of the northern areas, chanced upon her at 0347 hours/18th.

This A.S.V. contact by "M" was obtained in the position 37° 21' N, 00° 38' E and classified in his signal as a probable U-boat. At Area Headquarters, due allowance was not made for the probability that U.960 had been running on the surface. It was 30 miles outside the "Swamp" area. They were sceptical and might have discounted his contact altogether, but for a mistake by U.960. Aircraft "M" homed on to his contact from 5 miles, and at three-quarters of a mile switched on his searchlight. This called forth concentrated, but not very accurate flak and explosive shells, which ceased as soon as the light was extinguished. He lost U.960, but dropped a marker and homed aircraft to the position. The weather at the time and during the night had been particularly bad, cloud base lowering at times to 100 feet, the whole of the sky covered and visibility poor. "Swamp" was recentred on the position of his sighting.

In the next phase, the central search pattern was a 40 mile square, with sub-areas to East and North of it to cover the U-boat's track towards Toulon, either round the Balearic Islands or through the Ibiza Channel. The patrols were reinforced by French Latecoeres of 2/S Squadron. The weather grew threatening in the evening of the 18th and abandonment for the night seemed probable. But all the available night-flying aircraft(1) operated.

At 2228 hours, "U"/No.35 Squadron, patrolling the north-eastern area adjacent to the 40-mile square, obtained contacts on a position which proved that U.960 had changed her course to starboard to escape detection. While aircraft and destroyers concentrated, the aircraft areas were redesigned to cover the probable new track of the U-boat. Acting on further evidence, aircraft reported a contact 10 miles ahead of U.S.S. Niblick and dropped markers at 0240 hours. Destroyers depth-charged U.960, but she did not surface until 0708 hours. She was thereupon enegaged by gunfire from the destroyers and attacked by aircraft "Y"/No.500 Squadron with depth-charges. These straddled U.960, which was seen to sink 10 seconds after the explosions. Some of the crew were swimming in the water.(2) The destroyers believed U.960 had not yet been abandoned and was attempting to dive. U.S.S. Niblick therefore delivered another depth-charge attack which ended the action. Some of the twenty survivors claimed they were fired at after hoisting the white flag, otherwise the full complement would have been saved. U.960 was sunk in the position 37° 20' N, 01° 35' E, soon after 0724 hours on 19 May.

Although there had been minor imperfections in the maintenance of air cover, the unhesitating direction of the various phases of both this hunt, and its forerunner, the improving use of signals, the boldness shown in stretching the old "Swamp" patterns beyond their original

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- (1) Except the 2 strike aircraft at Reghaia, which were used for an early morning sortie on the 19th.
 - (2) No. 500 Squadron O.R.Bs.

moulds and the enthusiastic manner in which naval and air units co-operated all went to ensure these two well-earned successes.

It was made clear once more that U-boat commanders were developing their tactics to match the rapidly improving Allied measures. They plotted the pattern of air cover and escaped from the net as soon as it was lifted. They would surface after dark and, if possible, proceed at maximum speed out of the area. Furthermore, they would, in spite of their customary caution, stay surfaced and fight it out with aircraft. A survivor of U.960 stated that when aircraft were picked up on the instruments and recognized as such, the Captain gave the order "Heran kommen lassen" ("Let them come on"). Coastal Air Force's attention had first been drawn to these tactics on 19 Oct. 43 and commented that U-boat defences had been improved for that purpose.(1)

The planning had made great strides since the fumbling inauguration of the "Swamp" hunt in October 1943, but the principal point that emerged was the crucial importance of the individual member of the aircrew. On the acuity of one man's reactions the success of the whole enterprise often depended. It would be going too far to suggest that a golden rule had been devised, for there were still imponderables such as bad weather, breaks in communications and human factors influenced by fatigue or lack of practice. The achievement had been in learning the lessons, eliminating possible errors and "snags" and isolating the irreducible factors due to chance.

The "Swamp" of 19 - 21 May and the destruction of U.453(2)

The next "Swamp" was the exception that proved the rule that there must be plenty of aircraft available and that they must get into the area within 2 hours. The ingredients for success were largely missing, but in this case the combined surface and air deterrent persuaded the U-boat Captain to remain submerged. His movements at 2 knots were correctly estimated and the hunt resulted in a kill. A more seasoned Captain would have surfaced at night and escaped through the gap in air cover.

U. 453 left Pola in early May. During the morning of the 19th, the southbound convoy H.A.43(3) had been escorted by a Wellington,(4) and two Italian aircraft - an R.S.14 and a Cant Z.501(5) At 1245 hours, the convoy passed into the area controlled by Air H.Q. Malta. It was now not escorted by aircraft, only by the Italian destroyers Urania, Danaide and torpedo boat Monzambano.

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- (1) M.A.C.A.F. Ops. O.R.B. Oct. 43.
 - (2) M.A.C.A.F. O.R.Bs and Appendix INT/F.17: No.248 Wing and Nos. 221 and 283 Squadrons O.R.Bs: Admiralty C.B.04050/44(6).
 - (3) Codename "Hippopotamus".
 - (4) No. 221 Squadron from 0213 - 0943 hours.
 - (5) Italian Seaplane Wing/No. 242 Group, from 0943 - 1305 hours.

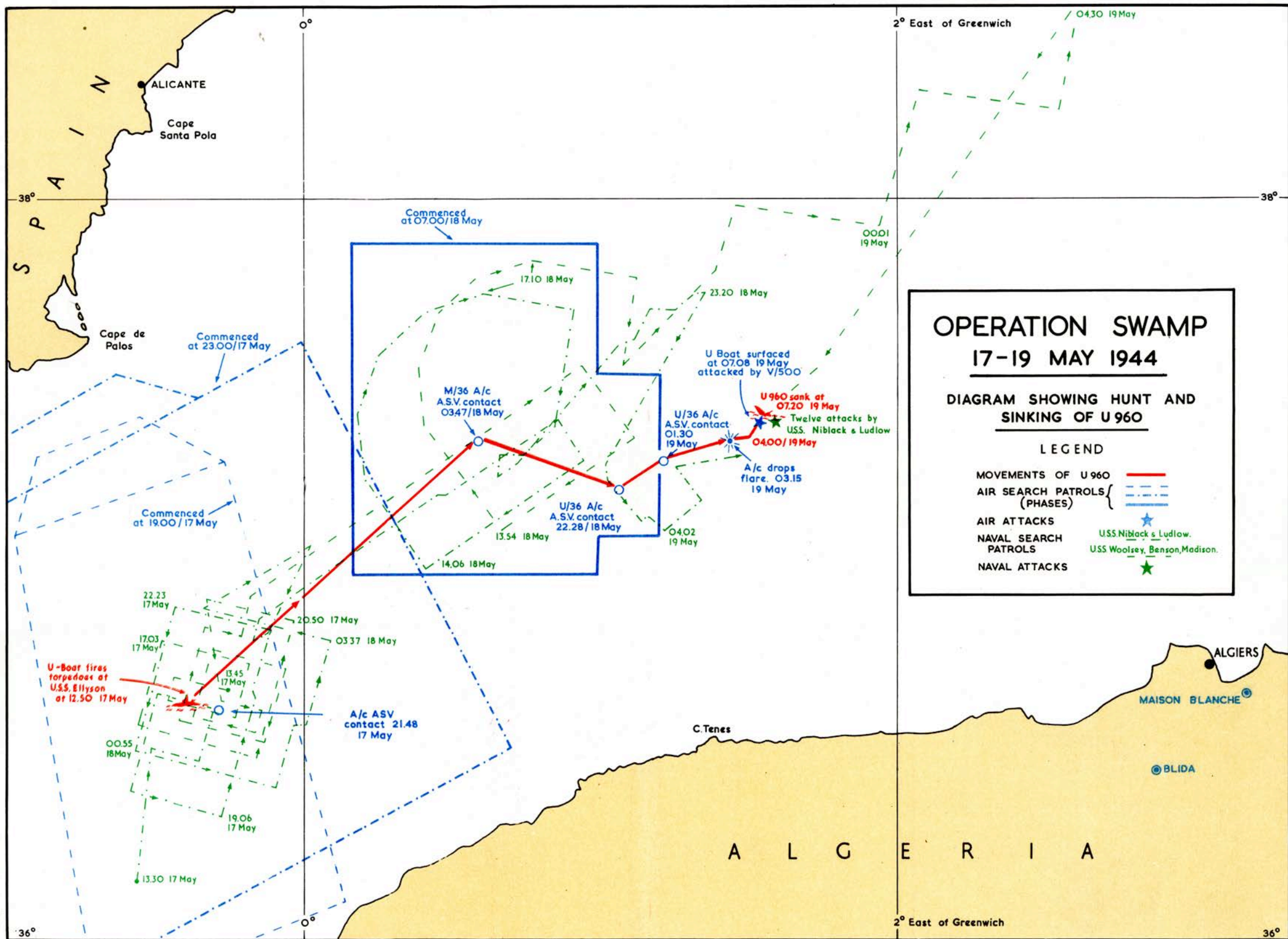


FIGURE 15

At 1745 hours, U.453 torpedoed and sank S.S. Fort Missenabie. The Admiralty stated(1) that the Italian vessels made Asdic contact, attacked and searched, without specifying the period. The Coastal Air Force stated, however, that the cause of the explosion was not decided on until approximately 2130 hours on the 19th. This uncertainty was the reason for a delay of $8\frac{1}{4}$ hours before the first aircraft was in the area. (The presence of a U-boat in the area, be it noted, had been known for some time past.)

The disposition of air forces at the time was an awkward one for the occasion:-

- (a) No.242 Group: 4 Wellingtons of No.221 Squadron (2 of them airborne on anti-shipping operations) and a few Cants and R.S.14s (of limited endurance) of the Italian Seaplane Wing.
- (b) Malta: 1 Wellington of No. 221 Squadron Detachment and a few Warwicks of No.283 Air/Sea Rescue/Anti-submarine Squadron.

H.M. Ships Termagant and Tenacious were diverted from the Strait of Otranto and H.M.S. Liddesdale sailed from Malta, but these three ships did not reach the area until about 1030 hours/20th.

There were not enough aircraft for a full "Swamp". At 2200 hours, just after the decision that a U-boat was responsible, Malta initiated a hunt with the one aircraft available. This Wellington, however, had difficulties and was not on a patrol until 0130 hours/20th. No.242 Group took over the area of 35 miles radius from the position of the sinking. Coastal Air Force was appealed to for reinforcements for the hopelessly inadequate local forces, but was compelled to reply in the negative, as all aircraft were fully engaged.

No. 242 Group began co-operating by dispatching a Wellington at 0545 hours/20th to relieve the Malta Wellington. At 0718 hours, he sighted the wreckage of the merchant vessel off Point Stilo. This aircraft patrolled the area to a depth of 60 miles off the Calabrian coast between Point Stilo and Crotone. No. 242 Group then provided another Wellington(2) of No. 221 Squadron, which patrolled an area to the North from 1300 to 2000 hours, and two Cant.Z.501's which patrolled it from 1300 to 1915 hours.

In the meantime, No. 248 Wing carried out patrols from Malta in three large areas, each being covered once in every 2 hours. The hunt was now in the nature of a modified "Swamp". During the 20th, they provided two Warwicks and four Wellingtons, supplementary to No. 242 Group's effort.(3) After 1900 hours, the search areas were extended by 15 miles: the intention was to cover these

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- (1) Admiralty C.B.04.050/44.50(6) p.9.
 - (2) No. 221 Squadron.
 - (3) These aircraft flew a total of 57 hours 41 minutes.

areas until 0600 hours on the 21st, with an average of four sorties a patrol. Experience in the Western Basin had already proved that cover of large areas by a handful of aircraft by day was likely to prove useless; concentration by night over reduced areas being the real solution.

In the meantime, the three ships of the Royal Navy had been searching the areas since about 1130 hours on the 20th and, after obtaining contacts in a position about 12 miles from where the Italian ships were still searching, made eleven attacks between 1250 and 2040 hours/20th.

Five Wellingtons(1) were on patrol in the Point Stilo area until past midnight. At 0044 hours/21st, they reported gunfire. U.453 surfaced at 0024/21st and was destroyed by ship's guns about 32 miles N.E. of Cape Spartivento.(2) Another valuable crew were taken prisoners. This was a fortunate outcome to a late-starting hunt, for it was already apparent that the few aircraft could not have continued the hunt on anything like an adequate scale for another day and night.

The conclusions from this hunt should be compared with the consolidated conclusions from its predecessors. What emerged from this particular case was that there must be prompt decisions and prompt action after the U-boat revealed its presence: there must be plenty of aircraft handy: areas of patrol should be covered once every half-hour during the night: search patterns should be wide and loose by day and concentrated by night.

The last "Swamp": 26 - 28 May 44.(3)

The last "Swamp" hunt - the nineteenth in the series - began off Cape San Vito (N.W. Sicily) on 26 May and was abandoned on 28 May 44. It developed, as had those of 20-22 February, 29-30 March and 9-10 May in an area difficult for aircraft concentration, where air and naval forces had few occasions for concerted hunts and at extended signals range from the Coastal Air Force Headquarters at Algiers. The aircraft operated from Borizzo in Sicily. Liaison between that station and authorities in Palermo were poor.

At 1401 hours on 26 May, Hudson "S" of No.608 Squadron, in transit from Monte Corvino to Borizzo, sighted the swirl of a U-boat in the position $38^{\circ} 18' N, 12^{\circ} 50' E$ (about 10 miles N.E. by N. of Cape Vito) from 5 miles distance. The course could not be established: no attack was possible as the U-boat had disappeared before the range was closed. The Hudson flew over the swirl and saw a disturbed oval shaped oily patch of water 100 yards wide. No marker was dropped.(4) The sighting report was received at Area Combined Headquarters at Naples 36 minutes later.

Lengthy discussions as to the authenticity of the sighting led to its ultimate acceptance by the Navy at 1512 hours, when a "Swamp" was laid on. One hour and

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- (1) 4 of No. 221 Sqdn. and 1 of No. 221 Detachment in Malta.
 - (2) In $38^{\circ} 13' N, 16^{\circ} 36' E$.
 - (3) File MACAF/3/4/6/AIR (At Cabinet Hist. Archives AFHQ/277/9).
 - (4) Reason not given.

eleven minutes had already been lost. The crew was an experienced one and insisted that it was a U-boat they had seen and not shell splashes from destroyers carrying out practice firing.

Naval Intelligence had indicated that a U-boat was to be expected in that area. A hunting group of five destroyers had sailed from Palermo to sweep ahead(1) of the convoy "Almanac" in anticipation of this and a hunt had been maintained in this general area for over a week. Three M.L.S.(2) were patrolling in the area.

The datum point was the position of the sighting and the base line ran due East and West. It was decided to control the "Swamp" from Borizzo Station because of unsatisfactory communications from there to Naples, because all the limited resources of No. 608 Squadron were being mustered and sent from Monte Corvino to Borizzo and No. 221 Squadron Detachment (at Grottaglie) had also been warned to proceed there. The total air forces available were:-

2 Hudsons No. 608 Squadron Detachment	Borizzo
6 Hudsons No. 608 Squadron	Monte Corvino to Borizzo
5 Wellingtons No. 221 Squadron	Malta to Borizzo
1 Wellington No. 221 Squadron	Grottaglie - Borizzo

1 Warwick of No. 293 Squadron at Pomigliano was at strike readiness in case of emergency in the Naples area.

Coastal Air Force ordered No. 338 Wing to send 10 Leigh Light Wellingtons to Borizzo (Sicily) on the morning of 27 May. 62nd Fighter Wing counted on these reinforcements and planned accordingly.

During the 26th, until 2215 hours, Phase I of the air/ naval hunt followed an uneventful course.

At 2100 hours, Coastal Air Force sent a signal to Col Robert S. Israel, Jnr. (commanding 62nd Fighter Wing) cancelling the reinforcement of 10 Leigh Light Wellingtons without explanation. This signal took no less than 20 hours 15 minutes to reach his headquarters.

In the meantime, the air cover continued with a break of only one hour (covered by a wider compensatory sweep). Phase II, III and IV lapsed without incident, except for a depth-charge attack by a destroyer on a false contact. Phase V lasted from 2200 hours on 27 May until 0300 hours on 28 May, when the air hunt had to be called off owing to the shortage of aircraft and crews. The "Circus" force continued with a sweep to northwards and thence southwards again ahead of the southbound convoy "Stinker", but it, too, found no trace of the U-boat.

If only M.A.C.A.F.'s signal had reached 62nd Fighter Wing in reasonable time, they could have recalled their

(1) Code name "Circus".
(2) Code Name "Bayonet".

handful of aircraft from the fruitless search. If the 10 Wellingtons had been spared, a continuation of the search by 12 hours or more might have resulted in a sighting.

Lessons from "Swamp" operations

When the last successful "Swamp" of May 1944 had ended, Coastal Air Force issued what it believed to be the master list of lessons of general application in all the areas it controlled, as far as Malta. These must be recapitulated. Contributions on these lines from the Naples area will then be given to illustrate the difference that area made to outlook. The Naval view will follow.

Coastal Air Force's formula for the perfect "Swamp" was a balance of precise, accurately-timed movements. Crews must be briefed in writing: markers must be dropped on all good contacts and units concerned advised: exact homing signals must be broadcast: aircraft with A.S.V. troubles were to stay on patrol unless recalled: aircraft with radio troubles were to remain on patrol if weather permitted and recourse made to alternative signals apparatus if any one went unserviceable: reports and instructions should be sent in plain language for speed and amplifying reports and relays made on every relevant occasion: controlling formations such as wings should be kept "in the picture": there should be a general concentration of aircraft at dusk and, after night attacks, concentration in the target area.(1)

Turning to the area of the Flag Officer Western Italy and the 62nd Fighter Wing at Naples, the crying need was clearly for more aircraft and better communications. After giving instructions that the air formation should apply to them for reinforcements if needed, Coastal Air Force had failed to supply these reinforcements on two critical occasions and as the area was intimately affected by the course of land operations and the continuous movements forward of air units, their formula appeared rather academic to 62nd Fighter Wing; and yet the basic principles were sound - the four triumphs in May had proved that, but only under current conditions in the Western Mediterranean.

Having been let down in the matter of air reinforcements, and having failed to achieve a true "Swamp" either near a coastline or in more open sea areas, the C.O. of 62nd Fighter Wing discussed the U-boat problem with the Flag Officer Western Italy and the staffs of the C-in-C. Mediterranean at Naples. They produced a joint plan of considerable interest, which, although never put into practice during the Second World War, must be recorded as a rider to the "Swamp" formula. This plan went to Coastal Air Force and the C-in-C. Mediterranean for examination.

Briefly it sought to remedy the deficiency in centimetric radar apparatus in aircraft by an operation with the code name of "Hencoop" in which strike aircraft armed with heavier depth charges and delayed-fused bombs were to strike positions fixed by naval surface craft, who would only attack thereafter. Nothing came of the plan, as the

(1) M.A.C.A.F. Signal 231445B in File CAF/106/AIR
(A.F.H.Q./292/3 at Cabinet Historical Archives).

American aircraft capable of carrying deep-set depth charges were not available. The idea of twelve aircraft in two waves of six dropping depth charges, followed by bombing was, on the face of it, an intelligent method of saturating an area of some 300 by 400 yards. The Naval plan emphasised two sore points in air force economy: one of them was the ever-green one of the shortage of night-flying aircraft; the other was the absence in most aircraft of centimetric radar, which gave the "Naxos"-fitted U-boats an inestimable advantage.(1)

A few days later, the C-in-C. Mediterranean pointed out to his own station and to Coastal Air Force that a recent exercise in Home Waters confirmed his own belief in the effectiveness of flooding an area with anti-submarine aircraft. Only recently, he wrote, a U-boat finally surfaced after spending 72 out of 75 hours submerged. The air cover must be continuous. Any interruption jeopardised the whole operation.

There was never another chance to experiment with the "Swamp" formula. Although it was not realised at the time, the May operations broke the back of the 29th U-boat Flotilla. The balance of eleven boats was greatly reduced by the constant vigilance of air and naval patrols and air attacks on their bases.(2) Their operations were never again conducted in the same spirit of enterprise.

Other operations against U-boats (1 Jan. to 31 May 44)

Port bombing

The series of air attacks carried out between late January and late April 1944 on U-boat bases, dockyards and torpedo factories gave striking confirmation of the valuable role the heavy bomber formations might have assumed in the anti-submarine campaign if more urgent policies had not prevented greater frequency.

It has already been noted in the section of this chapter covering air operations in the Adriatic that the attack on Fiume on 21 Jan. 44 and those on Pola on 9 Jan. and 25 Feb. 44 had caused widespread damage to installations, the U-boat base at Pola and the torpedo factory at Fiume. U.81 was sunk at Pola on 9 January in company with the Italian submarine Nautilo.

The heavier attacks on Toulon during the period under review paid much bigger dividends. On 4 Feb. 44, U.S. heavy bombers carried out their only attack of the month on Toulon. Seventy-one Fortresses bombed harbour installations in bad weather and against opposition by some thirty enemy aircraft. They damaged three U-boats, vis., U.343, (3) U.642 (4) and U.380. (5) On 7 March, 48 Fortresses attacked Toulon

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- (1) Letter FOWIT 654 of 15 May 44 in File CAF/3/1/AIR Encl.25A (A.F.H.Q. 276/6 at Cabinet Historical Archives).
 - (2) The closing phases of the submarine war will be related in a later chapter.
 - (3) Fit for service again 3 Mar. 44.
 - (4) Paid off 12 Jly. 44.
 - (5) Sunk in air raid 11 Mar. 44.

dockyard, inflicting only slight damage. They lost three of their Lightning escort to some twenty-five aircraft defending the port. On 11 Mar. 44, 122 Liberators(1) made a successful attack on Toulon dry docks, submarine base, repair shops and arsenal. U.380 was sunk, U.410 hit and written off as a total loss.(2) U.586, U.967 and U.642 were damaged.(3) Welcome aid to Allied submarines was afforded by the destruction of U.J.6080 (ex K.T.42),(4) an anti-submarine vessel.

The last U.S.A.A.F. attack on Toulon in this period came on 29 Apr. 44 when 178 Fortresses and 310 Liberators, escorted by 172 Lightnings and 42 Black Widows penetrated the bad weather and bombed through a dense smoke screen. A bitter air battle with some 60 aggressive German fighters added to intense heavy anti-aircraft fire over the target complicated the issue. Against claims of 10 enemy fighters destroyed the Strategic Air Force had to list 11 Liberators, 3 Lightnings and 1 Black Widow as lost. The submarine installations were damaged, U.421 and a French submarine sunk and U.642 damaged.(5)

U-boats sunk by surface craft and mine

The Navy sank two U-boats in this period. On 9 Mar.44, U.450 was sunk in 40° 53' N, 12° 28' E, S.W. of Anzio, by the U.S. destroyer Madison and the British destroyers Exmoor, Blankney, Blencathra and Brecon. The captain, three other officers and forty-seven ratings were picked up. The next day, 10 Mar.44, U.343 was sunk by H.M.S. trawler Mull S. off Sardinia.(6)

U.455 was written off as lost, probably by mine, on 6 Apr.44. There are no claims suggesting she was sunk by aircraft or surface craft.

The number of U-boats, active or under repair, at the close of May 1944 in the Mediterranean was eleven.

Operations against German Small Battle Units (April 1944)(7)

Advent of the German Human Torpedo

On the night 20/21 April 44, Allied patrol boats detected the first group of German one-man human torpedoes and their "mother ship" off Anzio. The "chariots", as the

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- (1) Escorted by 51 Lightnings.
 - (2) Paid off 22 Mar. 44.
 - (6) U.586 was ready for service again on 9 May 44, U.967 on 12 Apr.44. U.642 was paid off on 12 Jly.44.
 - (4) A case of a War Transport freighter (795 G.R.T.) converted to anti-submarine duties.
 - (5) Report of Joint Admiral/Air Ministry Sub-Committee Sept.1950. (A.H.B.)
 - (6) For details of the accurate initial attack by the single-handed Mull refer to C.-in-C. Mediterranean Anti-U-Boat summary for March 1944, (00250/8, Admiralty File M/056760/44).
 - (7) Mediterranean Anti-U-Boat Summary April 1944. Ref. C.-in-C. Med/00250/17 - Admiralty File M/0571322/44): AHS/Admlty preliminary narrative: C-in-C. Med. report on midget U-boats dated 21/7/44, copy in File CAF/3/1/AIR. (ATHQ/276/6 at Cabinet Historical Archives): F.D.S./Admlty.

human torpedoes were usually called, made an abortive attack on shipping. Depth charges were dropped in their vicinity forcing coxswains to abandon ship. One "mother ship" and two torpedoes were recovered. Six torpedoes were destroyed by P.558, PC.651 and PC.626. Four prisoners were taken. S.S. John Armstrong appears to have been the only Allied casualty.

The Small Battle Units Command(1) of the German Navy, of which they formed a unit (M.E.K.75) thus gave another proof of its determination to offset the Navy's weakness in more orthodox warships in the Mediterranean with a product offering the most favourable prospect of reducing the disparity in circumstances best suited to its component weapons. In this respect, the development of the Small Battle Unit bears comparison with that of the pilotless aircraft, the explosive rocket and the heavily armed naval ferry barge. Lessons from these operations were applied to operations in the summer against the Allies in Northwest Europe.

The "chariots" were of a new type, of German manufacture and German manned. On 23 May, 44, after experimentation, the C.-in-C. Mediterranean considered it unlikely that this weapon would be detected by radar (except by a certain type or similar sets in perfect weather conditions), by asdic, or by hydrophone. The weapons could, however, be defeated by a high degree of alertness on the part of patrol vessels and the liberal use of depth charges of all sizes.

German plans for the Anzio operation

Great importance was attached by the Germans to early experiments with specialised weapons. From these first efforts, a powerful, elaborate organization grew to extend operations until the end of the war in several areas. A base for two-man torpedo boats.(2) was established at Nettuno; from it units were transferred by land to a jumping-off point at Terracina for harassing operations against Allied shipping in the Naples area.

Gruppe Nord/Flotte(3) planned for the Anzio attack with 40 special weapons. Kesselring provided an advisory engineer officer. Consignments of human torpedoes (minus the crew) were sent from Germany to Nettuno by rail on 31 March/1 April.

The Allies had only a vague idea of German plans and the majority of German authorities knew very little more, for the whole plan was shrouded in secrecy and its

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- (1) Kommando der Kleinkampf-verbände - abbreviated title K.d.K. from 22 Apr.44, previously Naval Special Operations Detachment or Marine Einsatz Abteilung - abbreviated title M.E.A.
 - (2) M.T.S.M.'s - the Italian Motoscafo turismo silurante modificato.
 - (3) At Kiel.

execution proceeded by trial and error. The organization was, it was known, an Italo-German one, but details of functions and the terms of the alliance only became known in their entirety much later. There was little or no evidence to be gleaned in the Adriatic area, where the organization did not become effective until October 1944.

The problem of Special Weapons

From time to time, Allied air units found their targets among these specialised weapons and installations. Allied naval forces found their operations increasingly hampered by surprise attacks by entirely new craft. Enemy agents were planted by these means behind the Allied lines. Concern was felt for the safety of warships, for bitter experience at Alexandria at the hands of Italian limpeteers had infused a wholesome respect for 'insidious weapons' of all kinds into the Navy's councils. That these methods did did not go unappreciated is borne out by the many successful Allied operations with them, aided by instructors recruited from Italian prisoners-of-war. In June 44, Allied 'charioteers' entered La Spezia harbour and damaged the Italian cruiser Bolzano.

While, for various reasons, the Small Battle Units Command hardly fulfilled the high hopes of its creators, it would be completely misreading the mood of the period to pretend the problem was anything less than a difficult one for the Air Forces and Navies.

END OF PART I

REPORTS AND RECORDS OF ADMIRAL DOENITZ(MAY - AUGUST 1943)

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Sources:- Report on the German naval war effort
(Admly. N.I.D. 24/t.65/45)

The 'Headline Diary' of Vice Adml. Assmann
(Admly. Foreign Docs. Section)

Adml. Doenitz's War Diary (Admly. Foreign Docs. Sec.).

DOENITZ'S REPORT ON HIS VISIT TO ROME(12 to 15 May 1943)

May 12, 1943.

0800 hrs. Departure from Berlin.

1300 hrs. Arrival in Rome.

Conference at Hotel Excelsior with Vice-Admiral Ruge, Rear-Admiral Meendsen-Bohlken, and Rear-Admiral Loewisch (the German Naval commanders in Italy).

The commanders gave a brief summary of the situation. The Commander-in-Chief, Navy, discusses the immediate problem: which is more important, Sicily or Sardinia? After lunch, Admiral Doenitz asks the commanders what they think is the best solution for the present situation, where German interests are represented by two naval commands, who thus cannot be effective in dealing with the Italians and do not guarantee smooth and close collaboration.

Both commanders are convinced that the present dualism will have to end ... Rear-Admiral Meendsen-Bohlken does not consider this solution possible for technical reasons Admiral Doenitz reserves his decision for the present; it has already been influenced by the fact that Admiral Riccardi has asked him that Vice-Admiral Ruge should be appointed the sole representative of Germany with the Supermarina (the Italian Navy High Command).

1630 to 1930 hrs. Conference at Supermarina

Admiral Doenitz states that the purpose of his visit is to discuss matters personally and exchange information, since it is difficult to do this from a distance or by post.

Admiral Riccardi gives a summary of the present situation from the Italian point of view. The enemy is preparing for further operations in the Algerian coastal harbours; at the same time he is systematically destroying the Italian harbours; since the fall of Tunisia, an attack on the Italian islands has been expected any day. There are three ways of meeting the enemy invasion:-

- (a) Air attack on the African embarkation points.
- (b) Attack on the approaching invasion fleet at sea.
- (c) Local defence at the point of invasion.

The enemy will most likely employ forces strong enough to make his first attempt a certain success. It is therefore necessary that our own weak forces should be consolidated It has become difficult to supply Sicily. Rail traffic to it has come to a complete standstill and supplies have had to be sent by sea from Naples. The only way to improve transport on the island itself would be by an increased use of lorries.

Before the war Sicily had supplies for 40 days. To-day there is enough for only 7 days. The question of supplies is becoming more and more difficult every day because the enemy Air Force is constantly increasing. The same situation prevails in Sardinia. Most of the piers at Cagliari have been destroyed. Porto Torres is of very little use, so only Olbia remains. Railways in Sardinia are badly crippled; lorries are the only solution.

Rear Admiral Sansonetti explains the plans of the Italian Navy in greater detail..... These studies showed that there is no reason to expect an invasion of Sicily. Of course the enemy knows of the minefields between Sicily and North Africa, but these minefields divide his lines of approach. An invasion of Sardinia is more likely at this time.... If it is invaded the Italian battle fleet will be used, but only three large battleships are actually available in La Spezia; there are as well three cruisers and eight destroyers After hearing the views of the German Admirals stationed in Rome, Admiral Doenitz states that he believes the enemy will attack soon and that our own forces are too weak to foil the enemy's plan either by destroying his embarkation points or the approaching invasion fleet. He is going to send more U-boats to the Mediterranean, although he is convinced that U-boats will never be able to stop an invasion - they would only be of nuisance value.... The battle on land alone is decisive; therefore the most important part of the Navy's task is to make battle on land possible, which means safeguarding the supply lines across the sea..... We must use every available means to get as much material to the islands as possible. Even small vessels will have to be used for shallow harbours and open bays. If there are not enough small vessels, U-boats will have to be used.

Admiral Riccardi interrupts: To transport supplies?

Admiral Doenitz: Yes, because U-boats are not decisive in battle.

Cruisers, too, must frequently make fast trips with supplies Harbour facilities must be exploited to the fullest extent. The responsible Italian officers must have the right to draft civilians for this. It must not happen again, as it did in North Africa, that we were defeated because our supply system failed Even though a naval officer would prefer to fight the enemy at sea we must realize that our forces are too limited and that maintenance of supplies in our main task.

Admiral Riccardi states that he will use all available means to help solve the transport problems. However, he asks Admiral Doenitz to use his influence to increase the Air Force.

Admiral Doenitz replies that he had only taken up naval matters. Upon return to Berlin, he would stress the absolute necessity of increasing the number of aircraft Once the enemy obtains airfields near the front, it might again be too late for many things. The sacrifice of the Italian Fleet might have helped considerably if it had come earlier; later on, the effect was dissipated by the increased enemy air force.

(At this point a misunderstanding is caused by the faulty translation of the Italian interpreter, which makes it clear that Admiral Riccardi took these remarks as a reproach to the Italian Navy. The reaction of the Admiral as a reflection of Italian opinion was very enlightening).

Admiral Sansonetti interjects that the Italian Admiral Barone in Sicily reported yesterday that there would be nothing left on the island in a month's time unless the strongest efforts were made for defence against enemy air attack ...

Admiral Doenitz asks Admiral Riccardi if troops were still being transferred to Sardinia.

Admiral Riccardi replies that the transfer itself poses no difficulties. The real obstacle is the availability of ships for heavy equipment.

Admiral Doenitz points out that the main consideration is the cargo space in small ships Everything shall be done to meet Admiral Riccardi's requirements He will emphasize that increases in air power and AA batteries are most urgently needed.

Admiral Riccardi replies that the above is already a large order. Whatever Germany will provide will be most useful. As far as he knows, the Duce has telegraphed the Fuehrer about the question of the Air Force. He is aware that Germany, too, is having great difficulties

May 13, 1943

Continuation of conferences with representatives of various German offices 1100 hrs. Visit to General Ambrosio.

General impression: Polite but formal reception.

Admiral Doenitz explains that, at the moment, the chief weakness in the defence of the large Italian islands is a lack of reinforcements and supplies. No time should be lost in sending these, because the enemy is constantly increasing pressure on our supply lines After establishing numerous unloading positions, it may be necessary to press into service submarines, cruisers and other vessels to complete the transport of men and supplies as quickly as possible. It is more important for the navy to supply transports than to engage the enemy in battle.

General Ambrosio did not fully agree with the above; he felt that submarines and cruisers should fight.

Admiral Doenitz replied that naval forces have already ceased fighting. When the serious need for transport is compared with what may be gained by engaging the enemy, the former takes precedence.

11.30 hrs. Interview with the Duce.

General impression: The Duce is well, optimistic, composed, very frank, sincere, and amicable.

The Duce states that he is confident about the future. The only result of British air raids on Italy will be that the people will learn to hate the British, which has not always been the case. This helps in carrying on the war. If there is one Italian who hates the British, it is he himself. He is happy that his people are now learning the meaning of the word hate as well. He has answered the Fuehrer's offer of five divisions by stating he only wants three. This refusal came as a surprise to Doenitz. The Duce explains that he had asked that these three divisions should include six panzer battalions with 300 tanks; two of the battalions are detailed for Sardinia, three for Sicily, and one for Southern Italy. He believes Sicily is in the greatest danger and supports his contention by referring to the British Press, which had repeatedly stated that a free route through the Mediterranean would mean a gain in two million tons of cargo space for the Allies.

Admiral Doenitz gives his opinion of the general situation to the Duce.

The Duce immediately reacts to this by stressing the necessity for improvisation and considers this easily possible, particularly because of favourable weather conditions during the summer.

1630 hrs. Conference with Vice-Admiral Ruge and Rear-Admiral Meendsen-Bohlken.

Admiral Doenitz announces his decision that Admiral Ruge is to take over the German Naval Command and still to maintain the Operations Staff at Supermarina. Rear Admiral Meendsen-Bohlken will be recalled for other duties. Admiral Doenitz explains his reasons for the decision to Rear-Admiral Meendsen-Bohlken.

Later, drive to Nemi Lake; inspection of the old Roman ships

1930 hrs. Conference with German Transport Ministry

2200 hrs. Conference with Field-Marshal Kesselring.

Field Marshal Kesselring states that the Fuehrer is considering transfer of the Hermann Goering Division and the 7th Airborne Division to Italy.

The Italian Commando Supremo's refusal of the Fuehrer's offer of five divisions was reported direct to the German Supreme Command without informing him (Field-Marshal Kesselring). Kesselring considers this an act of political importance, inasmuch as it proves that the Italians want to remain masters in their own house. Relations between him and General Ambrosio are not very cordial. If his person represents an obstacle to better relations with the Commando Supremo, he is going to express his willingness to make way for another German Commander-in-Chief.

On his tour of inspection in Sicily, Field-Marshal Kesselring noticed that Italian defence preparations were very incomplete and impressed this fact on the Italian Commander-in-Chief, General Roatta. A similar tour of Sardinia is planned during the next few days.

Kesselring agrees with the Duce that an attack on Sicily is more probable than an attack on Sardinia. He considers an attack on the Iberian peninsula the best way of bringing relief to the Mediterranean situation and intends to submit such a plan to the Fuehrer.

Admiral Doenitz repeatedly stresses that the crux of the problem is the transport of supplies and that these must be brought to the islands speedily and in large quantities The one drawback is that the Italians are accustomed to work in a leisurely manner

May 14, 1943

0930 hrs. Audience with the King.

General impression: warm reception, agreeable, impressive, a wise experienced person, lively, vivacious and has a good memory.

Admiral Doenitz gives his opinion of the general situation to the King. He is convinced that Tunisia's fall was due only to the lack of supplies. If we master the supply situation we will defeat the enemy.

The King points out that unfortunately most of the land routes in Italy are also close to the shore and are therefore subject to attack from the sea. The audience was ended with stories about his travels to Spitzbergen and Norway.

1030 hrs. Departure from Rome.
 1630 hrs. Arrival at 'Wolfsschanze'.
 1830 hrs. Departure for Berlin.
 2045 hrs. Arrival at Tempelhof.

The problem of Sicily or Sardinia was still unresolved. The Italians for the most part had guessed Sicily, but while Doenitz had been in Italy, some Allied papers, which described Allied plans for invading Sardinia and the Peloponnesus, had been discovered by the Germans in convincing circumstances. They were immediately shown to Hitler who accepted them at their face value. He had in any case believed that Sardinia would be the next Allied objective.

Doenitz's meeting with Hitler (14 May 43)

Even more important than the problem of where were the Allies going to strike next, was the question of whether the Italians would remain loyal to the Axis, and Hitler awaited Doenitz's report with some anxiety. He saw Doenitz within an hour of his arrival at 'Wolfsschanze'.

'The Commander-in-Chief, Navy, reports the progress and outcome of his conference with the Duce.

The Fuehrer does not agree with the Duce that the most likely invasion point is Sicily. He believes that the discovered Anglo-Saxon order confirms the assumption that the planned attacks will be directed mainly against Sardinia and the Peloponnesus

The C.-in-C., Navy, has come away from these conferences with the impression that the Italians will do nothing about increasing shipping facilities. He was therefore very pleased to note that Captain Engelhardt, Commanding Officer of Supply and Transport, had already begun to make the necessary arrangements.

Captain Engelhardt reports

The Fuehrer asks Admiral Doenitz whether he thinks that the Duce is determined to carry on to the end.

Admiral Doenitz answers that he accepts this as certain, but that he cannot, of course, be sure. He gained the impression that the primary failing of the Italians is their lack of initiative.

The Fuehrer asserts that he does not trust the Italian upper class. He believes that a man like Ambrosio would be happy if Italy could become a British dominion.

Admiral Doenitz states that since his return from Rome, he has come to the conclusion that the plan to hold the Italian islands will result in a purely defensive operation and will consume much energy without getting the Axis out of its defensive position. The Anglo-Saxon powers have gained two million tons in shipping space since the Mediterranean was cleared.

The Fuehrer: 'Which our trusty U-boats will now have to sink.'

The C.-in-C., Navy: We are facing the greatest crisis in U-boat warfare For the first time, fighting has been impossible and we are suffering heavy losses, 15-17 boats per month.'

The Fuehrer: 'These losses are too high. Something must be done about it.'

The C.-in-C., Navy: '..... In view of this situation the occupation of Spain, including Gibraltar, would be the best strategic solution. This would constitute an attack against the flank of the Anglo-Saxon offensive, the Axis would regain the initiative, a radical change would take place in the Mediterranean, and U-boat warfare could be given a much broader basis.'

The Fuehrer states that we are not capable of an operation of this kind, since it would require first-class divisions. Occupation of Spain without the consent of the Spaniards is out of the question, as they are the only tough Latin people and would carry on guerilla warfare in our rear. In 1940, it might have been possible to get Spain to agree to such a move. However, the Italian attack on Greece in the autumn of 1940 shocked Spain. The Axis is saddled with Italy. Therefore, shipping and transport of supplies must be handled according to the suggestions made by Captain Engelhardt.'

For the moment, there the situation rested. Preparations were made for receiving the Allies in Sardinia, and Hitler began to turn over in his mind various schemes for dealing with the Italians. Nothing concrete emerged, but he started hinting darkly about the appalling state of Italian leadership and the need for German inspiration. He had not yet decided to intervene actively. Doenitz, for his part had acquitted himself well in his first major State duty, but his strategical conceptions had been weak, and, for a naval officer, his refutation of sea power had been as incredible as it was to prove disastrous. From Hitler's point of view, however, Doenitz had faced and dealt with the situation realistically. He did not appreciate the fact that had Doenitz offered the Italians adequate supplies of fuel oil and some measure of air protection, they would probably have still been willing to pit their Fleet against the British, even at this late hour. The obvious contempt of Doenitz and other German officers was the very opposite of what was required to encourage the Italians to fight. But Hitler, too, felt the same contempt for the Italians, and, instead of chiding Doenitz for mishandling his mission, he praised him for his success. He was pleased to see his protégé shaping so well.

DOENITZ'S REPORT ON THE ITALIAN ARMED FORCES17 JULY 1943

"The Commander-in-Chief, Navy, says that he is making this report because he feels that it is his duty to give the Fuehrer his opinion about the situation in Italy. Generally speaking, his views are the same as those submitted by Jodl in writing.

He happens to know that the younger officers of the Italian Navy who have really seen action, for example with the Tunisian convoys, and also the young submarine commanders, are opposed to the Supermarina. Even when he first visited Rome, these young officers were expecting a change in the high command of the Italian Navy, since it was completely out of touch with what was going on at the front and was therefore not recognised by most of the youngest officers. What is more, he is of the opinion that the Italian Navy would have been of much greater help to us if it had been under German leadership. This holds true today. He believes that there are quite a few Italian officers who sincerely want to fight on our side and who have proved their willingness in action, but who would at the same time welcome a change in leadership. He believes it would be advisable to place a young Italian admiral in command, who has the confidence of the Italian Navy, to be assisted by a German staffThe attitude of the Supermarina is infamous. In spite of all his efforts, he was unable to get Admiral Riccardi to use his light forces to drive the enemy out of the Stratis of Messina - an intolerable situation since he has the forces available to do so. Admiral Riccardi is hoarding these light forces in case the battleships should put to sea. Admiral Doenitz believes that that will never happen. However, he has no way of doing anything about the situation except to send telegrams. Riccardi replies to these that he will submit them to the Duce.

The Fuehrer: 'The Duce is not getting them'.

Grand-Admiral Doenitz continues: 'Later an answer arrives that for very subtle reasons it is impossible to take the necessary steps. The situation would be greatly improved if the present Supermarina could be done away with and a new command with a good German staff put in its place If we want to hold Italy, German troops and German naval coastal artillery must take over the harbours. Otherwise Taranto and Naples will meet the same fate as Augusta.'

The Fuehrer replies that he has himself been considering how to do this. The greatest problem is the demoralization of the Italian Army. Only very severe measures, like those applied by Stalin in 1941, or by the French in 1917, will be of any use. If only individual units were affected, we could appeal to their sense of honour by offering medals, etc., but the whole army is in a state of collapse and only barbaric measures can help to save the nation. A sort of directorate, tribunal, or court-martial must be set up in Italy to remove undesirable elements. There must still be some capable people in Italy. He has already consulted Ambassador Mackensen, but he could suggest no one capable of taking over the leadership.

Grand-Admiral Doenitz: 'I believe that we must either do without the Italian Army altogether or we must try to strengthen it with German troops.'

The Fuehrer: 'Without the Italian Army we cannot defend the entire peninsula. We would have to withdraw to a relatively short line.'

Lt.-General Jodl points out that this would have very serious repercussions in the Balkans.

Grand-Admiral Doenitz: 'That is why I believe we must infiltrate our men into the Italian Army'.

At this point Field-Marshal Rommel enters and the Fuehrer asks him whether he knows of any really capable person in the Italian Army who is fully co-operating with Germany.

Field-Marshal Rommel replies that there is no such person. Ferrari Orsi would have qualified, but he was killed in action. At the moment, Roatta would probably come closest, although he is not to be trusted and is without character.

Grand-Admiral Doenitz says that he will ask again in naval circles and see whether they know of a suitable Army man.

The Fuehrer declares that everything depends on a radical change in the Italian situation. If this cannot be brought about, it will be worth taking the risk. If not, there is no point in throwing in additional German troops and thus committing the last reserves

Grand-Admiral Doenitz says that Germany ought to give the British something new to worry about. He suggests that they begin laying the new mines in great numbers at the end of August.

The Fuehrer repeatedly asserts that he is very much worried that the enemy in turn might use these new types of mines if he finds them. This could easily happen if the Air Force made a mistake in dropping them. He is willing to let the Navy lay the new mines at any time, but you can never tell where the Air Force will drop them.

Grand-Admiral Doenitz points out that experienced units of the Luftwaffe, for example IX Fliegerkorps, were very successful in laying mines

The Fuehrer: 'All right, I agree. But if the British should get hold of these mines and drop them in the Baltic Sea, we shall be finished.'

EXTRACTS FROM DOENITZ'S DIARY OF
EVENTS (JULY AND AUGUST 1943)

July 30, 1943:

Word is received from the Admiral, Fuehrer Headquarters, that relations with Italy are becoming more strained, since there are further indications that the Italian Government is double-crossing us. Nevertheless, Operation 'Schwarz' is to be deferred in order to pour as many troops into Italy as possible while co-operation still continues.

August 1

At a conference with the Fuehrer, information is obtained from Engineer Desauer about the Duce's possible whereabouts. Orders are issued to proceed with Operation 'Eiche'. The movement of German troops into northern Italy continues.

August 2.

Reports from Rome Italian warships can be seized only with the help of strong military forces. Kesselring has not yet decided The general impression is that the various German officers understand the task in hand. They are, however, somewhat overwhelmed by the difficulties that must be dealt with and because of the widely scattered units of the German Navy in the event of Operation 'Achse'. In the afternoon, the Fuehrer again sees Engineer Desauer, who reports that a column of cars heavily guarded by Carabinieri was sighted, but the Duce himself was not seen. He mentions Petty Officer Laurich as an additional witness. The order is given to bring Petty Officer Laurich unobtrusively from Gaeta to headquarters via Berlin. Reports indicate that the Duce is being held on Ventotene Island.

August 3.

Jodl reports that the Italians have completely ceased resistance to our measures. During the discussion of the possible reasons for this, the Fuehrer puts forward the theory that they may be biding their time in order to come to terms with the Anglo-Saxons before an open break with Germany. Jodl and the Commander-in-Chief, Navy, suggest that the Italians may feel helpless and therefore want to rely on us again. It remains to be seen what the actual situation is, and meanwhile Operations 'Eiche', 'Achse' and 'Schwarz' are not to be undertaken.

August 6.

The Admiral at Fuehrer Headquarters reports that Himmler has sent information that the Italians are holding a destroyer in readiness to remove the 'valuable object' (Mussolini) in case of emergency. The Fuehrer informs the Commander-in-Chief, Navy, at once, asking him to re-examine the distribution of Italian destroyers. Preventive measures must be taken immediately. He suggests that a submarine should be used to blockade the harbour of Ventotene.

Grand-Admiral Doenitz replies: An inconspicuous blockade of the harbour, even with U-boats, is impossible since it would have to stand just off the harbour entrance. There is no inconspicuous way of rendering the destroyer harmless in its present anchorage. A blockade would therefore be inadvisable.

August 8

Petty Officer Laurich* reports to the Commander-in-Chief, Navy, who decides that Laurich shall fly with him the next day to Fuehrer Headquarters. He is put under oath to observe absolute secrecy.

August 9

At Fuehrer Headquarters. A report was made on the general war situation. The entry of our troops into Italy has been marked by an ever-increasing number of incidents of minor importance. The Fuehrer is convinced that both the King and Badoglio are planning treachery. He is struck by the increased activity of the Italian Navy In the afternoon, after the noon situation conference, Petty Officer Laurich makes his report. Besides the Fuehrer and the Commander-in-Chief, Navy, Ribbentrop, Goering, Himmler, Keitel, Ambassador Hevel, and the Admiral at Fuehrer Headquarters are also present. The Fuehrer dismisses Laurich with the words 'Well done, my boy.'

An early execution of 'Eiche' appears necessary. The general conviction is that Mussolini is on San Stefano. The action will therefore be confined to the island Parachute troops will probably have to be used

The Fuehrer expresses his views on the Italian situation in detail. He calls it shameful the way the Duce has been treated after he had directed the destinies of Italy for twenty years and had been hailed by the whole of Italy during this time. He criticizes especially the attitude of the King and speaks about lack of responsibility among many rulers who rely upon unscrupulous historians to touch up their record and who therefore fail to recognize their accountability to history. The Fuehrer feels the predicament of the Duce all the more because of the close ties of friendship which exist between them. He still considers the Italian government to be extremely unreliable and believes it capable of almost any kind of treason.

August 11

After the noon situation conference, the Italian problem is discussed again at great length.

The Fuehrer states: 'The Italians will not show their true colours until after Grandi's trip to Lisbon or the meeting of Churchill and Roosevelt in Canada has produced results. The Italians are going ahead with their negotiations at full speed. They will be taken in by any promise of the Anglo-Saxons if only the continued rule of the Royal House is guaranteed. The negotiations are treasonable.....'

During our last meeting at the station, the Duce suddenly remarked: "I don't know how my Generals reason, or where they want to defend Italy, or why they keep such strong forces in northern Italy!". They are becoming frightened as they realize that they face two great dangers - capitulation or communism. The only point that speaks against treason is the fact that the Crown Prince has sent his children to north-western upper Italy. If the government remains on our side, however, there will still be the danger of an uprising among the people'

Subsequently the Fuehrer discussed indications which point to growing differences between the Anglo-Saxons and the Russians: the recall of Maisky and Litvinoff, the meeting of Churchill and Roosevelt without Stalin. The Anglo-Saxons do not wish to see Russia in Finland, nor, under any circumstances, that Russia should improve her sea communications in the North. Poland is to be restored; the Russians will not be allowed to come near the Bosphorus, and they will be kept out of the Balkans as well as Iran and Iraq. These reasons are enough to nettle Stalin!

* Laurich had struck up a friendship with an Italian Naval officer, who had told him that Mussolini had been taken to Ventotene. Laurich had zealously passed this information on to his Commanding Officer, who in turn had informed Doenitz.

ALLIED AND NEUTRAL MERCHANT SHIPS⁽¹⁾
SUNK IN THE MEDITERRANEAN (2)
1940-1945

Year	Surface Vessels		Submarines				Aircraft				Mines		Other Causes		Total	
			Torpedo		Gunfire		Torpedo		Bomb							
	No.	Tons	No.	Tons	No.	Tons	No.	Tons	No.	Tons	No.	Tons	No.	Tons	No.	Tonnage G.R.T.
1940	-	-	3	15,360	1	1,045	-	-	4	34,375	4	9,555	1	2,900	13	63,235
1941	1	8,325	9	31,745	2	1,080	7	32,470	109	347,650	8	47,210	18	30,195	154	498,675
1942	4	37,570	19	109,425	6	1,340	8	43,950	23	157,845	4	16,900	4	6,715	68	373,745
1943	-	-	46	240,235	7	980	15	115,255	40	195,735	8	31,755	4	29,185	120	613,145
1944	-	-	10	76,760	-	-	6	41,285	4	19,930	5	19,870	-	-	25	157,845
1945	-	-	1	9,550	-	-	-	-	-	-	2	14,375	-	-	3	23,925
Total	5	45,895	88	483,075	16	4,445	36 ^(3A)	232,960	180 ⁽³⁾	755,535	31	139,665	27 ⁽⁵⁾	68,995	383 ⁽⁴⁾	1,730,570

(1) Excluding vessels under 100 G.R.T.

(2) Excluding the Red and Black Seas; including the Strait of Gibraltar as far as 6°W.

(3) 83 were sunk in harbour. (3A) 2 in harbour.

(4) British 165, Greek 98, U.S.A. 38, Norwegian 20, Dutch 14, French 8, Egyptian 7, Palestinian 6, Panamanian 4, Yugoslav 4, Polish, Spanish, Swedish, Turk, 3 each, Belgian, Italian, 2 each, Lebanese, Syrian, Russian, 1 each.

(5) Other causes: under water weapons 6, Captured 8, Not Known 13.

Source. Mediterranean Statistics Second World War, by Hist. Sec. Admiralty January 1954.
(A.H.B. IIK/113/5).

THE EFFECTS OF ALLIED AIR SUPREMACY ON
GERMAN SUBMARINE WARFARE

A memorandum by Admiral Doenitz dated 8.6.1943

The war at sea is at present characterised by a decrease in the victories of our Navy against enemy merchant shipping. The principal exponent of this type of warfare, the submarine, is limited in operational capacity by the ever-growing strength of the enemy's anti-submarine-defences and in particular by the enemy Air Force, using as yet unknown equipment and weapons.

Consequently, our hitherto successful tactics against convoys on the main enemy shipping routes in the North Atlantic have had to be abandoned for the time being, and our submarines are compelled to withdraw to sea areas which are not so strongly defended until such time as effective counter-measures against the new enemy weapons have been discovered. It is to be hoped that the submarine will eventually regain its striking power: in the meantime, we must expect a decline in submarine victories, consequent on the necessity of evacuating the principal area of operations in order to avoid unbearably high losses.

This situation has been appreciated by the enemy. Whereas until a few weeks ago official pronouncements described the general war situation as being everywhere favourable, with the exception of the shipping war which hampered all enemy plans and constituted the gravest menace for the future, successful defensive actions against German submarines and the resulting gain in merchant-shipping tonnage now form the most important news concerning the conduct of the war.

This fact and the evolution of the war until now reveal the drastic effect which our operations against merchant shipping have had on the overall position of the enemy. This effect can only be assessed in the light of experiences during the first World War, and of the fact that only relatively weak forces have been employed against the Reich in the present war. Conclusions may however be drawn from the fact that approximately 9,8 million tons of steel have been used alone by the Anglo-Saxon merchant-shipping fleet of 15,3 million G.R.T., an amount that would satisfy the overall-requirements of the German Navy (sea-going and on shore) for five full years, and also from the fact that in the U.S.A. merchant shipping requirements planned for 1943 have taken up 1/8 of the total steel production.

Even greater are the figures of men and materials engaged on active anti-submarine operations; the elimination of the submarine menace would certainly release an enemy war potential of incalculable size for operations on other fronts. Consequently, as far as the naval situation is concerned, - apart from the effects on the ground and air situation, - considerable light naval forces would be available for operations against our own sea communications: the resulting enemy supremacy in German coastal waters would be more than a match for the already inadequate German defences, so that Norway, for example, dependent on sea-borne supplies, could be neutralised without an invasion by means of a blockade.

The maintenance of anti-shipping warfare is therefore an important factor in the German conduct of the war. Measures necessary for the regaining of submarine striking power are at present being taken or under preparation. Even if submarine warfare cannot fully overcome the present difficulties and win the same successes as formerly, all possible efforts in this direction must nevertheless be made, since our operations will destroy or tie down a large part of the enemy war potential.

The employment of the new mine-fuse-apparatus is expected to produce the increase in sinkings that is so urgently needed. This weapon cannot be effectively used by naval forces alone; they must be supported by strong Air Force elements in maritime areas beyond the range of the surface craft.

A well-planned mine-offensive carried out by the Air Force and Navy in close co-operation could seriously interfere with the sea lanes, particularly those around the English Isles, along which, at present, a huge volume of sea traffic sails in comparative immunity from attack.

The operational employment of the German Air Force in sea warfare has, apart from minelaying operations, been very slight up till now because of the great demands placed on our air units for other tasks and because of the rapid shrinking of the small Naval Air Forces available at the beginning of the war.

The fact that the German Air Force has been slowly forced back on to the defensive by the growing material superiority of the enemy is largely responsible for the present position, in which Germany is waging the war at sea practically without an Air Force. The enemy, on the other hand, confronts us with large Air Force formations specially trained and experienced in sea warfare, and equipped with weapons brought to a high level of perfection.

The air-sea warfare waged by the Allies, Italy and Japan, has also differed from ours in its development. Whereas the Italian Air Force after initial successes at the beginning of the war was slowly paralysed by the increasing material and numerical superiority of the enemy, the excellently trained and equipped Japanese Naval Air Force has affected the whole course of the sea war in South East Asia and is continuing to do so at present.

The German position, on the other hand, is characterised by:-

- (1) the absence of operations against merchant shipping,
- (2) the lack of extensive long range reconnaissance over sea, and of adequate protection in coastal waters for our own shipping and submarine movements,
- (3) the lack of torpedo bombing units ready for combat, and
- (4) the inadequacy of the training given in air sea warfare.

Experience gained until now has clearly shown that the Air Force is destined to play an important part in sea warfare. While in the open sea, sea supremacy is no longer possible without simultaneous air supremacy, in coastal waters the Air Force has become a weapon of decisive importance. We have experienced this ourselves during operations in the Mediterranean, (favourably in Crete, and unfavourably in Tunisia), and also in the North Sea.

During recent weeks remarkable successes have been achieved in bombing attacks by single aircraft operating off the Spanish coast. It is also known that our air attacks on ports and wharves, have had considerable indirect effect on enemy sea power.

Even more instructive have been the lessons to be learned from the employment of the enemy Air Force. The British have so far deliberately directed their heaviest attacks against sea communication lines, and, even when advancing with their land forces, concentrated on throttling sea supply channels. The bridgehead of the Axis Powers in North Africa was lost because:-

- (a) our supply lines could no longer be effectively defended against the enemy air attacks
- (b) enemy supply lines in the Mediterranean could not be disrupted.
- (c) extensive long range reconnaissance was not available to direct our numerically strong submarine forces against convoys in the Atlantic.

The non-existence of a Naval Air Force has gravely affected submarine warfare, which is the most vital task of the German Navy. In view of the fact that the main difficulty experienced hitherto has not been the submarine attack itself, but the location of the objective, it is clear that adequate long range reconnaissance would have multiplied our successes.

The enemy has employed his Air Force with considerable effect against our submarines, and at the present time devotes a large proportion of his effectives to the protection of the convoy routes in the Bay of Biscay. Due to these measures, enemy successes have grown to such an extent that the enemy aircraft is the most dangerous opponent of our submarines.

The crisis in submarine warfare is therefore due to enemy air supremacy in the Atlantic, and we must remedy this defect in the conduct of the war at sea as quickly as possible by providing our submarines with relief and better reconnaissance.

No military decision can be expected as a result of dislocation and terror-attacks of the German Air Force on England. The reaction of our population to even the heaviest air attacks has proved that as long as morale remains unbroken, such attacks tend to strengthen the defensive spirit of the nation. Particularly where the British character is concerned, little psychological effect will be achieved by isolated air attacks. The British are far more disturbed by losses of naval and merchant shipping, in which they rightly see a threat to their very existence.

Our aim must therefore be to exploit the enemy's dependence on sea-communication lines by employing all aircraft not urgently required for the defence of the European position against enemy sea power, that is against ships and ports.

(signed) DOENITZ.

TRANSLATED BY:
A.H.B.6. AIR MINISTRY
15.9.1947

TRANSLATION NO. VII/42.

GLOSSARY OF ITALIAN NAVAL TERMS -

Italian term	English equivalent	Italian Admiralty Abbreviation
Avviso Veloce	Sloop type vessel (escort etc.)	
Brigantino	brigantine	Brg.
Caociatorpediniere	destroyer	Ct.
Cannoniere	gunboat	
Cisterna	tanker	
Corazzata	battleship	Cr.
Corvetta	corvette	
Dragamine	minesweeper	Drag.
Goletta	goelette	Gol.
Guardia de Finanza	customs guard	
Incrociatore	cruiser	
Mezzo D'Assalto	midget explosive craft and weapons used by Ital. <u>10 M.A.S. Flotilla</u> (See Kleinhampfmittel)	
Motonave	motor ship	M/n
Motoscafo Silurante	M.B. (anti-sub and general purposes) - 20 tons	Mas.
Motoscafo Turismo Modificato	explosive motor boat (Ital)	M.T.M.
Motoscafo Turismo Silurante	" " " " (later version)	M.T.S.M.
Motosilurante	M.T.B. - 60 tons	Ms.
Motoveliero	s.v. (aux. motor) vessel	M/v
Motozattera	motor landing craft	Mz.
Naveidrografiche E Posacavi	survey and cable ship	
Navetrasporto Materiali	supply ship	
Piroscafo	steamship	P/fo.
Posamine	minelayer	
Portaerei	aircraft carrier	
Rimorchiatore	tug	Rm
Rimorchiatore Dragamine	minesweeping tug	R.D.
Sommergibile	submarine	Sm.
Torpediniera	torpedo boat	Torp.
Trabaccolo	lugger	Trab.
Vedetta Anti-Sommergibile	anti-submarine vedette	Vas.
Veliero	sailing vessel	Vel.

GERMAN U-BOATS DETAILED FOR THE MEDITERRANEAN
AND THE ACCOUNT OF THEIR FATE
SEPTEMBER 1941 TO SEPTEMBER 1944

Note:- U-boats damaged on passage to the Mediterranean are marked X.

When detailed	Sailed	From B.d U's War Diary giving the estimated night on which final passage through Strait was made	When known by B.d U. to be clear and Chronological No.	Results and totals inside Mediterranean
<u>7 Sept. 41</u>				
<u>U.371</u> <u>U.97</u> <u>U.559</u> <u>U.331</u> <u>U.75</u> <u>U.79</u>	16 Sept. 20 Sept. 20 Sept. 24 Sept. 27 Sept. 28 Sept.	22/23 Sept. 27/28 Sept. 27/28 Sept. 29/30 Sept. 30 Sept./1 Oct. 2/3 Oct.	30 Sept. (1)) 30 Sept. (2)) 30 Sept. (3)) 30 Sept. (4)) 1 Oct. (5)) 10 Oct. (6))	Sept./Oct. 6 detailed as <u>Group Goeben</u> All got through
By 10 Oct. - Total in Mediterranean = 6				
<u>4 Nov. 41</u>				
<u>U.81</u> <u>U.205</u> <u>U.565</u> <u>U.433</u>	5 Nov. already at sea 8 Nov. 8 Nov.	11/12 Nov. 10/11 Nov. 13/14 Nov. 14/15 Nov.	13 Nov. (8)) 12 Nov. (7)) 14 Nov. (9) did not report before being sunk 16 Nov. (10)	Torpedoed H.M.S. <u>Ark Royal</u> on 13 Nov.
<u>11 Nov. 41</u>				of the 14 detailed in November
<u>U.431</u> <u>U.95</u>	16 Nov. 19 Nov.	24/25 Nov. 25/26 Nov.	24 Nov. (11) did not report before being sunk 28 Nov. (12)	7 got through 3 were sunk 3 were forced back 1 returned - engine trouble
<u>18 Nov. 41</u>				
<u>U.557</u> <u>U.562</u>	19 Nov. 20 Nov.	25/26 Nov. 27/28 Nov.	28 Nov. (13) 28 Nov. (14)	
<u>27/28 Nov. - Night air patrols started in Strait by F.A.A. Swordfish</u> (Mk. II A.S.V. with illuminating cartridges)				
<u>28 Nov. 41</u>				
<u>U.652</u>	already W. of Gib.	28/29 Nov.	29 Nov. (15)	
<u>U.96 X</u>	already W. of Gib.	(attacked and damaged on night 30 Nov. in the Strait by Swordfish A/812 F.A.A. and forced to return to St. Nazaire.		
<u>U.206</u>	29 Nov.	<u>Sunk</u> en route in Bay of Biscay by B/502 R.A.F. on 30 Nov.		
<u>U.563 X</u>	29 Nov.	(attacked and damaged en route in Bay of Biscay by T/502 R.A.F. on 1 Dec. and forced to return to Lorient.		

When detailed	Sailed	From B.d U's War Diary giving estimated night on which final passage through Strait was made	When known by B.d U. to be clear and Chronological No.	Results and totals inside Mediterranean
U.558 X	already	(attacked and damaged on night 1/2 Dec. in the		
	W. of Gib.	(Strait by Swordfish A/812 F.A.A. and forced to		
		(return to France		
U.71	29 Nov.	returned to port 5 Dec. with engine trouble		

Meanwhile U.433 was sunk inside the Med. off Malaga on 16 Nov. by H.M.S. Marigold on passage to a convoy: on 28 Nov. U.95 was sunk N. of Alboran Island by H.M.N.S./M.O.21 when returning to Gib. from operations.

Total in the Mediterranean at end of Nov. =			13
<u>6 & 7 Dec. 41</u>			
<u>U.372</u>	already W. of Gib.	7/8 Dec.	9 Dec. (16)
<u>U.375</u>	already W. of Gib.	(failed night 6/7 (made passage 7/8	9 Dec. (17)
<u>U.453</u>	already W. of Gib.	7/8 Dec.	9 Dec. (18)
<u>U.568</u>	sailed 4 Dec.	9/10 Dec.	11 Dec. (19)
<u>U.374</u>	sailed 6 Dec.	9/10 Dec.	11 Dec. (20)
<u>U.208</u>	sailed 3 Dec.	(Sunk en route to Strait night 11/12 by H.M.S. <u>Bluebell</u> (escorting C.G.77	
<u>U.573</u>	(7 Dec. (11 Dec.	but turned back 8 Dec. with defects. and made passage about 18/19 Dec. 23 Dec. (24)	Sailed again on)
<u>11 Dec. 41</u>			
<u>U.74</u>	9 Dec.	about 16/17 Dec.	19 Dec. (21)
<u>U.77</u>	10 Dec.	about 16/17 Dec.	19 Dec. (22)
<u>U.432 X</u>	10 Dec.	(attacked and damaged in Strait by Swordfish A/812 (F.A.A. and forced to return night 15/16)	
<u>U.569 X</u>	10 Dec.	(attacked and damaged in Strait night 15/16 by (Swordfish A/812 F.A.A. and forced to return	
<u>18 Dec. 41</u>			
<u>U.133</u>	sailed 16 Dec.	21/22 Dec.	23 Dec. (25)
<u>U.451</u>	already W. of Gib.	<u>sunk</u> in Strait night 21/22 by Swordfish A/812 F.A.A.	
<u>19 Dec. 41</u>			
<u>U.83</u>	sailed 11 Dec.	18/19 Dec.	20 Dec. (23)
<u>U.202 X</u>	sailed 13 Dec.	(attacked and damaged in Strait night 19/20 by (Swordfish A/812 F.A.A. and forced to return	
<u>U.577</u>	16 Dec.	21/22 Dec.	23 Dec. (26)

When detailed	Sailed	From B.d U's War Diary giving estimated night on which final passage through Strait was made	When known by B.d.U. to be clear and Chronological No.	Results and totals inside Mediterranean
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During the latter half of December 1941, the following boats were sunk inside the Mediterranean:-

16 Dec. - U.557 off Crete

23 Dec. - U.79 off Bardia

28 Dec. - U.75 off Sollum

So that the number of U-boats in the Mediterranean on 31 Dec. 41 was 21

2 Jan. 42 (Orders to make the passage during the next new moon period were signalled to these boats on 9 January).

<u>U.73</u>	4 Jan.	13/14 Jan.	16 Jan. (27)	of the 3 detailed in
<u>U.561</u>	3 Jan.	14/15 Jan.	17 Jan. (28)	Jan. 42
<u>U.572</u>	7 Jan.	(arrived West of Strait about 6th and gave up on 19th after unsuccessful attempts.		2 got through 1 was forced back
				Note: Swordfish night air patrols ceased 26 Jan.

On 9 January U.577 and on 12 January U.374 had been sunk inside the Mediterranean, so that the total number inside on 18 January 42 was 21. 21

Thereafter, during the Spring and Summer of 1942, the following were sunk inside:- U.133 on 14 March, U.573 on 1 May, U.74 on 2 May, U.568 on 28 May, U.652 on 2 June and U.372 on 4 August, and there were left inside the Mediterranean - U.73, 77, 81, 83, 97, 205, 331, 371, 375, 431, 453, 559, 561, 562, 565 = 15 15.

On 19 September 42, the German Naval Staff considered that reinforcements were necessary in view of the drop in numbers and the general Mediterranean situation. Accordingly, Doenitz was instructed to send in six boats during the October new moon period. These were organized under the name of Operation 'Tuemmler'.

<u>'Tuemmler'</u> <u>28 Sept 42</u>				of the 6 detailed in Oct. 42
<u>U.458</u>	1 Oct.	10/11 Oct.	13 Oct. (29)	4 got through
<u>U.605</u>	1 Oct.	10/11 Oct.	13 Oct. (30)	2 turned back
<u>U.593</u>	3 Oct.	10/11 Oct.	13 Oct. (31)	
<u>U.660</u>	3 Oct.	10/11 Oct.	13 Oct. (32)	
<u>U.89</u>	4 Oct.	(The Metox Search Receiver		
<u>U.438</u>	6 Oct.	{was found to be defective and boats ordered to remain in Atlantic.		
Total in Mediterranean =				19

On 30 October U.559 was sunk off Port Said, reducing total to 18.

SECRET

4

APPENDIX 5

When detailed	Sailed	From B.d U's War Diary giving estimated night on which final passage through Strait was made	When known by B.d U. to be clear and Chronological No.	Results and totals inside Mediterranean
Group Delphin was formed on 4 November 42 to reinforce the Mediterranean in view of the rising tempo of land, sea and air operations in the Central and Eastern areas.				
<u>Group Delphin</u> <u>4 Nov. 42</u>				of the 9 detailed in Nov.
<u>U.595</u>	sailed 31 Oct.	6/7 Nov.	8 Nov. (33)	7 got through 2 not fit
<u>U.407</u>	sailed 2 Nov.	7/8 Nov.	9 Nov. (34)	
<u>U.596</u>	4 Nov.	7/8 Nov.	9 Nov. (35)	
<u>U.617</u>	sailed 2 Nov.	7/8 Nov.	9 Nov. (36)	
<u>U.440</u>) <u>U.662</u>) <u>U.755</u>	W. of Gib. sailed 1 Nov.	engine trouble, cancelled attempt. 9/10 Nov.	11 Nov. (38)	
<u>5 Nov. 42 - 2 boats in lieu of 440 and 662</u>				
<u>U.259</u>	5 Nov.	8/9 Nov.	10 Nov. (37)	
<u>U.380</u>	5 Nov.	9/10 Nov.	11 Nov. (39)	
Total inside Mediterranean =				25

Subsequently in November, five more U-boats were sunk inside the Mediterranean. U.660 on 12th, U.605 on 13th, U.595 on 14th, U.259 on 15th, and U.331 on 17th, and from 18 November the total inside the Mediterranean was once more down to 20.

Another batch was detailed on 3 December 42 - Group 'Taucher'

<u>Group 'Taucher'</u> <u>3 Dec. 42</u>				of the 5 detailed in Dec. 42
<u>U.443</u>	W. of Gib.	3/4 Dec.	5 Dec. (40)	3 got through 1 returned - C.O. ill
<u>U.602</u>	sailed 1 Dec.	7/8 Dec.	9 Dec. (41)	
<u>U.301</u>	3 Dec.	8/9 Dec.	10 Dec. (42)	1 returned with leak
<u>U.258</u>	(sailed 2 Dec. Turned back on 4 Dec. owing to illness of C.O. <u>U.257</u> detailed in lieu.			
<u>U.257</u>	7 Dec.	Returned to port with leak.		

No further sinkings of U-boats took place up to 31 December 42, and there remained inside the Mediterranean: U.73, 77, 81, 83, 97, 205, 301, 371, 375, 380, 407, 431, 443, 453, 458, 561, 562, 593, 596, 602, 617, 755 = 23.

On 2 January 43 a boat was detailed in lieu of U.257

<u>2 Jan. 43</u>				
<u>U.224</u>	3 Jan.	9/10 Jan.	11 Jan. (43)	

However, on 13th this boat (U.224) was sunk off Cape Tenes, leaving the total inside unchanged at 23.

SECRET

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APPENDIX 5

When detailed	Sailed	From B.d U's War Diary, giving estimated night on which final passage was made	When known by B.d U. to be clear and Chronological No.	Results and totals inside Mediterranean
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No further U-boats were sent in until April 43, but in the interim another six had been sunk inside the Mediterranean:- U.301 on 21 Jan., U.205 on 17 February, U.562 on 19 February, U.443 on 23 February, U.83 on 4 March and U.77 on 28 March. This reduced the number inside to 17.

17

<u>1 Apl. 43</u>				
<u>U.414</u>	1 Apl.	9/10 Apl.	11 Apl. (44)	
<u>U.303</u>	1 Apl.	10/11 Apl.	12 Apl. (45)	
		Total in Mediterranean = 19		19

In the last week in April, U.602 was lost in the Western Mediterranean from unknown causes (last message from her was on 24 April). This reduced the number to 18.

18

<u>U.616</u>	19 Apl.	3/4 May	6 May (46)	
<u>U.410</u>	26 Apl.	4/5 May	7 May (47)	
		Total in Mediterranean = 20		20

On 5 May, in view of the serious situation in the Mediterranean, Doenitz detailed two boats already at sea to make the passage:-

<u>5 May 43</u>				
<u>U.447</u>	W. of Gib.	(Sunk en route to Strait by Hudson X/233 R.A.F. (on 7 May in 35.30N x 11.55W.		
<u>U.659</u>	Had sailed	25 April. <u>Sunk in collision</u> with <u>U.439</u> on 3 May.		

Later in May, the following boats were sunk inside the Mediterranean:- U.303 on 21st, U.414 on 25th and U.755 on 28th, bringing the number down to 17.

17

About 22 May, two boats were detailed instead of 447 and 659

<u>22 May 43</u>				of the 4 detailed in May 43
<u>U.594</u>	23 May	Sunk en route to Strait on 4 June by Hudson F/48 R.A.F. in 35.55N x 09.25W.		1 got through
<u>U.409</u>	26 May	4/5 June	9 June (48)	2 <u>sunk</u> en route
		Total inside Mediterranean = 18.		1 <u>sunk</u> in collision
				18

No boats were sent through for the next three months. During this time, another six U-boats were sunk inside the Mediterranean:- U.97 on 16 June, U.409 and U.561 on 12 July. U.375 on 30 July, U.458 on 22 August and U.617 on 11 September. By 12 September 43 only 12 inside. This reduced the total inside the Mediterranean to 12 U-boats.

12

SECRET

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APPENDIX 5

When detailed	Sailed	From B.d U's War Diary, giving estimated night on which final passage was made	When known by B.d U, to be clear and Chronological No.	Results and totals inside Mediterranean
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In order to make up numbers, Doenitz gave orders on 17 September 43 for seven boats to enter the Mediterranean. With the exception of one already at sea, the others were not ready for immediate departure.

<u>17 Sept. 43</u>				
<u>U.223</u>	outward bound in Bay.	{ attacked off the Strait 23-25 September by L/L (Wellingtons/179 R.A.F. 25/26 Sept. 28 Sept. (49)		
<u>U.667</u> X	18 Sept.	{ attacked off Strait 23-25 September by L/L (Wellington/179 R.A.F. and while withdrawing, on (26 September by T and N of Nos. 233 and 48 R.A.F. (On receipt of her signalled report 26/9, Doenitz (ordered the other boats to abandon the attempt and (withdraw to westward.) }		
<u>U.445</u>	20 Sept.	{ arrived off Strait about (25 September and withdrew.		of the 7 detailed in Sept. 43
<u>U.264</u>)	22 Sept.	Withdrew		
<u>U.420</u>)	Had not sailed before 26th.	Operation		
<u>U.450</u>)	cancelled			
<u>U.466</u>		1 got through 1 forced back 2 recalled 3 cancelled		

On 27 September, Doenitz recorded that unless boats had the new Naxos Search Receiver to detect 10 c.m. A.S.V. transmissions, further attempts were useless. Another attempt would be made in the October new moon period using U-boats so equipped.

Total inside the Mediterranean = 13 13

On 30 October, U.431 was sunk inside the Med., making the total inside = 12

<u>U.450</u>	14 Oct.	about 30/31 Oct.	1 Nov. (50)	
<u>U.340</u>	17 Oct.	<u>Sunk</u> in Strait - Shared between night attacks by L/L Wellingtons, W. and R/179 and H.M. Ships night 1/2 Nov.		
<u>U.732</u>	17 Oct.	<u>Sunk</u> in Strait by surface patrol night 31 Oct./1 Nov.		
<u>U.642</u>	18 Oct.	2/3 Nov.	6 Nov. (50)	Of the 5 detailed in Oct. 43
<u>U.566</u>	18 Oct.	<u>Sunk</u> en route by L/L Well. A/179 night 23/24 Oct. on extended Strait defences.		
Total <u>inside</u> the Mediterranean = 14				2 got through 2 <u>sunk</u> in Strait 1 <u>sunk</u> en route
				14

Total inside the Mediterranean = 14 14

<u>Nov. 43</u>				
<u>U.230</u>	22 Nov.	4/5 Dec.	8 Dec. (52)	The 1 detailed in Nov. 43 got through
Total <u>inside</u> the Mediterranean = 15				15

SECRET

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APPENDIX 5

When detailed	Sailed	From B.d U's War Diary, giving the estimated night on which final passage was made	When known by B.d U. to be clear and Chronological No.	Results and totals inside Mediterranean
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During December, the following were sunk inside the Mediterranean:-
U.593 on 13th and U.73 on 16th, leaving number reduced to 13 U-boats.

<u>Dec. 43</u> <u>and Jan. 44</u>				
<u>U.952</u> <u>U.343</u>	16 Dec. 26 Dec.	3/4 Jan. 5/6 Jan.	7 Jan. (53) 7 Jan. (54) (12 day trip)	The 2 detailed in Dec. 43 got through
Total <u>inside</u> the Mediterranean = 15				15

On 9 Jan. U.81 was destroyed in Pola by a U.S. air raid, leaving 14.

<u>U.455</u> <u>U.969</u> <u>U.586</u> <u>U.967</u>	6 Jan. 44 24 Jan. 29 Jan. 20 Jan.	21/22 Jan. 2/3 Feb. 11/12 Feb. 12/13 Feb.	30 Jan. (55) 8 Feb. (56) 19 Feb. (57) 21 Feb. (58)	The 4 detailed in Jan. 44 all got through.
Total inside the Mediterranean = 18				18

<u>Feb. 44</u>				
<u>U.761</u>	12 Feb.	(Sunk in Strait 24 Feb. by aircraft (including some fitted with M.A.D.) and H.M. Ships		
<u>U.421</u>	19 Feb.	After 2 aircraft attacks.		
<u>U.618</u>	23 Feb.	19/20 Mar. 28 Mar. (60)		Of the 5 detailed in Feb. 44
<u>U.392</u>	29 Feb.	After many attempts, gave it up on 25th and returned to France.		2 got through 2 sunk in Strait 1 gave up
<u>U.466</u>	4 Mar.	(Sunk in Strait 16 Mar. by M.A.D. equipped aircraft and H.M. Ships.	25 Mar. (59)	

Meanwhile, inside the Mediterranean the following U-boats had been destroyed:-
U.450 and U.343 on 10 Mar., U.380 and U.410 in an air raid on Toulon by U.S.A.A.F. on 11 Mar., and U.223 on 29 Mar., leaving a net total by end of March 44 inside the Mediterranean of only 15.

This was reduced on 6 April by the loss of U.455 through unknown cause off La Spezia to 14.

<u>Mar. 44</u>				
<u>U.471</u>	16 Mar.	30/31 Mar.	8 Apl. (61)	The 1 detailed in Mar. 44 got through
This addition was cancelled out on 29 April by the destruction of <u>U.421</u> in an air raid on Toulon by the U.S.A.A.F.				
Total still in the Mediterranean = 14				14

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APPENDIX 5

When detailed	Sailed	From <u>B.d U's</u> War Diary, giving the estimated night on which final passage was made	When known by <u>B.d U</u> to be clear and Chronological No.	Results and totals inside Mediterranean
<u>Apl. 44</u> <u>U.731</u> X	18 Apl.	<u>Sunk in Strait 15</u> and H.M. Ships.	May by M.A.D. equipped aircraft	Of the 2 detailed in <u>Apl. 44</u>
<u>U.960</u>	27 Apl.	about 14/15 Mar.	17 May (62)	1 got through 1 sunk in Strait

X U.731 was posted missing and given up by Doenitz on 20 May. He then ordered that no more U-boats were to try to enter the Mediterranean owing to the strong AIR/SURFACE defences in the Strait of Gibraltar.

Meanwhile inside the Mediterranean another batch of boats had been sunk:-
U.371 on 4 May, U.616 on 14 May, U.960 on 19 May and U.453 on 21 May, leaving the number inside the Med. as only 11.

There was little further operational activity by any of the 11 surviving U-boats and during the next few months they were all disposed of as under:-

U.586 Destroyed on 5 July 44 by an air raid on Toulon by the U.S.A.A.F.

U.471
U.642
U.952
U.969) Destroyed on 6 August 44 by an air raid on Toulon by the U.S.A.A.F.

U.466
U.967) Scuttled in Toulon on 19 August 44.
U.230 Scuttled in Toulon on 21 August 44.
U.407 Sunk by H.M. Ships near Crete on 19 September 44.
U.565
U.596) Destroyed on 24 September 44 by an air raid on Salamis by the U.S.A.A.F.
Leaving no U-boats afloat inside the Mediterranean.

Source: Naval Staff History - The Defeat of the Enemy Attack on Shipping Vol.I.

GERMAN U-BOATS AND THE MEDITERRANEANANNUAL SUMMARY SEPTEMBER 1941 TO SEPTEMBER 1944

Year	No. of German U-boats detailed	Sunk en route to the Strait	Damaged and forced to return while en route	Returned owing to defects or sunk by accident	Sunk by the Strait's Inner Defence Forces	Damaged and forced back by the Strait's Defence Forces	Gave up the attempt due to the Strait's Defences	Sailing cancelled due to the Strait's Defences	Total sunk, damaged etc. by the Strait's Inner Defence Forces	Got clean through into the Mediterranean	Sunk inside the Mediterranean	Total inside the Mediterranean at the end of the year
1941	36	2	1	1	1	5	-	-	6	26	5	21
1942	23	-	-	6	-	-	1	-	1	16	14	23
1943	24	3 ¹ / ₄	-	1	2	1	2	3	8X	10	20	13
1944	12	-	-	-	3	-	1	-	4	10	23	nil
Totals	95	5 ¹ / ₄	1	8	6	6	4	3	19X	62	62	

¹/₄ Three sunk by Strait Distant Air Patrols.

X Three more were sunk by Strait Outer Air Patrols.

AIR RAIDS ON U-BOAT BASES IN THE MEDITERRANEAN

<u>Date</u>	<u>U-boat base</u>	<u>Damage</u>												
30/31.12.41	Salamis	No damage to U-boat.												
18/19. 4.43	Spezia	Widespread damage to dockyard. U-boat repair dock completely disabled. This necessitated the transfer of some U-boats to Toulon and Pola.												
5. 6.43	Spezia	<u>H.8</u> sunk												
24.11.43	Toulon	Mourillon U-boat base completely disabled. Misseissey U-boat base heavily damaged. 3 oil tanks destroyed, 5 U-boats damaged:-												
		<table><tr><th><u>U-boat</u></th><th><u>Again fit for Service</u></th></tr><tr><td>1. <u>593</u></td><td>1.12.43</td></tr><tr><td>2. <u>380</u></td><td>20.12.43</td></tr><tr><td>3. <u>73</u></td><td>4.12.43</td></tr><tr><td>3. <u>371</u></td><td>22. 1.44</td></tr><tr><td>5. <u>450</u></td><td>15. 2.44</td></tr></table>	<u>U-boat</u>	<u>Again fit for Service</u>	1. <u>593</u>	1.12.43	2. <u>380</u>	20.12.43	3. <u>73</u>	4.12.43	3. <u>371</u>	22. 1.44	5. <u>450</u>	15. 2.44
<u>U-boat</u>	<u>Again fit for Service</u>													
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2. <u>380</u>	20.12.43													
3. <u>73</u>	4.12.43													
3. <u>371</u>	22. 1.44													
5. <u>450</u>	15. 2.44													
2.12.43	Marseilles	Damage to U-boat installations and pens.												
21. 1.44	Fiume	Widespread damage to dock area. Torpedo factory 40% disabled.												
9. 1.44	Pola	Heavy damage to U-boat base. 'U.81'. sunk (did not return to service).												
4. 2.44	Toulon	3 U-boats damaged:-												
		<table><tr><th><u>U-boat</u></th><th><u>Again fit for service</u></th></tr><tr><td>1. <u>343</u></td><td>3. 3.44</td></tr><tr><td>2. <u>642</u></td><td>Paid off 12. 7.44</td></tr><tr><td>3. <u>380</u></td><td>Sunk in raid 11. 3.44</td></tr></table>	<u>U-boat</u>	<u>Again fit for service</u>	1. <u>343</u>	3. 3.44	2. <u>642</u>	Paid off 12. 7.44	3. <u>380</u>	Sunk in raid 11. 3.44				
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2. <u>642</u>	Paid off 12. 7.44													
3. <u>380</u>	Sunk in raid 11. 3.44													
25. 2.44	Pola	Heavy damage to U-boat base.												
7. 3.44	Toulon	Slight damage to dockyard.												

<u>Date</u>	<u>U-boat Base</u>	<u>Damage</u>														
11. 3.44	Toulon	U.380 sunk. U.410 total loss. (Paid off 22.3.44). Three U-boats damaged:-														
		<table border="1"> <thead> <tr> <th><u>U-boat</u></th> <th><u>Again fit for Service</u></th> </tr> </thead> <tbody> <tr> <td>1. <u>586</u></td> <td>9. 5.44</td> </tr> <tr> <td>2. <u>967</u></td> <td>12. 4.44</td> </tr> <tr> <td>3. <u>642</u></td> <td>Paid off 12. 7.44</td> </tr> </tbody> </table>	<u>U-boat</u>	<u>Again fit for Service</u>	1. <u>586</u>	9. 5.44	2. <u>967</u>	12. 4.44	3. <u>642</u>	Paid off 12. 7.44						
<u>U-boat</u>	<u>Again fit for Service</u>															
1. <u>586</u>	9. 5.44															
2. <u>967</u>	12. 4.44															
3. <u>642</u>	Paid off 12. 7.44															
29. 4.44	Toulon	Damage to U-boat installations. 'U.421' sunk (did not return to service). 'U.642' damaged (paid off 12.7.44) 1 French U-boat sunk.														
5. 7.44	Toulon	'U.586' sunk. Did not return to service. 6 U-boats damaged:-														
		<table border="1"> <thead> <tr> <th><u>U-boat</u></th> <th></th> </tr> </thead> <tbody> <tr> <td>1. <u>642</u></td> <td>Paid off 12.7.44 (Sunk 6.8.44)</td> </tr> <tr> <td>2. <u>967</u></td> <td>Again damaged 11.7.44. Scuttled 19.8.44.</td> </tr> <tr> <td>3. <u>471</u></td> <td>Sunk in air raid 6.8.44.</td> </tr> <tr> <td>4. <u>952</u></td> <td>Paid off 8.7.44.</td> </tr> <tr> <td>5. <u>969</u></td> <td>Sunk in air raid 6.8.44.</td> </tr> <tr> <td>6. <u>466</u></td> <td>Scuttled 19.8.44.</td> </tr> </tbody> </table>	<u>U-boat</u>		1. <u>642</u>	Paid off 12.7.44 (Sunk 6.8.44)	2. <u>967</u>	Again damaged 11.7.44. Scuttled 19.8.44.	3. <u>471</u>	Sunk in air raid 6.8.44.	4. <u>952</u>	Paid off 8.7.44.	5. <u>969</u>	Sunk in air raid 6.8.44.	6. <u>466</u>	Scuttled 19.8.44.
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5. <u>969</u>	Sunk in air raid 6.8.44.															
6. <u>466</u>	Scuttled 19.8.44.															
11. 7.44	Toulon	U.967 damaged - Scuttled 19.8.44.														
6. 8.44	Toulon	U.471, U.642, U.969 and U.952 sunk.														
24. 9.44	Salamis	U.596 sunk. U.565 damaged. Scuttled 30.9.44 (but Submarine Tracker, C.-in-C. Med. says sunk 24.9.44).														

Source: Joint Historical Sub-Committee 1950 report (A.H.B.);
Navi Perdute (A.H.B.6) and Admlty/Foreign Docs. Sec.

GERMAN AND ITALIAN SUBMARINES IN THE MEDITERRANEAN
SUNK OR SHARED BY AIRCRAFT
(excluding Strait of Gibraltar)

Serial No.		Date	U-Boat		Task of Killer	Killer	Position
It.	Ge.		Italian	German			
1	-	28. 6.40	<u>Argonauta</u>	-	Air patrol	Sund. L.5804/230	Central Med. 35.24 N. 19.00. E.
2	-	29. 6.40	<u>Rubino</u>	-	Air patrol	Sund. L.5804/230	Ionian Sea 39.10 N. 18.49 E.
3	-	22. 8.40	<u>Iride</u>	-	Air patrol	Sword/824 F.A.A. Disembarked from H.M.S. <u>Eagle</u> .	G. of Bomba (Cirenaica)
4	-	30. 9.40	<u>Gondar</u>	-	Air patrol/ Ship in passage	Shared (L.2166/ 230 RAF & H.M. Ship	Off Alexandria 31.33 N. 28.33 E.
5	-	18.10.40	<u>Durbo</u>	-	Air/Sea patrol	Shared (D/202 RAF & H.M. Ship	East of Gib. 35.54 N. 04.17 W.
-	1	9. 1.42	-	<u>U.577</u>	Air patrol	X/230 R.A.F.	Off Mersa Matruh 32.22 N. 26.54 E.
-	2	1. 5.42	-	<u>U.573</u>	Air patrol	M/233 R.A.F.	Off C. Tenes (Algeria) 37.00 N. 01.00 E.
-	3	2. 5.42	-	<u>U.74</u>	Air/Sea patrol	Shared (C/202 R.A.F. & H.M. Ships	Off C. Palos (Spain) 37.32 N. 00-10 E.
-	4	2. 6.42	-	<u>U.652</u>	Air patrol	Blen/203 RAF & Sw/815 F.A.A.	Off Sollum 31.55 N. 25.13 E.
6	-	9. 6.42	<u>Veniero</u>	-	Air patrol	J/240 R.A.F.	Sth. of Majorca 38.21 N. 03.21 E.
7	-	9. 6.42	<u>Zaffiro</u>	-	Air patrol	? J/240 R.A.F.	Sth. of Majorca 38.21 N. 03.21 E.
8	-	11. 7.42	<u>Ondina</u>	-	Air/Sea patrol	Shared (Wal/700 or 701 F.A.A. & H.M. Ships	East of Cyprus 34.35 N. 34.56 E.
-	5	4. 8.42	-	<u>U.372</u>	Air/Sea patrol	Shared (203 R.A.F. & H.M. Ships	Off Jaffa (Palestine) 32.00 N. 34.00 E.
9	-	14. 9.42	<u>Alabastro</u>	-	Air patrol	R/202 R.A.F.	Off Algiers 37.28 N. 04.34 E.
-	6	30.10.42	-	<u>U.559</u>	Air/Sea patrol	Shared (Aircraft & H.M. Ships	N.E. of Port Said 32.30 N. 33.00 E.
10	-	7.11.42	<u>Antonio</u> } <u>Sciesa</u> }	-	Bombing	U.S. Army Aircraft	In Tobruk (Cirenaica) 32.05 N. 25.39 E.

Serial No.		Date	U-Boat		Task of Killer	Killer	Position
It.	Ge.		Italian	German			
-	7	14.11.42	-	<u>U.595</u>	Air patrol	F.K.W.L. & X/500 R.A.F.	N.E. of Oran (Algeria) 36.38 N. 00.30 E.
-	8	15.11.42	-	<u>U.259</u>	Air patrol	S/500 R.A.F.	N.W. of Algiers 37.20 N. 03.05 E.
-	9	17.11.42 *	-	<u>U.331</u>	Air patrol and Carrier Air patrol	Z.L. & C/500 R.A.F. Alb./FAA from H.M.S. <u>Formidable</u>	N.W. of Algiers 37.05 N. 02.24 E.
11	-	2.12.42	<u>Dessie</u>	-	Air patrol	L/500 R.A.F.	N.W. of Algiers 37.48 N. 02.14 E.
12	-	14. 1.43	<u>Narvalo</u>	-	Air/Sea	Shared (Aircraft & H.M. Ships	S.E. of Malta 34.08 N. 16.04 E.
-	10	17. 2.43	-	<u>U.205</u>	Air/Sea escort	Shared (Bisley/15 SAAF. & H.M. ships	W. of Derna (Cyrenaica) 32.56 N. 22.01 E.
-	11	19. 2.43	-	<u>U.562</u>	Air/Sea	Shared (Well/38 RAF & H.M. Ships	N.E. of Benghazi (Cyrenaica) 32.57 N. 20.54 E.
-	12	4. 3.43	-	<u>U.83</u>	Air patrol	V/500 R.A.F.	S.E. of C. Palos (Spain) 37.10. N. 00.05 E.
-	13	23. 4.43	-	<u>U.602</u>	Air patrol	J or N/500 R.A.F.	Off Oran
13	-	13. 5.43	<u>Mocenigo</u>	-	Bombing	U.S. Army Air Raid	Cagliari (Sardinia)
-	14	28. 5.43	-	<u>U.755</u>	Air patrol	M/608 R.A.F.	N. of Ibiza (Balearics) 39.59 N. 01.41 E.
14	-	5. 6.43	<u>H.8</u>	-	Bombing	R.A.F. Air Raid	Spezia (G. of Genoa)
-	15	16. 6.43	-	<u>U.97</u>	Air patrol	/459 R.A.F.	W. of Haifa (Palestine) 33.00 N. 34.00 E.
15	-	18 .7.43	<u>Romolo</u>	-	Air escort	B/221 R.A.F.	E. of Augusta (Sicily) 37.20 N. 16.18 E.
-	16	11. 9.43	-	<u>U.617</u>	Air/Sea patrol	Shared (L. & P/179 R.A.F. & H.M. Ships	South of Alboran Isl. (W. Med.) 35.38 N. 03.27 W.
16	-	12. 9.43	<u>Topazio</u>	-	Air (accident)	C/13 R.A.F.	South of Sardinia 38.39 N. 09.22 E.
-	17	13.12.43	-	<u>U.593</u>	Swamp	Shared (Air Hunt U.S. & H.M. Ships	N.E. of Bougie (Algeria) 37.38 N. 05.58 E.
-	18	16.12.43	-	<u>U.73</u>	Swamp	Shared (Air Hunt U.S. Ships	Off Oran (Algeria) 36.07 N. 00-50 W.
-	19	9. 1.44	-	<u>U.81</u>	Bombing	U.S. Army Air Raid	Pola
-	20	11. 3.44	-	<u>U.380</u>	Bombing	U.S. Army Air Raid	Toulon
-	21	11. 3.44	-	<u>U.410</u>	Bombing	U.S. Army Air Raid	Toulon
-	22	29. 3.44	-	<u>U.223</u>	Swamp	Shared (Air Hunt H.M. Ships	N. of Sicily 38.48 N. 14.10 E.

* U.411 has been, up to date, officially credited to aircraft and H.M. Ships on 28th November 1942, north of Bone. However, this U-boat was detailed on 8th November by Doenitz to take up a billet westward of Gibraltar and at no time was she told to enter the Med. Doenitz last heard from her on 10th November and a better claim for her destruction comes from H.M.S. Krestler escorting KMS.1 on 15th November in position 3609N. x 0742W. (Atlantic) which was her allotted billet.

Serial No.		Date	U-Boat		Task of Killer	Killer	Position
It.	Ge.		Italian	German			
-	23	29. 4.44	-	<u>U.421</u>	Bombing	U.S. Army Air Raid	Toulon
-	24	4. 5.44	-	<u>U.371</u>	Swamp	Shared {Air Hunt U.S., H.M. & F.F. Ships	N.E. of Bougie (Algeria) 37.49 N. 05.39 E.
-	25	14. 5.44	-	<u>U.616</u>	Swamp	Shared {Air Hunt/36 RAF, H.M. & U.S. Ships	Off C. Tenos (Algeria) 36.46 N. 00. 52 E.
-	26	19. 5.44	-	<u>U.960</u>	Swamp	Shared {Air Hunt 36 & 500 R.A.F. & U.S. Ships	N.W. of C. Tenes (Algeria) 37.20 N. 01.35 E.
-	27	21. 5.44	-	<u>U.453</u>	Swamp	Shared {Air Hunt & H.M. Ships	N.E. of C. Spartivento (Italy) 38.13 N. 16.36 E.
-	28	5. 7.44	-	<u>U.586</u>	Bombing	U.S. Army Air Raid	Toulon
-	29	6. 8.44	-	<u>U.642</u>	Bombing	U.S. Army Air Raid	Toulon
-	30	6. 8.44	-	<u>U.952</u>	Bombing	U.S. Army Air Raid	Toulon
-	31	6. 8.44	-	<u>U.471</u>	Bombing	U.S. Army Air Raid	Toulon
-	32	6. 8.44	-	<u>U.969</u>	Bombing	U.S. Army Air Raid	Toulon
-	33	24. 9.44	-	<u>U.596</u>	Bombing	U.S. Army Air Raid	Salamis (Greece)
-	34	24. 9.44	-	<u>U.565</u>	Bombing	U.S. Army Air Raid	Salamis

Date	Name	Flag	Position	Scuttled	Captured	SUNK						Remarks
						Navy	Mine	Aircraft	Air Raid	C.U.	Other Causes	
ENEMY SUBMARINE KILLS IN THE MEDITERRANEAN (10 JUNE 1940 TO 2 MAY 1945) DEFINITIVE NOMINAL LIST OF OPERATIONAL LOSSES												
1940												
17 June	PROVANA	It.	Off Oran			941						French S.C. S.C. Badly damaged by S.C. and scuttled. Badly damaged by S.C. and scuttled. R.A.F. L.5804/230 R.A.F. L.5804/230
20 June	DIAMANTE	It.	Off Tobruk			591						
27 June	LIUZZI	It.	33°46'N., 27°27'E.			1036						
29 June	UEBI SCEBELI	It.	35°29'N., 20°06'E.			620						
29 June post 27 June	RUBINO ARGONAUTA	It. It.	30°10'N., 18°49'E. Tobruk-Ras el Tin - Ras Hilal					591 599				
22 Aug.	IRIDE	It.	1.5 m. - 85° Ras Megara (Gulf of Bomba)					615				F.A.A. T/824
30 Sept.	GONDAR	It.	31°33'N., 28°33'E.			(615)	615				R.A.F./Navy shared 2166/230 and S.C. and scuttled.
2 Oct.	BERILLO	It.	60 m. N. of Sidi Barrani			618						S.C. and scuttled. sub.
8 Oct.	GEMMA	It.	35°30'N., 27°18'E.			618						
8-15	FOCA	It.	prob. 6 m. Cape Carmel (Palestine)					1121				R.A.F./Navy shared. D/202 and S.C. S.C.
18 Oct.	DURBO	It.	60 m. E. of Gibraltar			(620)	620				
20 Oct.	LAFOLÉ	It.	36°00'N., 03°00'E.			620						
14 Dec.	NAIADE	It.	Off Bardia			591						S.C.
1941												
19 or 22 Jan.	NEGHELLI	It.	Perhaps 37°15'N., 22°04'E.							615		Mine or S.C. - uncertain.
6 Mar.	AMFITRITE	It.	15 m. off Caso Is. (Aegean)			591						S.C. and scuttled.
31 Mar.	CAPPONI	It.	38°32'N., 15°15'E.			770						sub.
27 June	SALPA	It.	32°05'N., 26°47'E.			599						sub.
5 July	JANTINA	It.	37°21'N., 15°20'E.			599						sub.
2 Aug.	TEMBIEN	It.	36°21'N., 12°40'E.			620						S.C.
Post 15 Sept.	SMERALDO	It.	Sicilian Channel ?							591		Mine ?
28 Sept.	FISALIA	It.	32°19'E., 34°17'E.			599						S.C.
30 Sept.	ADUA	It.	50 m. N. of Cape Tenez			615						S.C.
9 Nov.	U.433	Ger.	Off Malaga			769						S.C.
28 Nov.	U.95	Ger.	E. of Gibraltar			769						H. Neth. M. sub.
11 Dec.	CARACCILO	It.	32°09'N., 25°19'E.			1461						S.C. and scuttled.
16 Dec.	U.557	Ger.	Off Crete								769	Italian t.b.
23 Dec.	U.79	Ger.	Off Bardia			769						S.C.
28 Dec.	U.75	Ger.	Off Mersa Matruh			769						S.C.

Date	Name	Flag	Position	Scuttled	Captured	SUNK					Remarks
						Navy	Mine	Aircraft	Air raid	C.U.	
ENEMY SUBMARINE KILLS IN THE MEDITERRANEAN (contd.)											
1942											
5 Jan.	SAINT BON	It.	8 m. Pt. Milazzo			1461					sub.
9 Jan.	U.577	Ger.	E. of Sollum					769			R.A.F. X/230
12 Jan.	U.374	Ger.	S. of Messina			769					sub.
30 Jan.	MEDUSA	It.	44°45'N., 13°56'E.			599					sub.
14 Mar.	MILLO	It.	off Pt. Stilo (Calabria)			1461					sub.
14 Mar.	U.133	Ger.	off Cape Phleves (Greece)				769				
17 Mar.	GUGLIELOTI	It.	22 m. Cape d'Armi			896					sub.
18 Mar.	TRICHECO	It.	off Brindisi			810					sub.
1 May	U.573	Ger.	37°0'N., 01°E.					769			R.A.F. M/233
2 May	U.74	Ger.	37°32'N., 30°10'E. OR			(769).....		769			R.A.F./Navy shared.
			37°16'N., 01°W.								C/202 and S.C.
28 May	U.568	Ger.	N. of Tobruk			769					S.C.
2 June	U.652	Ger.	31°55'N., 25°13'E.					769			R.A.F./F.A.A. - /203
7 or 9 June	VENIERO	It.	? 37°57'N., 03°21'E.?					941			and - /815 shared.
9 June	ZAFFIRO	It.	? 38°21'N., 03°21'E.?					591			R.A.F. J/240 ?
9 July	PERLA	It.	off Beirut		618						S.C.
11 July	ONDINA	It.	34°35'N., 34°56'E.			(591).....		591			F.A.A./Navy shared - /701 and s.c.
4 Aug.	U.723	Ger.	32°N., 34°E.			(769).....		769			R.A.F./Navy shared - /203 or /231 and s.c.
10 Aug.	SCIRE	It.	off Haifa			620					S.C.
12 Aug.	COBALTO	It.	37°39'N., 10°E.			630					S.C.
12 Aug.	DAGABUR	It.	37°18'N., 01°58'E.			620					S.C.
14 Sept.	ALABASTRO	It.	37°28'N., 04°34' E.					630			R.A.F. R/202
30 Oct.	U.559	Ger.	32°30'N., 33°E.			(769).....		769			R.A.F./Navy shared.
											Sund. and/or Wellesley and s.c.
6 or 7 Nov.	ANTONIO SCIESA	It.	Tobruk					1369			U.S.A.A.F.
9 Nov.	GRANITO	It.	38°34'N., 12°E.			630					sub.
10 Nov.	EMO	It.	off Algiers			941					s.c. and scuttled.
12 Nov.	U.660	Ger.	off Oran			769					s.c.
13 Nov.	U.605	Ger.	off Algiers			769					s.c.
14 Nov.	U.595	Ger.	36°38'N., 00°30'E.					769			R.A.F. X/500
15 Nov.	U.259	Ger.	37°20'N., 03°05'E.					769			R.A.F. S/500
17 Nov.	U.331	Ger.	37°05'N., 02°24'E.					769			R.A.F./F.A.A. Z.L. and C/500 R.A.F. and Alb./F.A.A. ex H.M.S. FORMIDABLE
2 Dec.	DESSIE	It.	37°48'N., 02°14'E.					620			R.A.F. L/500 ?
6 Dec.	PORFIDO	It.	38°10'N., 08°35'E.			630					sub.
13 Dec.	CORALLO	It.	off Bougie			620					S.C.
15 Dec.	WARSZIEK	It.	35°08'N., 14°22'E.			620					S.C.

Date	Name	Flag	Position	Scuttled	Captured	SUNK					Remarks
						Navy	Mine	Aircraft	Air Raid	C.U.	
1943			ENEMY SUBMARINE KILLS IN THE MEDITERRANEAN (contd.)								
13 Jan.	U.224	Ger.	W. of Algiers			769					S.C.
14 Jan.	NARVALO	It.	34°08'N., 16°04'E.			(810).....		810			R.A.F./Navy shared Beaufort/ - and s.c.
19 Jan.	TRITONE	It.	37°06'N., 05°22'E.,			746					S.C.
20 Jan.	SANTAROSA	It.	N.N.E. of Kaliuscia)			815					S.C.
			Sandbanks (Tripoli))								
21 Jan.	U.301	Ger.	W. of Bonifacio			769					sub.
8/9 Feb.	AVORIO	It.	37°N., 6°42'E.			630					S.C. and scuttled
9 Feb.	MALACHITE	It.	Cape Spartivento (Sard.)			615					H. Neth. M. sub.
17 Feb.	ASTERIA	It.	37°14'N., 42°27'E.			630					S.C. and scuttled
17 Feb.	U.205	Ger.	32°56'N., 22°01'E.			(769).....		769			R.A.F./Navy shared -
											W/15 and s.c.
19 Feb.	U.562	Ger.	32°57'N., 20°54'E.			(769).....		769			R.A.F./Navy shared -
											/38 and s.c.
23 Feb.	U.443	Ger.	off Algiers			769					S.C.
28 Feb.	FR.III (dx PHOQUE)-Fr.	It. ex Fr.	5 m. E. of Avola (Sic.)					974		U.S.A.A.F.	Spits
4 Mar.	U.83	Ger.	37°10'E., 00°05'E.					769			R.A.F. V/500
23 Mar.	DELFINO	It.	San Vito, Gulf of Taranto							810	Collision
28 Mar.	U.77	Ger.	37° 42'N., 00°10'E.					769			R.A.F. L & V/48 and L/283
23/24 Apl.	U.602	Ger.	Off Oran					769			R.A.F. J/500
13 May	MOCENIGO	It.	Cagliari						941		U.S.A.A.F.
21 May	GORGIO	It.	N. of Oran			746					S.C.
21 May	U.303	Ger.	off Toulon			769					sub.
25 May	U.414	Ger.	W. of Cape Tenez			769					S.C.
28 May	U.755	Ger.	39°59'N., 01°41'E.					769			R.A.F. M/608
5 June	H.8	It.	La Spezia						336		R.A.F.
16 June	U.97	Ger.	33°N., 34°E.					769			R.A.F. -/459
11 July	FLUTTO	It.	37°34'N., 15°43'E.			746					S.C.
12 July	BRONZO	It.	off Syracuse		630						S.C.
12 July	U.409	Ger.	E. of Algiers			769					S.C.
13 July	NEREIDE	It.	40 m. E. of Augusta			591					S.C.
13 July	AC CIAIO	It.	38°30'N., 15°49'E.			630					sub.
13 July	U.561	Ger.	Messina Straits			769					S.C.
15 July	REMO	It.	39°19'N., 17°30'E.			2220					sub.
18 July	ROMOLO	It.	37°20'N., 16°18'E.					2220			R.A.F. B/221
23 July	ASCIANGHI	It.	37°09'N., 14°22'E.			620					S.C.
29 July	MICCA	It.	3 m. from S.M. di Leuca			1371					sub.
30 July	U.375	Ger.	Sicilian Channel			1769					S.C.
3 Aug.	ARGENTO	It.	off Pantelleria			630					S.C.
22 Aug.	U.458	Ger.	off Pantelleria			769					S.C.
7 Sept.	VELELLA	It.	16 m. Pta. Licosa			689					sub.
11/12 Sept.	U.617	Ger.	35°38'N., 03°27'W.			(769).....		769			R.A.F./Navy shared. L & A/179 and s.c.

Date	Name	Flag	Position	Scuttled	Captured	SUNK					Remarks
						Navy	Mine	Aircraft	Air Raid	C.U.	
<u>ENEMY SUBMARINE KILLS IN THE MEDITERRANEAN (contd.)</u>											
<u>Italian Surrender - scuttled by the Italians to avoid capture by the Germans</u>											
<u>1943</u>											
9 Sept.	AMBRA	It.	La Spezia	618							
9 Sept.	ARADAM	It.	Genoa	615							
9 Sept.	SIRENA	It.	La Spezia	591							
9 Sept.	SPARIDE	It.	La Spezia	746							
9 Sept.	VOLFRAMIO	It.	La Spezia	630							
9 Sept.	MURENA	It.	La Spezia	746							
11 Sept.	ARGO	It.	Monfalcone	689							
12 Sept.	AMETISTA	It.	5 m. off Numana	591							
12 Sept.	SERPENTE	It.	Off Numana (Ancona)	599							
9 Sept.	BATAMONTE (ex SMELI - YS.)	It. ex YS.	La Spezia	570							
14 Sept.	RISMONDO (ex OSVETNIK - YS.)	It. ex YS.	Catena, nr. Bonifacio	570							
14 Sept.	H.6	It.	Bonifacio	336							
30 Oct.	U.431	Ger.	off Toulon								sub.
13 Dec.	U.593	Ger.	37°38'N., 05°58'E.			(769).....	769				R.A.F./Navy shared Wells./s.c. 'SWAMP'
16 Dec.	U.73	Ger.	36°07'N., 00°50'W.			(769).....	769				R.A.F./Navy shared Wells./s.c. 'SWAMP'
<u>1944</u>											
9 Jan.	U.81	Ger.	Pola					769			U.S.A.A.F.
9 Mar.	U.450	Ger.	Tyrrhenian Sea			769					S.C.
10 Mar.	U.343	Ger.	S. of Sardinia			769					S.C.
11 Mar.	U.380	Ger.	Toulon					769			U.S.A.A.F.
11 Mar.	U.410	Ger.	Toulon					769			U.S.A.A.F.
29 Mar.	U.223	Ger.	38° 48'N., 14°10'E.			(769).....	769				R.A.F./Navy shared s.c. 'Swamp'
6 Apl.	U.455	Ger.	Mediterranean						769		mined ?
29 Apl.	U.421	Ger.	Toulon					769			U.S.A.A.F.
4 May	U.371	Ger.	37°49'N., 05°39'E.			(769).....	769				R.A.F. Navy shared 'Swamp'
14 May	U.616	Ger.	36°46'N., 00°52'E.			(769).....	769				R.A.F./Navy shared. 'Swamp'
19 May	U.960	Ger.	37°20'N., 01°35'E.			(769).....	769				R.A.F./Navy shared - /36 'Swamp'
20/21 May	U.453	Ger.	38°13'N., 16°36'E.			(769).....	769				R.A.F./Navy shared. 'Swamp'

Date	Name	Flag	Position	Scuttled	Captured	SUNK						Remarks
						Navy	Mine	Aircraft	Air Raid	C.U.	Other Causes	
1944 5 July	U.586	Ger.	Toulon						769			U.S.A.A.F.
6 Aug.	U.642	Ger.	Toulon						769			} U.S.A.A.F.
6 Aug.	U.952	Ger.	Toulon						769			
6 Aug.	U.471	Ger.	Toulon						769			
6 Aug.	U.969	Ger.	Toulon						769			
19 Aug.	U.466	Ger.	Off St. Mandrier	769								
19 Aug.	U.967	Ger.	Hyerres	769								
21 Aug.	U.230	Ger.	Toulon	769								
19 Sept.	U.407 (Schnorchel)	Ger.	Aegean			769						S.C.
24 Sept.	U.565	Ger.	Salamis						769			} U.S.A.A.F.
24 Sept.	U.596	Ger.	Salamis						769			

N.B. Aircraft and their squadrons are shown thus: X/230 i.e. Aircraft X of No. 230 Squadron.

S.C. = surface craft.

sub. = submarine.

NORTHWEST AFRICAN COASTAL AIR FORCE
OPERATIONAL ORDERS OF BATTLE ON 11 MAY, 30 MAY AND 26 JUNE 1943

11 MAY 1943

<u>No.323 Fighter Wing</u>	R.A.F.	H.Q. Maison Blanche
No.255 Squadron (Night Beaufighters)		Setif
No.283 Squadron (A/S/R Walruses)		Algiers
<u>No.325 Fighter Wing</u>	R.A.F.	H.Q. Setif
No.600 Squadron (Night Beaufighters)		Setif
No.153 Squadron " "		Maison Blanche
Fighter Pilots' Practice Flight		Setif
<u>No.328 General Reconnaissance Wing</u>		H.Q. Blida
No.500 Squadron (Hudsons)		Tafaroui
No.608 Squadron " "		Blida
No.14 Squadron (Marauders)		Bone

R.A.F. Stations

No. 32 Squadron (Hurricanes)	(Blida, Bone, Djidjelli,
No. 87 Squadron "	(Maison Blanche, Philippeville,
No.253 Squadron "	Tafaroui
No.813 Squadron (Fleet Air Arm) (Swordfish)	Maison Blanche
No.836 Squadron (Fleet Air Arm) (Albacores)	Taher
No.985 Balloon Squadron	Jemappes
	Tafaroui
	Bone
	Bone

<u>2037 Anti-Submarine Wing</u>	Crawfield
1st Anti-Submarine Squadron	Crawfield
2nd Anti-Submarine Squadron	Crawfield

<u>1st Air Defence Wing (U.S.A.A.F.)</u>	
<u>81st Fighter Group (U.S.A.A.F.)</u>	
91st Fighter Squadron Airacobras	Tingley
93rd Fighter Squadron "	Tingley
<u>2nd Air Defence Wing (U.S.A.A.F.)</u>	
<u>350th Fighter Group</u>	La Senia
345th Fighter Squadron	La Senia
346th Fighter Squadron	Orleansville
347th Fighter Squadron	Le Zera

30 MAY 1943

<u>No.242 Group (ex-Tactical Air Force)</u>	
<u>No.323 Wing R.A.F.</u>	
No.219 Squadron (Night Beaufighters)	
No.255 Squadron (Night Beaufighters)	
No.283 Squadron A/S.R. (Walrus)	
<u>52nd Fighter Group (U.S.A.A.F.)</u>	
2nd Fighter Squadron (Spitfires)	
4th & 5th Fighter Squadrons (Spitfires)	

<u>1st Air Defence Wing (U.S.A.A.F.)</u>	
<u>81st Fighter Group</u>	
91st Squadron (Airacobras)	
93rd Squadron (Airacobras)	
<u>No.328 Wing (R.A.F.)</u>	
14 Squadron (Marauders)	
47 Squadron (T/B Beaufighters)	
57 Squadron (Baltimores)	
144 Squadron (T/B Beaufighters)	
458 Squadron (Wellingtons)	

2nd Air Defence Wing (U.S.A.A.F.)350th Fighter Group

345th Fighter Squadron	(Airacobras)
346th Fighter Squadron	(Airacobras)
347th Fighter Squadron	(Airacobras)
No.153 Squadron	(Night Beaufighters)

Under direct control of N.A.C.A.F.

11/5 French Squadron	(Warhawks)
11/7 French Squadron	(Spitfires)
Lafayette Escadrille	(Warhawks)
727 (Fleet Air Arm) Squadron	(Defiants)

Bone Sector

No.32 Squadron	(Hurricanes)
No.87 Squadron	(Hurricanes)
No.253 Squadron	(Hurricanes)
No.600 Squadron	(Night Beaufighters)

Oran Sector

92nd Fighter Squadron (U.S.A.A.F.)	(Airacobras)
2037th Anti-Submarine Wing (U.S.A.A.F.)	(Casablanca Fighter Sector)
1st Anti-Submarine Squadron	(Liberators)
2nd Anti-Submarine Squadron	(Liberators)

C.A.F. Station, Tafaroui

No.500 Squadron	(Hudsons)
No.614 Squadron	(Blenheims)
No.813 (F.A.A.) Squadron	(Swordfish)
No.826 (F.A.A.) Squadron	(Albacores)

C.A.F. Station, Blida

No.608 Squadron	(Hudsons)
No. 13 Squadron	(Blenheims)

C.A.F. Station, Bone

No.608 Squadron Detachment	(Hudsons)
No.821 (F.A.A.) Squadron	(Albacores) (ex Malta)

No. 325 Wing, R.A.F.

Future policy not yet decided.
Balloon Squadron

26 JUNE 1943H.Q. No.242 GroupH.Q. No.328 Wing

No.458 Squadron	(Wellingtons)	Bizerta
No. 52 Squadron	(Baltimores)	Protville
No.144 Squadron	(Torp. Beaufighters)	Protville
No. 39 Squadron	(Torp. Beaufighters)	Protville
No. 14 Squadron	(Marauders)	Protville
No. 47 Squadron	(Torp. Beaufighters)	Protville
No.221 1/2 Squadron	(Wellingtons)	Protville

TUNIS FIGHTER SECTOR - No.323 Wing

No.255 Squadron	(Night Beaufighters)	La Sebala
No. 73 Squadron	(Hurricanes)	La Sebala
II/5 and II/7 French Squadrons	(Warhawks and Spitfires)	Sidi Achmed

52nd Fighter Group

2nd Fighter Squadron	(Spitfires)	La Sebala
4th Fighter Squadron	(Spitfires)	La Sebala
5th Fighter Squadron	(Spitfires)	La Sebala

No.275 Balloon Wing

No.981 Balloon Squadron	Bizerta
	Bizerta

SOUSSE FIGHTER SECTOR (H.Q. 1st Air Defence Wing)81st Fighter Group

91st Fighter Squadron	(Airacobras)
93rd Fighter Squadron	(Airacobras)
No.87 Squadron	(Hurricanes)
415th Night Fighter Squadron	(Beaufighters)
821 Squadron (F.A.A.)	(Albacores)
828 Squadron (F.A.A.)	(Swordfish)

Bourdjine
Monastir
Sfax
Monastir
Monastir
Monastir
Monastir
Monastir

R.A.F. Station LAMPEDUSA

No.253 Squadron	(Hurricanes)
-----------------	--------------

Lampedusa

R.A.F. Station, BONE FIGHTER SECTOR

No.219 Squadron	(Beaufighters)
No. 32 Squadron	(Hurricanes)
No.985 Squadron (Balloon)	

Bone
Tingley
Bone

ALGIERS FIGHTER SECTOR2nd Air Defence Wing

H.Q. 350th Fighter Group	
345th Fighter Squadron	(Airacobras)
346th Fighter Squadron	(Airacobras)
347th Fighter Squadron	(Airacobras)
414th Night Fighter Squadron	(Beaufighters)
No.153 Squadron	(Night Beaufighters)

Maison Blanche
Reghaia
Maison Blanche
Reghaia
Maison Blanche
Taher
Reghaia
Maison Blanche

ORAN FIGHTER SECTOR

H.Q. 2689th Oran Air Defence Region (Provisional)	
92nd Fighter Squadron	(Airacobras)

Oran
Oran
Warnier

CASABLANCA FIGHTER SECTORH.Q. 2688th Casablanca Air Defence Region

480th Anti-Submarine Group	
1st Anti-Submarine Squadron	
2nd Anti-Submarine Squadron	

Casablanca
Casablanca
Port Lyautey
Port Lyautey
Port Lyautey

R.A.F. Station BLIDA

No.608 Squadron	(Hudsons)
No. 36 Squadron	(Wellingtons)
No. 13 Squadron	(Bisleys)
727 (R.A.F.) Squadron	(Defiants)
1575 Flight	(Halifaxes and Venturas)

Blida
Blida
Blida
Blida
Blida

C.A.F. STATION, BONE AERODROME

Bone

C.A.F. STATION, TAFAROU

No.500 Squadron	(Hudsons)
813 (F.A.A.) Squadron	(Swordfish)
614 Squadron	(Bisleys)

Tafaroui
Tafaroui
Tafaroui
Tafaroui

AIR HEADQUARTERS MALTAORDER OF BATTLE13 MAY 1943

Unit	Base	Aircraft	I.E.	Function	Remarks
<u>A.H.Q. MALTA - VALETTA</u>					
23 Squadron	Luqa	Mosquito II		T.E. Fighter	
39 Squadron	Luqa	Beaufort I/II X	16	Recce/Bomber Torpedo bomber	{ Detachment to Egypt (201 Group) To re-arm Beaufighters 1 Flight at 10 U.E. Full squadron - 16 U.E.
69 Squadron	Luqa	Baltimore III	10	G.R.	
108 Squadron Det. (1 Flight)	Luqa	Beaufighter VI	8	T.E. Night fighter	
126 Squadron	Luqa	Spitfire VB/C/IX	16	S.E. fighter	
185 Squadron	Hal Far	Spitfire VB/C	16	S.E. fighter	
221 Squadron	Luqa	Wellington XII etc.	16	T.B./G.R.	Detachment in Egypt. 201 Group
229 Squadron	Krandi	Spitfire VB/C	16	S.E. fighter	
249 Squadron	Krandi	Spitfire VB/C	16	S.E. fighter	
458 Squadron	(Luqa (moving Tunisia shortly)	Wellington IC/III/VIII/X	16	T.B./G.R.	Detachment in Egypt. 201 Group. + One Flight Bomber.
683 Squadron	Luqa	Spitfire	12	P.R.U.	Ex 69 Squadron Detachment
1435 Squadron	Luqa	Spitfire VB/C	16	S.E. fighter	
Comm. Flight	Hal Far	Blenheim IV/Vars.		Communication	
Command Reserve		(Hurricane II B/C/ Spitfire)			9 aircraft on strength
983 Squadron	Valetta/Marsa			Balloons	{ Defence of Valetta harbour and submarine base.
272 Squadron	Takali	Beaufighter I/VI	16	T.E. Day fighter	Detachment in Egypt. 201 Group.
Sea Rescue Unit	Luqa/Hal Far	Fulmar/Walrus		Air Sea Rescue	
U.S.A.A.F.		Lightning		P.R.U.	(Per Op rest)

Unit	Base	Aircraft	I.E.	Function	Remarks
<u>248 Wing (ex 201 Group)</u>	<u>VALETTA</u>	<u>WELLINGTON VIII</u>		<u>NAVAL CO-OPERATION</u>	Re-forming in Malta to operate such T-B/A.S.V., <u>G.R.</u> and <u>F.A.A.</u> <u>Squadrons as are allotted.</u>
<u>FLEET AIR ARM</u>					<u>(CONTROL:- C.-in-C. MED.,</u> <u>through A.H.Q. MALTA.</u>
821 Squadron	Hal Far	Albacore	12	Shipping strike	
828 Squadron	Hal Far	Albacore	12	Fighter protection	
830 Squadron	Hal Far	Swordfish	12	(Fighter protection and torpedo	

MALTA, GOZO AND PANTELLERIAORDER OF BATTLE11 JULY 1943LUQA No. 244 Wing
Sqn. Nos.

* 1	S.A.A.F. Spit.	16
* 92	Spit.	16
* 145	Spit.	16
* 601	Spit.	16
417	Spit.	16
108 (1/2)	N/Beau.	10
600	N/Beau.	20
23	Mosquito	16
256 (1/2)	Mosquito	6
73 (1/2)	Hurricane	8
40	Spit. Tac./R.	16
683	Spit. P.R.U.	15
221 (1/2)	Well.	6
69 (1/2)	Baltimore	8
11 1/2	Sqns.	185 a/c

HAL FAR No. 324 Wing

43	Spit.	16
* 72	Spit.	16
* 93	Spit.	16
243	Spit.	16
250	Kitty	16
✓ A/S Rescue - Comm.		15
6	Sqns.	95 a/c

GOZO31st Group U.S.A.A.F.

Sqn. 307th	Spit.	25
308th	Spit.	25
309th	Spit.	25
3	Sqns.	75 a/c

PANTELLERIA33rd Group U.S.A.A.F.

Sqn. 58th	Warhawk	30
59th	Warhawk	30
60th	Warhawk	30
3	Sqns.	90 a/c

TA KALI No. 322 Wing
Sqn. Nos.

* 81	Spit.	16
152	Spit.	16
* 154	Spit.	16
* 232	Spit.	16
* 242	Spit.	16
3	R.A.A.F. Kitty	16
X 826	Albacore	10
815 (1/2)	Albacore	4
7 1/2	Sqns.	110 a/c

SAFI

* 111	Spit.	16
* 126	Spit.	16
* 1435	Spit.	16
112	Kitty	16
4	Sqns.	64 a/c

KRENDI

229	Spit.	16
* 249	Spit.	16
* 185	Spit.	16
3	Sqns.	48 a/c

KALAFRANA

1/2	Catalina Sqn.	3 a/c
1/2	Sqn.	3

Total: Malta 32 1/2 Sqns.
= 505 a/c.

Malta and Gozo -
35 1/2 Sqns. = 580 a/c.

Grand Total under control of A.H.Q. Malta 38 1/2 Squadrons - 670 aircraft.

* Squadron operating 6 Spitfire IX.

✓ Includes 5 Walrus 284 Squadron.

X Non-operational.

(Source A.H.Q. Malta report M.S.5050/Air 26 July 1943)

AIR HEADQUARTERS MALTAORDERS OF BATTLE OF OPERATIONAL AIRCRAFT
SEPTEMBER, OCTOBER, NOVEMBER AND DECEMBER 1943On 30 September 1943

<u>Squadron</u>	<u>Type of Aircraft</u>	<u>Location</u>
<u>Malta Wing</u>		
No. 126 (F) Sqdn.	Spitfires	Safi
No. 185 (F) Sqdn.	Spitfires	Hal Far
No. 229 (F) Sqdn.	Spitfires	Hal Far
No. 249 (F) Sqdn.	Spitfires	Hal Far
No. 1435 (F) Sqdn.	Spitfires	Safi
<u>No. 248 (G.R.) Wing</u>		Valetta
No. 69 (G.R.) Sqdn.	Baltimores	Luqa
No. 221 (G.R.) Sqdn.	A.S.V. Wellingtons	Luqa
<u>Miscellaneous</u>		
No. 23 (F) Sqdn.	Mosquitoes	Luqa
No. 108 (NF) Sqdn. 1 Flight	Beaufighters	Luqa
No. 256 (F) Sqdn.	Mosquitoes	Luqa
No. 683 (P.R.) Sqdn.	Spitfires	Luqa
Air/Sea Rescue	Miscellaneous	Ta Kali
728 (F.A.A.) Sqdn. (Detachment)	Defiants, Albacores	Ta Kali
826 (F.A.A.) Sqdn. 1 Flight	Albacores	Ta Kali
815 (F.A.A.) Sqdn.	Albacores	Ta Kali
<u>On 14 October 1943</u>		
<u>Malta Wing</u>		
No. 185 Sqdn.	Spitfires	Hal Far
No. 229 Sqdn.	Spitfires	Hal Far
<u>No. 248 (G.R.) Wing</u>		Valetta
No. 69 (G.R.) Sqdn.	Baltimores	Luqa
No. 221 (G.R.) Sqdn.	A.S.V. Wellingtons	Luqa
<u>Miscellaneous</u>		
No. 23 (F) Sqdn.	Mosquitoes	Luqa
No. 108 (NF) Sqdn. 1 Flight	Beaufighters	Luqa
No. 256 (F) Sqdn.	Mosquitoes	Luqa
No. 683 (PRU) Sqdn.	Spitfires	Luqa
Air/Sea Rescue	Miscellaneous	Ta Kali
728 (F.A.A.) Sqdn. Detachment	Defiants, Albacores	Ta Kali

Handover of N.A.C.A.F. responsibilities in Sicily to Air H.Q. Malta

A.H.Q. Malta Operation Instruction No. 66 of 24 October 43 quoted M.A.C. Directif S.61/Ops/MAC dated 18 October 43 on the assumption by Malta of operational and administrative control of all N.A.A.F. units previously controlled by N.A.C.A.F. in Sicily.

15 October was the day of handover. As a result the order of battle of Malta Command on 30 November 43 was:-

On 30 November 43

<u>Squadron</u>	<u>Type of Aircraft</u>	<u>Location</u>
<u>Malta Wing</u>		
No. 185 Squadron	Spitfires	Hal Far
No. 229 Squadron	Spitfires	Hal Far
<u>No. 248 (G.R.) Wing H.Q.</u>		Valetta
No. 69 (G.R.) Sqdn.	Baltimores	Luqa
No. 221 (G.R.) Sqdn.	A.S.V. Wellingtons	Luqa
<u>Miscellaneous</u>		
No. 108 (NF) Sqdn. Det.	Beaufighters	Luqa
No. 256 (NF) Sqdn. Det.	Mosquitoes	Luqa
Air/Sea Rescue	Miscellaneous	Ta Kali
Communications Flight	Miscellaneous	Ta Kali
728 (F.A.A.) Sqdn. Det.	Defiants, Albacores	Ta Kali
<u>Sicily</u>		
<u>No. 325 Wing H.Q.</u>		Borizzo
No. 52 (G.R.) Sqdn.	Baltimores	Borizzo
No. 614 (G.R.) Sqdn.	Bisleys	Borizzo
No. 87 (F) Sqdn. Det.	Hurricanes	Borizzo
<u>No. 335 Wing H.Q.</u>		Catania
No. 272 (T.E.F.) Sqdn.	Beaufighters	Catania
<u>No. 335 Wing Satellite Sector</u>		Palermo
No. 87 (F) Sqdn. Det.	Hurricanes	Bocca di Falco
No. 283 (A.S.R.) Det.	Walrus	Bocca di Falco

ALLIED AIR OPERATIONS AGAINST THE AXIS EVACUATION OF SICILYOperation Instruction No.16

H.Q., Tactical Air Force

6 August 1943

Reference: TAF/34/AIR

To: Commanding General, XII Air Support Command.
Air Officer Commanding, Desert Air Force.
Air Officer Commanding, Tactical Bomber Force.

Information

1. The enemy may be expected to evacuate Sicily in the near future. For his exit he may use at the outset any or all of the beaches from Milazzo to Taormina; at a later stage the beaches from Torre di Faro to Messina are likely to be the main evacuation area owing to the short channel crossing and the high scale of A.A. protection that can be given to this restricted area.
2. Under pressure from the land forces the enemy may evacuate by day, but it may be expected that he will endeavour to carry out the bulk of his movement under cover of darkness.

Aim of the Air Forces

3. The aim of the air forces will be to inflict maximum destruction on the enemy prior to and during his evacuation.

Air Forces available

4. All units of Tactical Air Force.

Proportion of Strategic Air Force as allocated to assist by Air Commander-in-Chief (see paragraphs 7 and 10).

Enemy Air Situation

5. It is estimated that the enemy air force will have available 100 fighters and fighter bombers which can operate to cover the evacuation by day from the Crotone and Scalea areas, and 15 night fighters based in the Naples area. Additionally, 100 long range bombers are available in the Heel of Italy and Foggia area which can be used by day or night to assist the evacuation; it is probable that the bomber aircraft will operate mainly at night.

Employment of our Air Forces - Prior to evacuationTactical Air Force

6. (a) Reconnaissance

The main requirement is to determine the commencement of the enemy evacuation.

Commencing from the receipt of this instruction, Air Officer Commanding Desert Air Force and Commanding General XII Air Support Command are to initiate daily reconnaissance to meet this requirement, using their own resources. The division of operational areas between Desert Air Force and XII Air Support Command is as specified in this Headquarters' Operation Instruction No. 15.

The Air Officer Commanding Tactical Bomber Force will be required to initiate a plan for night reconnaissance in the area from Milazzo to Taormina. The date of commencement of this reconnaissance will be issued separately.

Reports indicating the commencement of the enemy evacuation are to be made known by the quickest means to this Headquarters.

(b) Assistance to Land forces

The advance of the land forces is the primary requirement to impose evacuation on the enemy. In consequence, the full efforts of the Tactical Air Force are to be employed to this end under existing operational arrangements by Tactical Commands.

Strategic Air Force

7. (a) In accordance with arrangements made with Strategic Air Force, Wellingtons (60 to 90 sorties) are attacking Messina and the barge anchorages to the North on the nights 5/6, 6/7 and 7/8 August. This scale of attack will be continued if indications show the target justifies it; in this connection a recommendation will be made to Mediterranean Air Command by this Headquarters concerning the continuation of attacks.

(b) By day, B-17 formations will be directed from objectives in southern Italy to attack Messina by the Air Commander-in-Chief occasionally.

(c) Strategic Air Force medium groups will attack airfields in the Crotone and Scalea areas when P.R.U. reconnaissance determines a profitable objective.

(d) P-38 aircraft are being allocated for attack of movement in the Toe of Italy.

Commencement of Evacuation

8. Tactical Air Force Headquarters will inform Strategic Air Force and all subordinate formations of the commencement of enemy evacuation.

Employment of Air Forces - During Enemy Evacuation

Tactical Air Force

9. (i) Reconnaissance

Reconnaissance to determine evacuation points is to be undertaken by Desert Air Force and XII Air Support Command. Results of reconnaissance to be made known to this Headquarters by quickest means.

(ii) Offensive air action

By day

Desert Air Force, XII Support Command and Tactical Bomber Force to attack all movement to evacuation points and concentrations of troops in evacuation areas. Attacks to be extended to landing area on Eastern side of Strait of Messina.

Additionally, Desert Air Force and XII Air Support Command to extend operational area to include movement on the Toe of Italy. Co-operation with Strategic Air Force for fighter bomber attacks is specified in paragraph 8.

Tactical Bomber Force during this stage is to continue under operational control of Desert Air Force.

By Night

Tactical Bomber Force is to operate at maximum intensity during evacuation period.

The following principles are to guide employment:-

Tactical Bomber Force to attack evacuation areas at maximum strength shortly after last light and up to 2300 hours ("B"). A similar second attack is to be made after 0400 hours ("B"). Normally B-25 Groups are to be employed on these attacks using 326 Wing as pathfinders. The remainder of the Tactical Bomber Force is to be employed against road movement on the Toe of Italy.

Strategic Air Force

10. By day

The Strategic Air Force will require 12 hours notice as a minimum to operate against enemy evacuation targets. This notice will be given by this Headquarters. On information being received by Strategic Air Force the following co-ordinated plan with Tactical Air Force will come into force. At 0900 hours 72 B-17 aircraft will attack enemy evacuation area. This attack is to be followed by a prolonged fighter bomber attack on the same area. A second B-17 attack will follow approximately 2 hours afterwards and this in turn is to be continued by a second fighter bomber attack. After this point a medium bomber group will be at readiness to undertake a third bomber attack and will be dispatched by Strategic Air Force on request by this Headquarters.

If time permits an air courier will be dispatched by Strategic Air Force to this Headquarters to obtain full briefing on the tactical situation of Strategic Air Force crews.

Strategic Air Force will arrange to continue attack by medium groups on airfields in Crotona and Soalea areas and by P-38 Groups against movement on the Toe of Italy.

By night

Strategic Air Force are arranging for Wellingtons to attack the evacuation area continuously from 2300 hours ("B") to 0400 hours ("B").

11. Further instructions will be issued as the situation develops.

Air Officer Commanding
Tactical Air Force

(A.H.B. reference IIM/A41/1(B))

ANALYSIS OF OPERATIONAL AIRCRAFT ON THE STRENGTH OF
NORTHWEST AFRICAN STRATEGIC AND TACTICAL AIR FORCES
ON 7 AUGUST 1943

Unit	Aircraft	S.A.F.		T.A.F.	
		R.A.F.	U.S.A.A.F.	R.A.F.	U.S.A.A.F.
<u>Heavy bombers</u>					
2nd B. Gp.	Fort.		48		
97th B. Gp.	Fort.		48		
99th B. Gp.	Fort.		48		
301st B. Gp.	Fort.		37		
		-	181	-	-
<u>Medium bombers</u>					
310th B. Gp.	Mitchell		57		
321st B. Gp.	Mitchell		57		
17th B. Gp.	Marauder		57		
319th B. Gp.	Marauder		56		
320th B. Gp.	Marauder		51		
No. 37 Sqdn.	Well.	12			
No. 40 Sqdn.	Well.	15			
No. 70 Sqdn.	Well.	16			
No.104 Sqdn.	Well.	14			
No.142 Sqdn.	Well.	13			
No.150 Sqdn.	Well.	12			
No.420 Sqdn.	Well.	17			
No.424 Sqdn.	Well.	16			
No.425 Sqdn.	Well.	15			
12th B. Gp.	Mitchell				57
359th B. Gp.	Mitchell				55
		130	278	-	112
<u>Light bombers</u>					
47th B. Gp.					43
No. 18 Sqdn.	Boston			8	
No.114 Sqdn.	Boston			12	
No. 12 Sqdn.	Boston			14	
No. 21 Sqdn.	Balt.			17	
No. 24 Sqdn.	Boston			15	
No. 55 Sqdn.	Balt.			14	
No.223 Sqdn.	Balt.			14	
		-	-	94	43

ALLIED AIR OPERATIONS AGAINST THE SICILIAN EVACUATION SYSTEMANALYSIS OF SORTIES AND TARGETS

(1 to 16/17 AUGUST 1943)

Introduction

Allied air operations against the Axis evacuation system involved not only attacks on shipping afloat in the Straits of Messina, but on the whole complex of movements, maintenance, defence and communications in the Fortress Area, as far as the refuelling station at Marina di Vibo Valentia in Calabria.

Sortie totals are listed under three of the target groupings adopted by H.Q., N.A.A.F. in their records, namely:- ports and bases; camps, positions and lines of communications; evacuation shipping. Specific locations are given in almost all cases, with the date of attack and category of aircraft participating.

The period recorded includes 3 to night 16/17 August 1943, the actual official time occupied in ferrying and landing the German and Italian troops, material and equipment on the Italian mainland. Figures for 1 and 2 August are included, as days of heavy traffic from Sicily.

Details of the aircraft employed and their units are appended.

EFFECTIVE SORTIES - PORTS AND BASES

Number of Effective Sorties					
Target	Date	Medium	Light	F/Bomber	Totals
Bagnara	3 Aug.			12	12
	4 Aug.			15	15
Gioia	15 Aug.			11	11
Marina di Vibo Valentia	13/14 Aug.	17			17
Messina	1 Aug.			52	52
	2 Aug.			23	23
	4/5 Aug.	15			15
	5 Aug.			41	41
	6 Aug.			24	24
	7 Aug.			53	53
	13 Aug.	11		12	23
	14 Aug.			24	24
	15 Aug.			24	24
	16 Aug.	11		10	21
Milazzo	1 Aug.	24	23	24	71
	2 Aug.			23	23
	3 Aug.			22	22
	5 Aug.			12	12
	6 Aug.			10	10
	8 Aug.			32	32
	9 Aug.			30	30
	10 Aug.			12	12
	14 Aug.			11	11
	15 Aug.			16	16

Number of Effective Sorties (contd.)					
Target	Date	Medium	Light	F/Bomber	Totals
Palmi	9 Aug.			16	16
	10 Aug.			8	8
	11 Aug.			8	8
	13 Aug.			8	8
	14 Aug.			31	31
Pizzo	15 Aug.			12	12
Reggio	15 Aug.			12	12
Riposta	2 Aug.			11	11
Scilla	5 Aug.			12	12
	16 Aug.			9	9
Totals		78	23	620	731

ENEMY CAMPS, POSITIONS AND LINES OF COMMUNICATIONS

Number of Effective Sorties						
Target	Date	Heavy	Medium	Light	F/Bomber	Total
Bagnara	6 Aug.			4	16	16
	13/14 Aug.					4
Barbi, Cape	7/8 Aug.		14			14
Ganzirri	16 Aug.		12			12
Gioia Tauro	4 Aug.				12	12
	5 Aug.				10	10
	12/13 Aug.			4		4
	13 Aug.				11	11
	13/14 Aug.			4		4
	14 Aug.				22	22
	15 Aug.				32	32
Messina	1 Aug.				12	12
	4/5 Aug.		41			41
	5 Aug.	69				69
	5/6 Aug.		21			21
	6 Aug.	52			20	72
	6/7 Aug.		25			25
	7/8 Aug.		16			16
	8/9 Aug.		26			26
	9 Aug.	21				21
	9/10 Aug.		39			39
	10 Aug.				10	10
	10/11 Aug.		41			41
	11/12 Aug.		41			41
	12/13 Aug.		40			40
	13 Aug.				8	8
	14 Aug.				12	12
	14/15 Aug.			6		6
	15 Aug.				79	79
	16 Aug.				51	51

ENEMY CAMPS, POSITIONS AND LINES OF COMMUNICATIONS (contd.)

Number of Effective Sorties						
Target	Date	Heavy	Medium	Light	F/Bomber	Total
Milazzo	1 Aug.				23	23
	7 Aug.				11	11
	10 Aug.				10	10
	15 Aug.				12	12
Palmi	7/8 Aug.		19			19
	10 Aug.				10	10
	13/14 Aug.		24			24
	14 Aug.		47	12	7	66
	14/15 Aug.		6			6
	16/17 Aug.		10	10		20
Peloro, Cape	5/6 Aug.		64			64
	6/7 Aug.		12			12
	8/9 Aug.		56			56
	9/10 Aug.		47			47
	10/11 Aug.		47			47
	11/12 Aug.		48			48
	12/13 Aug.		50			50
	16 Aug.		24			24
Pizzo	13/14 Aug.		7			7
	14/15 Aug.		25			25
Reggio	6/7 Aug.			6		6
	8/9 Aug.			11		11
	12/13 Aug.			6		6
Scaletta	5/6 Aug.			3		3
	7/8 Aug.		35			35
	14/15 Aug.			5		5
San Giovanni	14/15 Aug.		18			18
	15 Aug.			2		2
<u>Totals</u>		142	855	73	368	1438

N.A.S.A.F. Lightning Operations in The Toe of Italy

Target	Date	Fighter/Fighter bomber	
Angitola	8 Aug.	46 (F)	
Bovalino	10 Aug.	13 (F)	
Catanzaro } - Locri }	10 Aug.	34 (F)	
C. Spartivento } - Siderno }	10 Aug.	13 (F)	
Sambiase } - Rosarno }	14 Aug.	12 (F)	
Toe of Italy	15 Aug.		21 (F/B)
Punta di Staletti	15 Aug.		24 (F/B)
		117	45

ATTACKS ON EVACUATION SHIPPING

Number of Effective Salties					
Target	Date	Medium	Light	F/Bomber	Total
Agata, Santa	15 Aug.	12			12
Barbi, Cape	15 Aug.			11	11
Bova Marina	9 Aug.			8	8
Giola, Tauro	11 Aug.			8	8
Giola, Gulf of	13 Aug.			21	21
Italy, S. & W. Coast	9 Aug. 10 Aug. 12 Aug. 14 Aug. 16 Aug.			14 32 16 29 7	14 32 16 29 7
Messina Strait	2 Aug. 3 Aug. 5 Aug. 6 Aug. 7 Aug. 8 Aug. 9 Aug. 10 Aug. 11 Aug. 12 Aug. 13 Aug. 14 Aug. 15 Aug. 16 Aug. 16/17 Aug.		12 6	23 23 47 78 58 20 52 46 57 55 72 119 61 191	23 23 47 78 58 20 52 46 57 55 72 119 61 203 6
Milazzo, Town & Gulf	9 Aug.			20	20
Palmi	11 Aug. 12 Aug. 13 Aug. 16 Aug.			8 16 10 12	8 16 10 12
Pizzo	13/14 Aug.		11		11
Scilla	15 Aug.			32	32
Sicily (names unspecified)	6 Aug. 10 Aug.			34 7	34 7
Spadafore	13 Aug.			11	11
<u>Totals</u>		12	29	1,098	1,139

Grand Totals of Sorties Against the Sicilian Evacuation SystemTargetsTotal Effective Sorties

	Heavy bombers	Medium bombers	Light bombers	Fighter bombers	Fighters	Totals
Ports and bases		78	23	620		721
(Camps, positions and) (lines of communication)	142	855	73	368		1438
Evacuation shipping		12	29	1098		1139
Lightning operations in) the Toe of Italy				45	117	162
	142	945	125	2131	117	3460

Note: A low number of entries against the evacuation system given in the table of operations have been omitted in the light of current information.

AIRCRAFT EMPLOYED

Heavy Bombers:- Fortresses of 2nd, 97th, 99th and 301st Bomber Groups.

Medium Bombers:- Mitchells of 12th and 340th Bomber Groups.
Wellingtons of Nos. 37, 40, 70, 104, 142 and 150 (R.A.F.)
and Nos. 420, 424 and 425 (R.C.A.F.) Squadrons.

Light Bombers:- Bostons (A.20s) of 47th Bomber Group, Nos. 12 and 24
Squadrons (No. 3 S.A.A.F. Wing) and Nos. 18 and 114
Squadrons (No. 326 Wing). Baltimores of Nos. 55 and
223 Squadrons (No. 232 Wing) and No. 21 Squadron
(No. 3 S.A.A.F. Wing).

Fighter Bombers:- Mustangs (A.36s) of 27th and 86th Bomber Groups.
Warhawks (P.40s) of 33rd, 57th and 79th Fighter Groups
and 99th Fighter Squadron. Kittyhawks of Nos. 3
(R.A.A.F.), 112, 250 and 260 and 450 Squadrons.

Fighters:- Lightnings of 1st, 14th and 82nd Fighter Groups.

Source:- N.A.A.F. Tables of operations (A.H.B.II J.1/123
(J & K)).

Air Historical Branch (6) Translation No. VII/156, August 1956

Admiralty Ref.: captured German documents PG 45898 and PG 45899

(1 August 1943 - 17 August 1943)

with Summary and Conclusions

(Captain von Liebenstein)

SEA TRANSPORT, MESSINA STRAIT

NAVAL OFFICER-IN-CHARGE

of

WAR DIARY

1 August 1943

Operations2nd Landing Craft Flotilla and 4th Landing Craft Flotilla

F 610, F 615 arrived Gallio from Milazzo forenoon.
 F 588, F 608, F 450, F 522 returned to Gallico in evening
 after discharging at Messina.

Ferry Service, Messina Strait

3 ferry barges on route I North.

10th Landing Craft Flotilla

8 Siebel Ferries in ferry service, Messina Strait.
 Anti-Aircraft Siebel Ferry SF 169 arrived Catona forenoon
 from Milazzo after escorting F 610, F 615.
 SF 94 shot down one aircraft making low-level attack
 during crossing.

Engineer Landing Battalion 771

9 landing craft in ferry service Messina Strait.

Ferry Performance, Messina Strait

To Sicily: 242 men
 103 vehicles
 198 tons ammunition
 51 tons fuel
 70 tons food and equipment

From Sicily: 975 men
 600 wounded
 263 vehicles
 11 tons ammunition
 5 tons fuel
 390 tons equipment

Total transport performance to Sicily: 319 tons.

During the day, three low-level attacks were made against ferry points and craft in the Messina Strait. No damage. During the forenoon a meeting was held at Sicily H.Q. and questions concerning the withdrawal of troops from Sicily discussed. On the way back an unsuccessful low-level attack was made against the Siebel Ferry in which I was sailing. Unfortunately, eight of the barrage balloons in use have been lost as a result of squalls. Others have been lost through becoming entangled when boats have approached too near each other. Consequently only two more landing craft can be equipped with balloons.

2 August 1943

Operations2nd and 4th Landing Craft Flotillas

F 607, F 609, F 617, F 589 are discharging supplies for the Army at Messina. Under an XIV Panzerkorps regulation, only the jetties in or north of Messina may be used for discharging cargo. This amounts to only Faro Centre and Salvatore, as the others are used by ferry traffic. To enable four barges to discharge, the whole unloading process will have to be speeded up,

2 August 1943
(contd.)

so that two can discharge in the forenoon and two in the afternoon. The main difficulty is getting the material away, there being a shortage of lorries.

By request of the Supply Staff, F 430, carrying a cargo of fuel, is to discharge at Paola. She has sailed for there.

Ferry service, Messina Strait:

4 ferry barges between Fara North and Cannitello South.

10th Landing Craft Flotilla

Ferry service, Messina Strait:

3 Siebel ferries between Ganzirri and Pezzo; 5 Siebel ferries between Paradiso and Catona North.

Engineer Landing Battalion 771

Ferry service, Messina Strait:

9 landing craft between Faro South and Cannitello South.
2 Engineer Siebel ferries between Ganzirri and Pezzo, but these are used only in emergency, as they are very slow and difficult to manoeuvre.

Sea Transport Office, Reggio

Lt. Reichardt, sailing the two oil lighters "Drossel" and "Zeisig" from Bagnara to Bari, made a short unannounced call at Gallico, and then, without informing me, put to sea again with the two lighters during the night, southbound. As a result, the preliminary measures ordered by German Naval Command, Italy, for this operation, that is, shore batteries to be warned, have not been taken. He had definitely been told to pick up orders before sailing.

Ferry Performance, Messina Strait

To Sicily:	153 men
	59 vehicles
	80 tons ammunition
	53 tons fuel
	75 tons food

From Sicily:	932 men
	377 vehicles

Total transport performance to Sicily: 178 tons.

During the day, several low-level attacks on the Messina Strait. Withdrawal of the supply depots has made it necessary for roads to be laid to the shore at Gioia Tauro. 200 men of Construction Battalion 430, which has been withdrawn from Palermo, have been moved to Gioia Tauro to set up the depots, lay roads and construct ferry points.

3 August 1943

Operations2nd and 4th Landing Craft Flotillas

Ferry service, Messina Strait: 4 ferry barges between Camitello North and Faro North.

0600 F 430 sailed from Scilla for Paola to discharge cargo.

1500 F 350, F 611 arrived at Catona from Naples, carrying fuel.

0700 F 522, F 617 sailed from Gallico for Naples.
F 522 is to take on radar equipment at Vibo Valentia,
F 617 will accompany F 350 to Paola to discharge evacuation cargo from the Messina Equipment Administration Office (Intendantur).

1500 F 450, F 523, F 609 sailed from Gallico for Naples.
F 450 carrying about 50 empty gas cylinders from the 2nd Naval Balloon Barrage Section, F 609 with 129 wounded.
F 588, F 589 are being sent to Pellaro to take in tow the oil lighters "Drossel" and "Zeisig", which have run aground there. The two lighters ran aground off Pellaro when they sighted enemy MTBs at three miles' range in the morning half-light.

F 615 is towing "sea serpent" sections belonging to Engineer Landing Battalion 771 from Vibo Valentia to the Messina Strait.

10th Landing Flotilla

Ferry service, Messina Strait:

3 Siebel ferries between Pezzo and Ganzirri,
5 Siebel ferries between Catona North and Paradiso.

Engineer Landing Battalion 771

10 Landing craft between Camitello and Faro,
2 Engineer Siebel ferries between Pezzo and Ganzirri.

Ferry Performance, Messina Strait

To Sicily: 260 men
94 vehicles
220 tons ammunition
4 tons fuel
28 tons food

From Sicily: 888 men
684 vehicles
10 tons ammunition
44 tons fuel
663 tons equipment

Total transport performance, Messina Strait, to Sicily:
283 tons.

During the day, several low-level attacks were again made against ferry points and ferry vessels. One U.S. fighter-bomber was shot down. During an air raid on Bagnara a fuel train was hit.

3 August 1943
(contd.)
2215

F 430 was severely damaged at the stern during an air raid on Paola. It will still be possible to discharge the cargo. The jetty at Pezzo North is being enlarged to take ferry barges, and the jetties at Catona South and Gallio South widened so that vehicles can move on and off without difficulty.

4 August 1943

Operations

Ferry service, Messina Strait:

4 ferry barges between Cannitello North and Faro North.
10 landing craft between Cannitello South and Faro South.
3 Siebel ferries, 2 Engineer Siebel ferries between Pezzo and Ganzirri.
5 Siebel ferries between Catona North and Paradiso.
The box-girder jetty at Cannitello Centre, which is being built by the Engineer Construction Company, Italy, is now at the stage where filling can begin. As the completion of this jetty is a matter of great urgency in the present situation, a working party of 100 men with 10 lorries has been put on the job at the expense of other work on hand, so that the jetty can be finished in 2 - 3 days. At the same time the jetty at Pezzo North is being enlarged.

0500

2nd and 4th Landing Flotillas

F 350 sailed for Paola, where she will discharge her fuel cargo. F 607 has been sent as escort.
F 440 and F 454 were due to discharge their cargoes of food at Messina during the forenoon, but orders received from XIV Panzerkorps by radio during the night stated that henceforth no food was to be unloaded at Messina. The two vessels have therefore been sent to Gioia Tauro to discharge their cargo.
F 617 arrived at Catona from Vibo with the four units of the "B" pontoon bridge ("sea serpent").
F 588 and F 589 will make another attempt to refloat "Drossel" and "Zeisig". At the moment only "Zeisig" is clear.

Ferry Performance

To Sicily: 80 men
28 vehicles
17 tons ammunition
3 tons fuel
10 tons food

From Sicily: 1601 men
700 wounded
559 vehicles
46 tons ammunition
11 tons fuel
962 tons equipment

Total ferry performance to Sicily: 188 tons
Total ferry performance from Sicily: 1019 tons

During the day continual low-level attacks on the Messina Strait, but ferry traffic was not interrupted. A fuel truck was hit during a raid on Gioia Tauro.

4 August 1943
(contd.)

The Director of Sea Transport, Italy has radioed the following enquiries connected with the expansion of ferry traffic for the special commitment ahead of us.

- 1) How effective are the barrage balloons, and is it desired to continue with them? Allocation of 24 spare balloons with supply and maintenance will be announced.
- 2) Supplies of urgently needed 20 m.m. quadruple A.A. are under way. Also ten 20 m.m. A.A. machine guns for I-boats. Report whether further gun crews needed.
- 3) Is assistance still needed for the emergency lighting of jetties at night?
- 4) Is assignment of personnel sufficient in view of casualties or are more crews required?

My answer to (1) is that more barrage balloons will be much appreciated, then all craft can be equipped with them, or at least all ferry barges. The balloons have already been very useful against low-level attacks in the Messina Strait, despite the disadvantage that they make the vessels more conspicuous.

Re (2), I have asked whether quadruple A.A. might be considered for ferry barges as well. I ask because of the excellent results which the Siebel ferries equipped with these guns have had in bringing down aircraft.

Re (3): As the jetties are lit at night only by oil lamps with makeshift screening, a method that is not very effective, further assistance in this respect would be appreciated.

Re (4): A reserve crew for ferry barges and Siebel ferries is requested.

The diesel oil situation for ferry barges and Siebel ferries is still very serious. I am informing the Director of Sea Transport, Italy that there are still about 50 cubic metres of B 4 in store for the 10th Landing Flotilla in Reggio. This represents 3 - 4 days' consumption. 120 cubic metres of B 4 are supposed to be coming up in four truckloads in the next few days. But in view of sharp fighter-bomber raids on railway stations we must expect losses. I have therefore urged that the flow of supplies be speeded up and facilities be given for storage. Diesel oil, too, of which only 50 cubic metres are available, and which ferry barges and landing craft consume at a rate of 12 - 15 cubic metres a day, is urgently needed. I have requested that two oil lighters now in Naples should be sent at once to the Messina Strait with Diesel oil and B 4. As it is probable that ferry vessels will shortly have to carry large numbers of troops, it will be necessary to equip landing craft, Siebel ferries and ferry barges with sufficient lifebelts and floats. 3000 lifeboats and 20 floats are being distributed to Engineer Landing Battalion 771, the 2nd, 4th and 10th Landing Flotillas. A further 1500 lifebelts and 20 floats are required, however, and these have been ordered by radio from the Director of Sea Transport, Italy. Their despatch was confirmed the same day.

4 August 1943
(contd.)

Director of Sea Transport, Italy has ordered that, if necessary, the two lighters "Drossel" and "Zeisig" should sail without cargo and ballast. Both lighters have now been refloated and have returned to Gallico. Lt. Reichardt has been instructed and has timed the operation for 1400 on 5 August.

At a meeting with the Operations Officer, Lt. Col. Birk, at Headquarters, approval was given to a request from XIV Panzerkorps that jetties 1 - 4 should be divided among individual divisions in Sicily. Attention was drawn to the unequal capacity of individual ferry points. The N.O. i/c, Sea Transport will reserve the right to switch movement between various ferry points, if the general situation makes such a measure necessary. I also broached the question whether XIV Panzerkorps still insists on having 12 ferry barges at its disposal in the Messina Strait. With supply problems becoming more complex every day due to the enemy's air superiority, the time for withdrawing troops cannot be far off, and in my opinion we should not dispense with this important reserve, even though there is little requirement for the shipment of supplies to Sicily from now on.

The Panzerkorps is of the same opinion. German Director of Sea Transport, Italy has therefore been informed by signal that 12 ferry barges must remain here for special duties; and that the order to sail empty ferry barges from Sicily to Naples for supply purposes in groups of not less than four can only be carried out in respect of barges over and above these twelve.

Supplies of ammunition to the front, in particular 20 m.m. and 37 m.m. A.A. ammunition, were classed as very urgent.

The Catania - Messina road has been temporarily cut near Taormina as a result of bombardment by heavy naval units.

5 August 1943

Operations

4 ferry barges in service between Cannitello North and Faro North.
10 landing craft between Cannitello South and Faro South.
3 Siebel ferries, 2 Engineer Siebel ferries between Pezzo and Ganzirri.
5 Siebel ferries between Catona North and Paradiso.
Work is continuing on the box-girder at Cannitello Centre and on the jetty at Pezzo North.

2nd and 4th Landing Craft Flotillas

F 434 is engaged on evacuating A.A. ammunition from Ganzirri to Catona.
F 588, F 608, F 622 are taking on evacuation cargoes for Naples at Catona and Gallico.

Ferry Performance, Messina Strait

To Sicily: 116 men
37 vehicles
58 tons ammunition
10 tons equipment

5 August 1943
(contd.)

From Sicily: 496 men
533 vehicles
78 tons ammunition
31 tons fuel
589 tons equipment
500 wounded

Total transport performance to Sicily: 68 tons

Continuous low-level attacks on the Messina Strait again. Very heavy air raid on Messina, hits principally on, or in the vicinity of, the road to Milazzo.

SF 177 damaged during low-level attack, 7 injured.

Operation Reichardt with "Drossel" and "Zeisig" will begin at 1400 so that the vessels pass Cape Spartivento before dark, as it is known from experience that there is no guarantee that the vessels will not be fired at by Italian shore batteries, even if advance warning is given. During the hours of darkness the vessels will proceed to Crotona, then in the following night to Taranto, and then on to Brindisi and Bari.

As, however, the officer in command of the operation, Lt. Reichardt, has not equipped the ships with the necessary recognition signals, life-saving gear or emergency provisions, sailing has been postponed twenty-four hours.

Commander-in-Chief, South has decided that the order for all ferry barges to be sent back to Naples in groups as they become empty shall remain in force. The opportunity will be taken to ship back valuable evacuation cargo and wounded to Naples. XIV Panzerkorps has been informed. Attention has also been drawn to the fact that it will take at least five days before a group of barges is back from Naples. In order to maintain the minimum ferry performance which I guaranteed the Korps, I shall retain where possible some empty ferry barges, certainly not less than six, and use them for ferry purposes in the Messina Strait when an emergency occurs (in that way there will be no unnecessary consumption of fuel).

6 August 1943

Operations

4 ferry barges in service between Cannitello North and Faro North.
11 landing craft between Cannitello South and Faro South.
3 Siebel ferries between Pezzo and Ganzirri.
4 Siebel ferries between Catona North and Paradiso.
The jetty at Cannitello Centre, a box-girder jetty for Siebel ferries, will be completed today. Work is continuing on the jetty at Pezzo North.

2nd and 4th Landing Craft Flotillas

1500

F 451 and F 611 with wounded, SF 608 with food and medical supplies, F 615 with radar equipment, F 588 and F 622 with Luftwaffe equipment, F 150 with flotilla equipment, all sailed for Naples via Vibo Valentia.

6 August 1943
(contd.)

1400

Sea Transport Office, Reggio

Tankers "Drossel" and "Zeisig" sailed from Gallico. About 1700 both vessels were sunk by low-level air attack off Cape dell'Armi. The crews, who jumped overboard at the first attack, have been rescued.

Ferry Performance, Messina Strait

To Sicily: 157 men
77 vehicles
6 guns
228 tons ammunition
2 tons fuel
14 tons equipment

From Sicily: 860 men
500 wounded
442 vehicles
59 tons ammunition
16 tons fuel
304 tons equipment

Total transport performance to Sicily: 241 tons.

Ferry vessels and jetties were attacked by low-flying aircraft throughout the day.

Just before midday another heavy air raid on the Messina Strait, hits once again principally on, and in the vicinity of, the road to Milazzo. Enemy air attacks are now being concentrated towards the north, and repeated attacks are being made on the jetties at Faro and Cannitello and the berths at Gioia Tauro and Bagnara.

For the purpose of ferrying across the units in Sicily, the ferry routes have been numbered I to IV. Route I is Cannitello - Faro, route II Pezzo - Ganzirri, route III Catona North - Paradiso and route IV Gallico-Salvatore.

1st Paratroop Division, which is entrusted with the defence of South Calabria, has been requested to provide A.A. protection for the ferry points at Bagnara and Gioia Tauro.

7 August 1943

Operations

Ferry service, Messina Strait:

4 ferry barges between Cannitello North and Faro North,
2 Siebel ferries between Pezzo and Ganzirri,
5 Siebel ferries between Catona North and Paradiso,
10 landing craft between Cannitello South and Faro South.
In the early morning 3 ferry barges were engaged on ferrying tanks across between Pistunina and Gallico.

0900

F 412, F 437, F 398, F 434, F 618 sailed from Gallico for Naples via Gioia Tauro and Vibo Valentia.
F 412 has evacuation cargo for the Army Supply Staff,
F 437 has evacuation cargo for the Luftwaffe,
F 398 has evacuation cargo for Special Task Unit ferry.

7 August 1943
(contd.)

F 434 and F 618 with wounded. The group going back is taking 472 wounded. This has considerably relieved the central dressing station at Seminari.

F 350 and F 454 entered Gallico after discharging cargo. F 440 discharged cargo at Gioia Tauro, 1 dead and 1 wounded in low-level attack.

10th Landing Craft Flotilla

SF 86 hit during low-level attack, burnt out, beached. I 60, I 61, I 62, I 98 arrived at Catona from Naples with 14 tons of 37 mm A.A. ammunition.

Unfortunately there is still a shortage of 20 mm A.A. ammunition, while sufficient 37 mm is available. The expenditure of 20 mm ammunition is heavy because of the continual air attacks.

Engineer Landing Battalion 771

Landing craft No.4 has been sunk by low-level attack on the ferry route Cannitello - Faro.

Ferry Performance, Messina Strait

To Sicily: 61 men
40 vehicles
70 tons ammunition
6 tons equipment

From Sicily: 829 men
468 vehicles
27 tons ammunition
29 tons fuel
705 tons equipment

Total transport performance to Sicily: 76 tons

During the day continuous heavy air attacks on ferry traffic and on Gioia Tauro. Light A.A. fire is becoming visibly less with the shortage of ammunition. During the evening heavy air attacks on the southern approach road to Messina. While inspecting the ferry points in an Engineer assault craft together with the Fortress Commandant, Messina Strait (Colonel Baade), I was machine-gunned by fighter-bombers. No damage was done. The approach roads to the ferry points at Gallico and Catona are being widened, and the approach road to Pezzo North finished.

8 August 1943

Operations

4 ferry barges between Cannitello North and Faro North.
6 landing craft between Cannitello South and Faro South.
At the request of Colonel Baade the remaining landing craft have been withdrawn from service to form a reserve, in view of increasing enemy air attacks.
3 Engineer Siebel ferries between Pezzo and Gansirri.
5 Siebel ferries between Catona North and Paradiso.
In the early morning three more ferry barges were engaged on ferrying across tanks between Pistunina and Gallico. The road to the Pezzo North ferry point is finished, and also the approach road to Catona South.

8 August 1943
(contd.)

2nd and 4th Landing Craft Flotillas

F 350 ferry ammunition for the Luftwaffe from Gallico to Messina.
F 429 sailed Nicotera 6 August, sunk by air attack.
F 585, F 611, F 615, F 622 sailed Vibo Valentia for Naples.
F 435 has run aground on a reef at Vibo Valentia.
Attempts at refloating without success. Salvage party is proceeding to Vibo Valentia.
F 440 destroyed by fighter-bomber attack on the beach at Palmi. A salvage party has been sent there also, to recover valuable equipment and material.

Sea Transport Office, Reggio

Oil lighter "Nicolaus" has been sunk by fighter-bombers off Palmi. This fishing boat had been sent out alone, as it was very slow and it was hoped that the enemy would leave it alone as a harmless fishing boat.

Oil lighters "Gertrud" and "Frieda" are in Vibo Valentia with a cargo of Italian fuel.

Ferry Performance, Messina Strait

To Sicily: 76 men
 51 vehicles
 1666 tons ammunition
 25 tons equipment

From Sicily: 611 men
 339 vehicles
 91 tons ammunition
 38 tons fuel
 417 tons equipment

Total transport performance to Sicily: 191 tons.

A system of lights at ferry points has been devised for night ferry traffic. Jetties for Siebel ferries will be marked with two white lights at the end of the jetty. Just before 2100, heavy air raid on San Giovanni and Faro. Damage slight.

Upon receipt of the order "Prepare for LEHRGANG", a radio message was sent to Director of Sea Transport, Italy requesting that all available empty ferry barges be sent back to the Messina Strait, the barges to carry A.A. ammunition and lifebelts. Special value was attached to empty ferry barges, as barges could not discharge their cargoes in the Messina Strait after the evacuation of all depots. At Gioia Tauro there are only small unloading parties. That is unfortunate because the necessity for A.A. protection has forced a group of barges to discharge there. German Naval Command, Italy has ordered that these barges shall proceed into the Messina Strait by night, escorted by motor minesweepers. They will not be able to sail until the entire group has been unloaded, which may mean a considerable delay in view of the continuous fighter-bomber attacks. Such a waste would be insupportable. German Director of Sea Transport has been informed of this matter.

9 August 1943

Operations

- 4 ferry barges between Cannitello North and Faro North,
- 2 Siebel ferries between Pezzo and Ganzirri,
- 5 Siebel ferries between Catona North and Paradiso,
- 6 landing craft between Cannitello South and Faro South.

2nd and 4th Landing Craft Flotillas

F 350 sailed Gallico for Ganzirri to carry ammunition for the Luftwaffe.

F 482, F 432 arrived Vibo Valentia.

F 618, F 434, F 412, F 391 attacked by 60 aircraft during afternoon north of Pizzo. F 434 sunk, other boats beached, probably total loss. Casualties slight, most of wounded fled ashore and are continuing northwards by devious means.

4 ferry barges in service on route IV and secondary landing points.

10th Landing Craft Flotilla

1400

3 I-boats ferrying ammunition from Messina to Catona.

2 A.A. Siebel ferries, SF 224 and SF 230, sailed for Vibo Valentia to escort the oil lighters "Gertrud" and "Frieda" to the Messina Strait.

Engineer Landing Battalion 771

1 landing craft sent to Gioia Tauro to transfer wounded to the hospital ship "Toscana".

Sea Transport Office, Reggio

Oil lighters "Gertrud" and "Frieda" are lying at Vibo Valentia with cargo of Italian fuel. At the request of the Army Supply Staff, one lighter is to discharge at Gioia Tauro. As "Frieda" has been damaged in a fighter-bomber attack, she will be sent to Gioia Tauro.

Ferry Performance, Messina Strait

To Sicily: 139 men
 88 vehicles
 125 tons ammunition
 3 tons equipment

From Sicily: 1423 men
 338 vehicles
 3 tanks
 62 tons ammunition
 26 tons fuel
 329 tons equipment
 400 wounded

Total transport performance to Sicily: 128 tons.

9 August 1943
(contd.)

1000

Hospital ship "Toscana" arrived at Gioia Tauro. Embarkation of wounded by means of a landing craft is proceeding slowly, only about 250 wounded have been ferried out to the ship. A second landing craft has been sent to Gioia Tauro to speed up embarkation. The oil lighter "Bussard", which sailed from Vibo Valentia without orders, has been sunk. Oil lighters have orders to wait at Vibo Valentia until sailing orders from Director of Sea Transport, Italy are received.

Director of Sea Transport, Italy has ordered ships to avoid sailing between the south and Vibo Valentia during daylight. Also, 2 cm A.A. ammunition was mentioned. As a result of this order, Sea Transport Office, Vibo Valentia has been instructed by telephone to postpone sailing of the convoy due to leave in the morning of 10 August until the evening of the same day. Motor minesweeper group R 38 has been ordered to take over the escort in the evening of 10 August and to proceed so that the convoy passes Bagnara by daybreak, so as to avoid the fire of shore batteries.

Oil lighter "Gertrud" is to discharge cargo at Messina. Radio message has been received from the Director of Sea Transport diverting to Scalea the oil lighters "Waltraud", "Kitty", "Etha" and "Lola", which are at present on their way south from Naples. Sea Transport Office, Vibo has been instructed to attempt to divert these lighters by means of messenger in one of the northerly intermediate ports.

10 August 1943

Shipping Movements

4 ferry barges between Cannitello and Faro,
8 landing craft between Cannitello and Faro,
3 Engineer landing craft on the route Pezzo -
Canitello Centre,
6 Siebel ferries on the route Paradiso - Catona North.

2nd and 4th Landing Craft Flotillas

F 350 carrying A.A. ammunition between Messina and Gallico. F 435, F 482 will sail with the A.A. Siebel ferries 230 and 224 from Vibo Valentia to Gioia Tauro, where the two barges and oil lighter will discharge their cargoes, as instructed by Army Supply Staff. Because fighter-bomber activity has made the voyage southward very dangerous, the two ferry barges, which are urgently needed for ferry traffic on 11 August, are sailing with escort and will unload during the night. A working party of 50 men with Lt. Schlipphage in charge is being sent to Gioia Tauro.

Oil lighter "Gertrud" will discharge cargo at Vibo Valentia by order of Army Supply Staff, and not, as previously instructed, at Gioia Tauro.

Tanker "Frieda", which is lying damaged at Vibo Valentia, will be unloaded there.

Ferry Performance, Messina Strait

To Sicily: 139 men
88 vehicles
3.5 tons ammunition

10 August 1943
(contd.)

From Sicily: 728 wounded
505 vehicles
62 tons ammunition
337 tons fuel
796 tons equipment

2 landing craft are being used at Gioia Tauro to embark 600 wounded on the hospital ship "Toscana".

During the afternoon, orders were received from XIV Panzerkorps for the operation called LEHRGANG to begin on 11 August. This operation is the gradual withdrawal of German troops from Sicily as they break away from the enemy. It will be carried out in five nights, during which time mainly other ranks will be ferried across to the mainland. As far as possible, the vessels will be brought back during the day. The estimated ferry performance is about 12,500 men per night. Despite opposition from me, the Army High Command feels that night operations are essential, for reasons of camouflage. My objections are as follows: Neither the ships' crews nor the troops are accustomed to sailing by night. The night will be very dark - it is the first quarter of the moon - and as no illumination can be used, the tempo of ferry traffic is bound to be slowed down considerably. For some days now, between 2100 and dawn the enemy has regularly carried out heavy bombing attacks against both sides of the Messina Strait and has paid particular attention to the northern jetties at Faro and Cannitello. One must therefore reckon on frequent interruptions, and not least on the loss of indispensable ferry craft. Worst of all, continual air attacks would create disorder among the troops embarked. In comparison, there are few air attacks during the day, and these can be warded off by heavy A.A. fire.

All preparations were discussed once more at a final meeting with the Commandant, Messina Strait. The preparations I had made were finally checked, and responsible officers were instructed in their sphere of activity.

It is regrettable that, as a result of a decision by C.-in-C., South the ferry barges retained by me for the imminent commitment have had to be sent back to Naples. As a result of the reserve of ferry barges being moved northward by Director of Sea Transport, Italy, at the moment only 5 ferry barges are available, instead of the 14 planned.

Loading and unloading of cargo and embarkation and disembarkation will be supervised by officers of the following units:

At Faro North, the Sea Transport Office, Messina;
at Faro Centre and South, Engineer Landing Battalion 771.
Overall responsibility at Faro will rest with the very reliable commanding officer of Sea Transport Office, Messina: Lt. Cdr. Neumann;
at Ganzirri, Engineer Landing Battalion 771;
at Paradiso, 10th Landing Craft Flotilla;
at Salvatore, 2nd Landing Craft Flotilla.

The jetties will be marked with white lights: those taking Siebel ferries with two lights at the end of the jetty, those taking ferry barges and other craft with one white light, those taking landing craft with coloured lights.

10 August 1943
(contd.)

The jetties of routes II to IV will be marked with corresponding white flashing lights (2 - 4) at intervals.

Road commandants from the Army are responsible for road discipline and maintenance..

To maintain approach roads and the jetties themselves, especially in the event of damage from air attack, I have detailed for the daytime one mobile working party from 1/25 with equipment, and for nighttime, two. These working parties can be sent at any time on demand to scenes of damage. To meet the contingency of damage to telephone cables, radio communication has been established between the Operations Room of Naval Officer-in-Charge, Sea Transport and the Battle H.Q. of Engineer landing Battalion 771. In this way, communication is ensured with the most important and most distant jetty.

The problem of fuel supplies has become as acute as that of A.A. ammunition, following the destruction of various fuel depots by air attack and the absence, or loss, of oil lighters and fuel trains.

The Supply Staff and the Luftwaffe have guaranteed sufficient fuel for five days and nights and the loading of all stocks, while units have undertaken to disperse supplies and store them as safely as possible against air attack.

11 August 1943

Ferry Movements, Messina Strait

Cannitello - Faro South:	11 landing craft
Ganzirri - Cannitello Centre:	4 Engineer Siebel ferries
Catona North - Paradiso:	6 Siebel ferries
Gallico North - Salvatore:	2 ferry barges
Gallico South - Pistunina:	3 ferry barges

F 432 and F 485 are discharging the remainder of their cargo at Gioia Tauro, as there was insufficient time available in the first night to complete the job.

There is a danger that the boats and their escort will suffer fresh damage from the daily fighter-bomber attacks. On the other hand, the dangers of sailing south of Vibo during daylight are so great that the task of the boats being further damaged in port will have to be taken, otherwise the whole convoy might be lost at sea. Cargo is being discharged during the day, in the face of continual fighter-bomber attack. F.423 has been wrecked by bombing, there are seven injured on one of the A.A. ferries. Orders from German Naval Command, Italy state that ships sailing to Messina will proceed at night, escorted by motor minesweepers. As the motor minesweepers are lying at Messina waiting to escort the steamship "Zeno" to Vibo Valentia, and the ferry barges are urgently needed in the Messina Strait, for the withdrawal of our troops, motor minesweeper escort will have to be dispensed with. Orders have been given for the craft to sail in company with the oil lighter "Kitty", which is loaded with A.A. ammunition, at such time as to allow them to pass Scilla by daybreak.

Engineer landing craft No. 4 has been destroyed by bombing, no casualties.

11 August 1943
(contd.)

Ferry Performance, Messina Strait

To Sicily: 264 men
76 vehicles
98 tons ammunition
12 tons equipment

From Sicily: 3631 men
801 vehicles
35 tons ammunition
48 tons fuel
1128 tons equipment

Night raids between 2100 and 0500 were repeated on a very heavy scale, especially against Faro and Ganzirri.

At 1800 today Operation LEHRGANG, the steady withdrawal of troops from Sicily, began. Preparations were made for night ferrying, but in the north they were handicapped by very heavy air attack. Ferry traffic on routes III and IV was on a small scale as the Army vehicles arrived only sporadically, and their drivers spent most of the time in the air raid shelters. The comparatively high ferry performance must be attributed to the following points:

- 1) As there is no more traffic to Sicily, no time is spent loading on the mainland.
- 2) About 5% - 10% of the motor vehicle figures refer to motor cycles and motor cycle combinations.
- 3) The newly completed and very efficient Siebel ferry points at Ganzirri - Pezzo and Faro Centre - Cannitello Centre are producing good results.

Radio message from German Director of Sea Transport received:

"For your special operation today 12 ferry barges outside Messina Strait plus 8 as reserve proceeding from north. Calculate that with 4 jetties apart from I-boats and W-boats total of 16 Siebel ferries and ferry barges continuously required. Anchor surplus in bay close inshore, if possible near A.A. Battery. This reserve near enough to be there within 12 hours. Ready for operations. Assume ferry traffic by night, or independently by day. C.-in-C., South has guaranteed immediate assignment of 10 lorries for fuelling naval craft, as fuelling by lighter not reliable enough.

Diesel lighter lying Vibo Valentia afternoon 11 August."

Number of ferry barges in ferry service:

Route I	3 - 4
Route II	3 - 4
Route III	4 - 5
Route IV	4 - 5

That is, 14 - 18 ferry barges. As the largest possible number of vehicles is to be ferried across - there are thousands of them - full use can be made of these ferry barges, as well as the Siebel ferries and landing craft.

11 August 1943
(contd.)

Essential factor is that the ferry barges should arrive here empty, as for reasons stated above the discharge of cargo takes so long that loaded barges would not be at the centre of operations in time. As a request with a short explanation on the subject of empty ferry barges was sent to German Director of Sea Transport two days ago, further mention does not seem necessary.

Following the departure to Führer H.Q. of the Senior Officer, Patrol Services, Messina Strait, Captain von Kamptz, I have assumed command of the ships of the 12th Motor Minesweeper Flotilla. A signal has been received announcing his successor, Captain Dr. Diederich. By far the majority of commitments in the Messina Strait are the responsibility anyway of the Naval Officer-in-Charge, Sea Transport, Messina Strait, with whom the responsible Army authorities - XXV Panzerkorps, 1st Paratroop Division, Colonel Baade's Staff - have always dealt directly. The intervention of a higher naval authority, a position which will be occupied by an officer completely new to local conditions and without special knowledge of the responsibilities involved, just at the moment when the final 5-day operation is beginning, can only create practical difficulties.

Quartermaster General, C.-in-C., South has reported that 150 drums of smoke screen chemical and ancillary equipment has been loaded on to F 451. I made a signal to German Director of Sea Transport, Italy: "No use in Messina Strait for smoke screen apparatus on F 451. If apparatus not needed in north please recall barge to Naples and unload there". Received following reply: "Unload F 451 there, so that barge available other purposes early as possible." I signal back: "No opportunity for unloading here, without two days' delay and corresponding danger of air raid damage." The barge would have to be unloaded at Vibo Valentia, where there is no unloading party, and no transport facilities for getting one there at short notice. Waiting there for other barges to form a convoy would be just as dangerous as proceeding independently, which is forbidden.

12 August 1943 Ferry Service, Messina Strait

Route I North	1 ferry barge
Route I South	13 landing craft plus
	1 landing craft for wounded
Route II	
Ganzirri - Cannitello	
Centre	4 Engineer Siebel ferries
Ganzirri - Pezzo	2 Siebel ferries and
	1 ferry barge
Route III	5 Siebel ferries
Route IV	4 ferry barges

0800 F 482 and oil lighter "Kitty" arrived Catona from Gioia Tauro escorted by A.A. ferries 224 and 230.

Ferry Performance, Messina Strait

To Sicily: nil.

12 August 1943 (contd.) From Sicily: 3249 men
 950 vehicles
 103 tons ammunition
 101 tons fuel
 1370 tons equipment

2nd, 4th and 19th Landing Craft Flotillas and Engineer Landing Battalion 771 are provided with sufficient fuel to maintain ferry traffic in the Messina Strait for 5 days and 5 nights. They also have full stocks to meet further requirements. Supplies of A.A. ammunition are still extremely small. Of the quota of 20 mm A.A. ammunition required, the 2nd Landing Craft Flotilla has only 45%, the 4th Landing Craft Flotilla only 15%, the 10th Landing Craft Flotilla only 18% and Engineer Landing Battalion 771 only 60%.

From 2100 to 0500 very heavy air attacks were again carried out on the Messina Strait, in particular on Faro, San Giovanni and Ganzirri. Ferry traffic on the northern routes I and II was suspended after 2100.

Shortly after 2100, I 60 was destroyed by a direct hit.

Oil lighter "Kitty" is discharging her cargo at Gallico. It has been discovered that the cargo of 20 mm A.A. ammunition is not the C 38 type required by my units, but C 30, which is of no use for the guns in my ships. The cargo was offered immediately to A.A. Brigade 22.

Further orders have been received from German Naval Command, Italy stating that motor minesweepers of the 6th Motor Minesweeper Flotilla are to be detailed to escort ferry barges between Vibo and Naples. Night sailing is advised in the zone of enemy air activity and no operations are permitted south of Vibo. For the moment no northbound convoys of ferry barges are envisaged, as all available vessels will be urgently needed in the Messina Strait.

2030

R 38 sailed from the Messina Strait for Vibo in company with R 185, R 187 and R 188, and arrived there at 2300. I intend to leave these ships there to provide immediate escort to the Messina Strait for any ferry barges arriving there. Senior Officer, Patrol Services, Messina Strait has resumed command of the ships of 12th Motor Minesweeper Flotilla.

I have ordered Sea Transport Office, Vibo to discharge cargo of oil lighter "Gertrud" for Army supply Staff. As F 450 and F 411 have not yet arrived at Vibo, an enquiry has been sent to the German Chief of Staff in Naples regarding their exact time of sailing.

In view of the abandonment of Sicily and the great concentration of troops in the Gioia Tauro area, to which the depots of Army Supply Staff, Reggio have already been withdrawn, it is imperative that adequate unloading facilities should be created in the harbours in question. As far is known, however, no decision has yet been made as to whether South Calabria is to be held for some time, or whether it will be necessary shortly to direct the main flow of supplies much further northward.

12 August 1943
(contd.)

The unloading stations in question for the Gioia Tauro area are the beach at Gioia Tauro and the harbour at Vibo Valentia. It would also be possible to unload at Tropea, but experience gained at Gioia Tauro and Bagnara has shown that it is not easy with the means available to provide effective A.A. protection for an open beach such as the one at Tropea. Another disadvantage of the open beach is that vessels have virtually no protection against naval bombardment at night, for an attacking ship would always be within the blind spot of the 75 mm guns of our barges. The solid mole at Vibo Valentia would be good protection against naval bombardment but here there is a serious risk of mass bombing. Nevertheless, Vibo Valentia and the neighbouring beach seem to offer the best facilities for unloading in the Gioia Tauro area. I have made a signal to the 1st Paratroop Division: "Most important harbour for unloading supplies in future Vibo Valentia. Therefore request very strong A.A. protection. A.A. defences Gioia Tauro have proved not strong enough." I have entrusted the direction of the Sea Transport Office, Messina, Lt. Cdr. Neumann, an experienced and reliable officer, and I have also placed the Gioia Tauro area under his command. I am assigning to him the Harbour Company, Messina and the Kauers Construction Company as harbour works personnel and have made a signal to German Director of Sea Transport requesting approval for these measures.

The Sea Transport Office, Vibo Valentia has no unloading personnel at the moment, but because various ferry barges have sailed from Naples which cannot be unloaded south of Vibo Valentia, Sea Transport Office, Vibo Valentia has received the following signal: "F 411, F 451, F 462, F 522, F 588, F 609 will discharge there. If necessary, make use of Paetz small engineer unit from Engineer Landing Battalion 771 (25 men). Apply Army Supply Staff for further personnel."

The fact that, despite my request, the vessels coming from the north are not empty but are in fact carrying full cargo means, unfortunately, that it will be virtually impossible to use them for LEHRGANG in the Messina Strait. In any case the first group of barges will not arrive in the Messina Strait before the last day of LEHRGANG.

13 August 1943

Ferry Movements

Route I North	3 ferry barges
Route I Centre	4 Engineer Siebel ferries
Route I South	9 landing craft
Route II North	2 ferry barges
Route II	2 Siebel ferries
Route III	5 Siebel ferries
Route IV	2 ferry barges
	1 naval gun barge

As the heavy air attacks on the Messina Strait during the night make it doubtful whether ferrying can take place, the commencement of operations has been postponed until 0500, as the air raids usually cease just before 0500. Routes I and II have been closed between 2100 and 0500 to avoid serious losses.

Night traffic is continuing on routes III and IV. But as a result of last night's experience, traffic was on a reduced scale. There was a temporary pause, which made

13 August 1943
(contd.)

itself felt when an unexpectedly large number of vehicles began to arrive and the situation was not brought under control again until shortly before 0300.

Ferry Performance, Messina Strait

From Sicily: 6142 men
440 wounded
1131 vehicles
36 guns
7 tanks
97 tons ammunition
53 fuel
1673 tons equipment

This performance is the maximum achievement so far, although during the night routes I and II were out of action and owing to a misunderstanding routes III and IV were working only part of the time. During the day, ferrying is restricted by the number of craft I have at my disposal.

Fuel stocks are adequate. The amount in hand is

2nd Landing Craft Flotilla	-	45 cbm Diesel
4th Landing Craft Flotilla	-	24 cbm Diesel
10th Landing Craft Flotilla	-	72 cbm B 4
		21 cbm Otto
Engineer Landing Battalion 771	-	57 cbm Diesel
		71 cbm Otto

A.A. ammunition stocks (% of authorised basic allowance):

2nd Landing Craft Flotilla	-	35%
4th Landing Craft Flotilla	-	15%
10th Landing Craft Flotilla	-	23%
Engineer Landing Battalion 771	-	75%

This means, unfortunately, extremely careful use of ammunition in combating low-level attacks.

From 2100 to 0500 there were again heavy air raids against Messina, Ganzirri and Faro.

During the day a landing craft used for transporting wounded was damaged by fighter-bomber machine-gun fire. The craft has had to be taken out of service. It was displaying a Red Cross flag. Engineer Siebel ferry No. 1 shot down one aircraft.

High-level raids have seriously damaged the roads in Sicily used by our troops to withdraw.

A further signal has been made to German Director of Sea Transport, Italy containing an urgent request that empty ferry barges be sailed back and the reason why they are needed. With the present limited facilities for unloading, only empty barges would be available in time, and those only if, as is expected, the operation is prolonged.

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(contd.)

German Director of Sea Transport has ordered: "As oil lighters are now directed mainly to Scalea, there must be separate sea transport representation for Scalea." And further: "Following the withdrawal to Vibo of Sea Transport Office, Messina the former Sea Transport Office, Catania and Catania Radio Station will move to Scalea and will report by radio their arrival there. Assume that Messina Radio Station is going to Vibo." German Naval Command, Italy has ordered craft to be dispersed, even outside the harbour moles.

This order corresponds to the basic landing orders which I have given my ships, but for safety's sake I am relaying it to Sea Transport Office, Vibo where a concentration of ferry barges is expected in the next few days.

According to radio reports from Naples, three groups of ferry barges are heading south, all loaded. The barges in question are apparently: F 450 and F 411, sailing date unknown; F 451, F 462, F 522, F 588, F 619 sailed 11 August; F 387, F 459, F 616, F 624 sailed 12 August, and F 617, F 611, F 615, F 523 also sailed 12 August. As no reports have been received from Vibo of their arrival, I have made the following signal to Vibo:

- 1) Have ferry barges arrived there?
- 2) Report to Quartermaster Abteilung of XIV Panzerkorps regarding disposal if any have arrived. Do not unload without authority of Quartermaster Abteilung.
- 3) Report immediately any barges become empty so that preparations can be made for escort by 12th Motor Minesweeper Flotilla to the Messina Strait.

German Director of Sea Transport, Italy has sent a signal to Sea Transport Office, Vibo ordering that all the ferry barges shall be unloaded there as quickly as possible and sent empty to the Messina Strait. That is no longer possible in the case of ferry barges carrying cargo. The continual interruption of unloading by fighter-bomber raids has to be taken into account. It is regrettable that my request for empty ferry barges was not complied with. The destination of the 15 ferry barges is not given, but it can only be Vibo Valentia. A concentration of 15 ferry barges there, where circumstances make unloading so difficult, is a matter of grave concern, in view of the day and night attacks on the harbour, and the high-level bombing. One has the impression that it is not fully realised in Rome how the air situation has deteriorated for us here since the enemy has captured Catania airfield, the effects of that, too, will be felt in the next few days. It is only in the Messina Strait that the enemy displays caution and avoids actual low-level attacks, as there he is brought under fire from all sides.

Following order received from German Naval Command, Italy: "Ships of 6th Motor Minesweeper Flotilla will put in to Vibo to escort groups of ferry barges. Escort of two per group to off Scalea, then return Vibo. Group of 4 ferry barges and more deep channel to Naples." That can only be carried out when the withdrawal operation across the Messina Strait is completed.

13 August 1943
(contd.)

Signal from German Naval Command, Italy:

"1730 air/sea rescue needed 10 miles NNE. Spartafera. Four airmen drifting in rubber dinghy." Engineer Landing Battalion has been ordered to organise a search with a large assault craft. The assault craft, accompanied by three small assault craft, saw red Verrey lights in the area in question and a British air/sea rescue aircraft escorted by four fighters. One fighter broke away and headed off the assault boat by firing across her bows. The air crew seems therefore to have been taken prisoner by the British. A later search of the same area to see if there was another dinghy produced no result.

2nd Fliegerkorps thinks, however, that the British were rescuing their own men and has asked for a further search the following morning, as it concerned Lt. Reichart with 156 "kills". This request has been agreed to.

14 August 1943

Operations

During the night of 13th/14th:

Route III	-	4 Siebel ferries
Route IV	-	3 ferry barges

During the day:

Route I North	-	2 ferry barges
Route I Centre	-	3 engineer Siebel ferries
Route I South	-	9 landing craft
Route II North	-	1 ferry barge
Route II Centre	-	3 Siebel ferries
Route III	-	3 Siebel ferries
Route IV	-	3 ferry barges

Night traffic at jetties III and IV is proceeding rapidly and smoothly in bright moonlight. There are no air attacks and the ferry craft are able to proceed without interruption. Sufficient vehicles are also reaching Messina. Ferrying is continuing smoothly throughout the day, with hardly any interference from the usual fighter-bomber raids. Destruction of the northern road west of Messina during the afternoon checked the flow of vehicles to ferry stations I and II. Ferry operations went so well throughout the day that no hold-ups occurred and the best ferry performance to date was achieved. The number of men and the quantity of material ferried from Sicily to the mainland amounted to:

7424 men
600 wounded
1380 vehicles
39 tanks
42 guns
214 tons ammunition
155 tons fuel
1728 tons equipment

14 August 1943
(contd.)

Orders from Director of Sea Transport, Italy:

- 1) 1st Company, Construction Battalion 432 will transfer to Scalea;
- 2) As far as can be foreseen, after LEHRGANG 2nd and 10th Landing Craft Flotillas will be stationed in the Naples area and 4th Landing Craft Flotilla in the Sardinia area.
- 3) 2nd Landing Division will then transfer to the area between Leghorn and Spezia and 4th Landing Flotilla to the Leghorn area.

In accordance with my instructions, 2nd and 10th Landing Craft Flotillas have moved all men not required for Operation LEHRGANG and all dispensable equipment to the first transit camp at Tauria Nova.

Sea Transport Office, Vibo has signalled:

"After consultation with Quartermaster Abteilung, XIV Panzerkorps, decision taken to discharge cargo of F 451, F 462, F 522, F 588, F 609, F 617, F 523, F 611, F 615. All barges will probably discharge 15 August."

On the basis of an order from Director of Sea Transport, Italy, the Officer Commanding, 112 Construction Party has ordered Construction Battalion 430 to move from Gioia Tauro to Vibo Valentia. They will report to the Sea Transport Office there. "Engineer Construction Company, Italy is included" was the reply received from Director of Sea Transport, Italy to an enquiry regarding the future employment of this formation.

Senior Officer of 4th Landing Craft Flotilla will arrive at Vibo by car in the evening of 15 August. Duty will be the command and administration of ferry barges in the area north of the Messina Strait. Orders will be passed through Vibo.

On the subject of the A.A. ammunition crisis, Director of Sea Transport has announced from Rome that Luftflotte 2 has directed Air Force Field Equipment Group, Naples to make an allocation of a further 20,000 rounds of 20 mm A.A. 38 ammunition, and that immediate shipment has been arranged. Unfortunately, this ammunition will be too late for use in the Messina Strait.

A large assault craft continued the air/sea rescue search. This craft was reported overdue, and two small assault craft set out to search for it, without success. During the evening the crew of the large assault craft was picked up by the Italian hospital ship "Aquilaia". Their vessel had been sunk by fighter-bombers.

At the request of the Herman Göring Division F 503 sailed at 0600 on 14 August for Galati, under the command of the Flotilla medical officer, to embark 80 - 100 seriously wounded men. The A.A. cover of four 20 mm quadruple machine-guns which had been promised was not to hand, and the ferry barge had to defend itself with its own guns against a bombing and machine-gun attack by 8 fighter-bombers. Only 10 men with serious wounds and 21 with slight wounds were embarked, and three ambulances and two lorries with medical equipment put aboard. A

14 August 1943
(contd.)

request from the medical officer of the Division for a ship to be detailed to Galati to pick up other medical equipment was turned down, attention being drawn to the official ferry points.

15 August 1943

Operations

During the night of 14/15 August, 3 Siebel ferries on Route III, 2 Siebel ferries after 0100.

On Route IV 2 ferry barges, and naval gun barge No. 7 in reserve to take off any men.

On the basis of the previous night's experience, ferry traffic is being resumed on the northern routes in accordance with the orders of XIV Panzerkorps. The following ships have been detailed:

Route	I North	-	1 ferry barge
Route	I Centre	-	2 Engineer Siebel ferries
Route	I South	-	4 landing craft
Route	II North	-	1 ferry barge
Route	II South	-	1 Siebel ferry

Traffic on the northern routes is scheduled to begin at 2300, if it is felt at that time that the air situation permits. Captain Paul of Engineer Landing Battalion 771 will be in control of operations.

Ferrying commenced as ordered, but the ships sailed empty, as neither men nor vehicles arrived. Operations were suspended at 0100 in consequence. Very little arrived for ferrying on the southern routes. Nevertheless, in contrast to yesterday, telephone communication was established with the Operations Officer of XIV Panzerkorps at Messina, so that systematic cooperation was possible. During the day, ferry traffic was resumed with the following vessels:

Route	I North	-	2 ferry barges
Route	I Centre	-	4 Engineer Siebel ferries
Route	I South	-	9 landing craft
Route	II North	-	2 ferry barges
Route	II	-	2 Siebel ferries
Route	III	-	5 Siebel ferries
Route	IV	-	3 ferry barges and 1 naval gun barge.

Oil lighter "Kitty" has a miscellaneous cargo of evacuation material for the Sea Transport Office, Reggio. The narrowness of the hatches restricted the type of cargo that could be loaded. As there is no chance of providing an escort, the ship will have to proceed independently, for she is exposed to danger here. She will sail at 1800. At the slow speed of 4 - 5 knots, "Kitty" will be at Vibo just before dawn.

15 August 1943
(contd.)

Ferry operations proceeded without hindrance throughout the day. During the night one or two air attacks of no consequence were carried out, although flares were dropped continually over the Messina Strait.

Just before morning one landing craft suffered 1 dead and 4 wounded in a fighter-bomber attack. The landing craft brought down one aircraft and a ferry barge another.

Ferry Performance

From Sicily: 4810 men
200 wounded
923 vehicles
1 tank
16 guns
86 tons ammunition
9 tons fuel
956 tons equipment

Fuel stocks are sufficient:

2nd Landing Craft Flotilla	-	30 tons
4th Landing Craft Flotilla	-	20 tons
10th Landing Craft Flotilla	-	36 tons B 4
		17 tons Otto
Engineer Landing Battalion 771	-	50 tons Diesel
		61 tons Otto

The continuous heavy air attacks reported from Vibo are creating serious problems in the harbour and disorganising supplies. Only those ferry barges on absolutely essential duty may enter the harbour. The Operations Officer of XIV Panzerkorps is reckoning on three more complete days of ferrying. It is therefore conceivable that I shall be able to move some ferry barges to the Messina Strait for the last day, to replace losses. It is astonishing that the enemy has not made stronger attacks in the past days. There has frequently been a pause of 1 - 2 hours between individual fighter-bomber raids, while high-level attacks have been practically non-existent. It is only during the night that raids are frequently incessant.

Colonel Baade's Staff has relayed the XIV Panzerkorps order to evacuate the 105 mm A.A. guns of four Batterien by ferry barge. That means 16 - 20 guns, and will require, in addition to the ferry barges in the Messina Strait, 5 more at Vibo Valentia, which is to be the destination of the guns. With the 5 ferry barges being held there in reserve for the Messina Strait, that will mean a strong concentration for a harbour so exposed to air attack. The other ferry barges will, in any case, have to sail back to Naples immediately. I have therefore made a signal to the Senior Officer, 4th Landing Craft Flotilla at Vibo Valentia: "End of LEHRGANG probably not before 18 August. Keep 5 empty ferry barges standing by to sail to Messina Strait to replace losses here, 5 others to take 105 mm A.A. guns to Naples on conclusion of LEHRGANG. Other ferry barges not required here." A.A. Brigade 22 has enquired whether A.A. defences are still required for Gioia Tauro. As there is no further need to discharge cargo there, the answer "no" was given. The A.A. defences for Vibo requested of 1st Paratroop Division have not materialised. Perhaps they have not

15 August 1943
(contd.)

received my signal. The absence of an Army radio station here is having unpleasant repercussions these days. I have accordingly made a signal to the German Director of Sea Transport;

"A.A. defences for Vibo Valentia applied for by us have so far not been provided. Request you arrange for A.A. immediately, as protection urgently needed for 15 ferry barges about to discharge cargo there."

Signal received from German Naval Command, Italy:

"If short of ferry craft, recall Vibo ferry barges." At the moment, unfortunately, there are no empty ferry barges there. A recent telephone conversation with the Panzerkorps has disclosed, however, that the bulk of men and material has already been ferried across. The all-out effort and self-sacrifice of our crews, who sailed their ships day and night in the face of almost continual fighter-bomber attacks, has achieved results considerably in excess of those expected by the Army High Command. I have therefore ordered Sea Transport Office, Vibo Valentia to sail 5 empty ferry barges to Naples by night, via the deep channel, escorted by two motor minesweepers. The motor minesweepers will accompany the barges as far as off Scalea and then return to Vibo. Only 5 ferry barges need remain there to remove the 105 mm A.A. guns.

As a result of the overcrowding of transit hospitals in the Palmi area, hospital ships are urgently needed to transport wounded to Naples. German Naval Command, Italy has been requested to detail the Italian hospital ship "Aquila", at present lying empty at Messina, to Gioia Tauro, to embark 750 wounded there on 16 August.

16 August 1943

Operations

During the night of 15/16 August:

Route III - 3 Siebel ferries
Route IV - 3 ferry barges

Just before 2300, in the course of an action involving ships of the 12th Motor Minesweeper Flotilla on patrol, a Siebel ferry was fired on by a shore battery at Messina, despite her making recognition signals. I immediately ordered ferry traffic to stop. As, however, nearly 200 vehicles were waiting at Messina, ferrying was resumed just before 0030. A complaint has been sent to XIV Panzerkorps.

Just before 2300, SF 175 began to sink off San Giovanni, as a result of leaks and blast damage sustained in the last bombing attack, during the afternoon. The ferry may yet be beached, but she has run aground about 20 metres from the shore, and so it is impossible to unload her cargo of vehicles. Those that are not already submerged by the vessel's list are being transferred to SF 92, which has gone alongside.

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At 0500, day traffic was resumed on all ferry routes:

Route	I North	- 2 ferry barges
	I Centre	- 4 Engineer Siebel ferries
	I South	- 5 - 6 landing craft
	II North	- 2 Siebel ferries
	II South	- 2 Siebel ferries
	III	- 4 Siebel ferries
	IV	- 3 ferry barges and 1 naval gun barge

2 landing craft are being sent to Gioia Tauro to move wounded. The hospital ship which was requested has not arrived there. A signal has been made to German Naval Command, Italy, urgently requesting the ship for 17 August.

The 4th Naval M/T Abteilung has not arrived. Its duties in the area of the Messina Strait will cease to exist within the next day or so. As my duties also cease on 17 August, I cannot take over command of the company. I have therefore made the following signal to German Naval Command, Italy: "Leaving Messina Strait with 2nd and 10th Landing Craft Flotillas probably 17 August. Who will then take over command of 4th Naval M/T Abteilung? 20 lorries are required here for 616 Naval Gunnery Abteilung. Using other vehicles at first for evacuation of naval establishments from here to the Naples area."

The transfer of Construction Battalion 432 initially to Vibo Valentia has been arranged for 16 August. Only the working parties for the ferry points, 60 men in all, will have to remain behind until the afternoon of 17 August, when ferrying has ended. Sea Transport Office, Vibo has been instructed: "Unload from F 450 as many gas cylinders of Seagoing A.A. Command South as required for Balloon sites there. Send remainder back to Naples together with life-belts, rafts, canteen goods of 10th Landing Craft Flotilla. Keep 2 cm ammunition there for ferry barges calling, if not immediately sent here by lorry." Also: "Only 2 - 3 ferry barges required for loading 105 mm A.A., but not immediately. Therefore consult Quartermaster Abteilung, XIV Panzerkorps and load ferry barges returning to Naples with the exception of 3 for task mentioned. Sail always at night, with motor minesweeper escort as far as off Scalea."

As a result of talks with A.A. Brigade 22, it is now known that there are no more than 12 guns.

Colonel Baade has agreed that the flotillas, engineers and my own staff shall withdraw on 17 August, when LEHRGANG is completed. XIV Panzerkorps has stated that it will probably be over between 0900 and 1000.

During the afternoon I received the following order from XIV Panzerkorps: "During the coming night it is vitally important that all ferries should sail continuously on all 4 routes, so as to evacuate the last units of XIV Panzerkorps to the mainland. It may happen that the ferries have nothing to do for hours and have to wait

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until a new contingent of men and vehicles arrives at the ferry points. Ferry craft will probably cease operating just before 0700 tomorrow, after which only assault craft need be used. But ferrying tomorrow morning cannot cease without the authorisation of Engineer Captain Holzapfel at ferry points I and II, and of Panzer Captain Rossmann at ferry points III and IV. These two officers are the only persons authorised to order a ferry not to return to the west side after discharging cargo. After the splendid ferry performance to date, I expect that ferry personnel will carry out their duty in the same exemplary fashion during the last vital night." (Signed) Hube: General der Panzertruppen."

Senior Officer, Patrol Services, Messina Strait has informed German Naval Command, Italy by signal that

- 1) Naval Radio Station, San Giovanni has closed down and has moved to Scalea;
- 2) He himself has withdrawn to Rome following the completion of his duties.

Sea Transport Office, Reggio is moving to Paola.

A signal has been received from German Naval Command, Italy: "N.O. i/c, Sea Transport, Messina Strait will not leave until authorised by XIV Panzerkorps via S.O., Patrol Services, Messina Strait. Four trains allotted. Naval M/T Abteilung will remain there. Hand over vehicles required for 616 Naval Artillery Abteilung to Senior Coastal Artillery Commander, Messina Strait." Apparently they think in Rome that I might leave my post without consulting the appropriate authorities! The Senior Officer, Patrol Services, Messina Strait has already gone. So far, all questions concerning ferry operations have always been handed directly between XIV Panzerkorps and myself.

In the course of the day, fighter-bomber attacks became more intense. There were also numerous high-level attacks. Just before 1600, F 607 was badly damaged by a near miss off the ship's side, and 2 Siebel ferries as well. Salvatore, the northern jetty for ferry barges at Messina, was put out of action by bombing. A relief ferry point is being used. Ferry operations have been distributed accordingly. There is no Siebel ferry left with two engines in working order. As there will be extensive troop ferrying to do today, A.A. Siebel ferries and I-boats will be used.

Ferrying continued throughout the entire night of 16/17 August.

It is expected that the last troops will leave Messina tomorrow morning between 0900 and 1000. Following an order from XIV Panzerkorps, the order to cease ferrying at Messina will be given by Captain Holzapfel for routes I and II, and by Captain Rossmann for routes III and IV. I have instructed my staff officers to see that ferrying at Messina is stopped at the correct time. The bright moonlight is helping operations considerably. High-level night-attacks have had no particular effect.

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The last ferries left Messina just before 0600. In the early hours of the morning British artillery fired on Messina from the south without causing any damage. I have issued the following daily order:

"The time for operations in the Messina Strait is over. Following the movement, first of material, then troops, and then material again to Sicily, in the end troops and material have had to be ferried back in the face of continuous and mounting enemy action. A loyal sense of duty has enabled the ferry performance to be raised from small beginnings to a pitch of efficiency which surpassed all expectations, and the final figures represent an achievement, of which everybody participating within the command of N.O. i/c, Sea Transport, Messina Strait may justly be proud. This achievement is due to the part played by the crews of the naval ferry barges and Siebel ferries, the crews of the craft operated by Engineer Landing Battalion 771 and its staffs, the officers and men of the Construction Battalion and the Harbour Companies, of the Engineer Construction Company, Italy, the Sea Transport Offices, and the Army and Air Force Supply Staffs. It required not only good organisation, but endurance, hard work and fighting spirit to carry out this operation of historic importance. And I have noted with pleasure that these qualities were always in evidence where they were most needed. Such cooperation made it possible to withdraw our comrades from Sicily almost to a man, and to bring back far more material than was ever expected. We mourn our comrades who have died, and our thoughts turn to the sufferings of our wounded, but we know that their sacrifice has not been in vain. To them first, and to all other comrades, I wish to express my thanks at this moment when we are obliged to leave the Messina Strait. We shall now employ our strength elsewhere, fully trusting in the final victory of our Fatherland.

(Signed) von Liebenstein.

San Giuseppe, 17 August 1943.

The "Hohlstab" gear was picked up at Sicily and was to be towed by landing craft to Vibo Valentia before being taken on to Naples. It is, however, so tightly jammed between the rocks that there is no chance of towing it away.

Very heavy, continuous fighter-bomber attacks were resumed at dawn. Roads, as well, are under continuous fighter-bomber attack.

Since midday yesterday the Messina Strait has been under slight fire from enemy artillery, apparently 150 mm. The only time left for unloading and transshipment is this forenoon, as there may be artillery bombardment from the Messina side by this afternoon. The evacuation will therefore end at an awkward time for me to withdraw my ships. They cannot get away during the day because of fighter-bombers, and will have to haul around the corner at Camitello as best they can to gain shelter

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from the enemy artillery. I have ordered A.A. defences to be strengthened from there. There is not a single Siebel ferry left with two serviceable engines. The only ones that can be withdrawn are 3 A.A. Siebel ferries, for the others could only raise 4 knots on one engine, which is too slow in the circumstances.

Until further notice, Vibo Valentia will remain the southernmost port for unloading, with Paola and Scalea the next towards the north. The duties in these harbours will be purely Sea Transport Office matters, and I shall not be required.

Signal received from German Naval Command, Italy:

"Make sure that even the non-operational craft are moved from the Messina Strait and that they are all loaded with evacuation material." As far as the ferry barges are concerned, this has been done. They have taken away damaged tanks and 105 mm. A.A. guns. There are no more "non-operational" craft in the sense conveyed in the signal, i.e. damaged but still able to proceed under their own steam. In any case, there can be no question of towing the Siebel ferries which have only one serviceable engine. And these craft have all suffered bomb-splinter damage as well.

A report has been received from the ferry points stating that the last ferries have arrived. The ferry crews and the engineers of Engineer Landing Battalion 771 have done a wonderful job. For days on end they have carried out their onerous task in the face of almost incessant day and night air attack, and are now suffering from extreme exhaustion.

Ships of the 2nd, 4th and 10th Landing Craft Flotillas are assembling in the area between Cannitello and Scilla, so as to sail north at nightfall.

In the course of the day the only enemy action observed took the form of numerous fighter-bomber attacks and sporadic artillery fire. The camp at San Guiseppe was evacuated during the forenoon and the remainder of flotilla stores taken away by lorry.

At 1700 I left the Messina Strait together with my staff in two cars, a motor cycle combination and a lorry, travelling via Gambari.

(Signed) v. Liebenstein.

CONCLUSIONSInitial Situation

At the end of the Africa campaign, the ships of the 2nd Landing Craft Flotilla and the Air Force Ferry units which had been operating in that campaign were engaged in the Messina Strait, where a transport problem affecting German material, vehicles and troops had arisen as a result of the Italian ferry steamers being lost through air attack. The Engineer Landing Battalion, Africa (later renamed Engineer Landing Battalion 771) was already using landing craft as ferries there. Understandably, the independent operation of various units with no overall command did not prove successful. As the result of a report which I submitted to German Director of Sea Transport, Italy in my capacity as Senior Officer, 2nd Landing Craft Flotilla, a new command was created to deal with this traffic. The officer appointed to this command in the first instance was Lt. Col. Schiller, the Officer Commanding, Air Force Ferry Flotillas. When his vessels (Siebel ferries) were absorbed by the 10th Landing Craft Flotilla, I was to be his relief. When I took over on 25 May 1943, the situation was as follows:

- a) 3 ferry routes were in operation:
 - 1) Cannitello - Faro for landing craft
 - 2) Catona - Salvatore for ferry barges
 - 3) Gallico - Salvatore (hospital) for Siebel ferries.
- b) By order of C.-in-C., South, the Chief of Army Supply Staff, Reggio (Major Schiele) had been appointed O.C., Armed Forces Supplies. Regular meetings were held between his office and that of the O.C., Air Force Ferry Flotillas, at which available shipping space for the following day was divided up among the various units concerned with supplies, according to requirement.
- c) The Sea Transport Office, Reggio was concerned exclusively with the loading of ferry barges and vessels of the Mediterranean Shipping Company at the port of Reggio. The loading of ferry barges, Siebel ferries and Engineer Landing craft elsewhere in the Messina Strait and their unloading on the Sicilian side was the direct responsibility of the Service units concerned. Because of the shortage of personnel at the Army Supply Staff, Messina, a ferry barge would lie several days at Faro before being unloaded. First of all, then, my position with regard to the O.C., Armed Forces Supplies, Reggio, the Sea Transport Office, Reggio and the newly established Sea Transport Office, Messina had to be clarified. To achieve maximum efficiency, it seemed to me that I should be given some authority over the Army and Air Force units engaged in ferrying. That was rejected. However, under a directive from Vice Admiral Ruge, the Flag Officer, German Naval Command, Italy, my particular ferry operations were made exclusively a naval matter. There was, therefore, no question of coming under an Army command. It was a matter of cooperation. German Director of Sea Transport, Italy gave me authority over the Sea Transport Offices at Reggio and Messina, so that there was at least unified representation for the Navy.

Commitments and Resources

A ferry service of small craft had to be maintained across the Messina Strait, the target quota of material to be carried to Sicily being 27,000 tons a month. Taking into account the fact that some days would be lost by bad weather, that meant a daily quota of some 1,000 tons, including quantities of material taken to Sicilian ports outside the

Messina Strait. After a short while the direction of ferry operations was placed in my hands, as the situation could be seen better from the Messina Strait than from Rome. The possibility of fighting in Sicily itself was taken into account when the ferry operations were planned, and allowance had to be made for increased enemy activity by air and sea.

The naval resources available for the task were an average of 8 Siebel ferries, 2 A.A. ferries and about 10 I-boats and W-boats, all of the 10th Landing Craft Flotilla, and 20 ferry barges and 2 naval gun barges of the 2nd Landing Craft Flotilla. Of these, only the Siebel ferries and ferry barges were engaged on direct ferry operations. The latter were also used for traffic to Sicilian ports outside the Messina Strait and for fetching material from the Naples area. After fighting had begun in Sicily, extensive use was also made of the 4th Landing Craft Flotilla. I was also given operational command of the following units upon their arrival in the Messina Strait:

- 1) Engineer Landing Battalion 771 (originally Engineer Landing Battalion, Africa) under Captain Paul consisting of one company for landing craft, one for Siebel ferries, and one for "sea serpent".
- 2) The Mazrus Construction Battalion and, after that was transferred, Construction Battalion 432 (Captain Schritter).
- 3) Engineer Construction Company, Italy (Lieutenant Froehlich).
- 4) Harbour Company, Messina.

And towards the end:

- 5) Construction Battalion 430 (Major Schnell).
- 6) Lieutenant Kauers' Construction Company.

I also had authority over the Sea Transport Offices at Reggio and Messina. While Engineer Landing Battalion 771 used its craft to maintain a ferry service on the northern ferry route, the function of the Construction Battalions and the Harbour Company, Messina was to provide working parties for the ferry points and to develop approach roads to the jetties. The Engineer Construction Company, Italy took over the task of constructing jetties, although a start could not be made until towards the end of June because the requisite equipment, notably pile drivers, did not arrive at the right time.

Daily Conference

In order to secure cooperation, contact had first to be established with all the Service units concerned with supplies. This meant, in addition to the Sea Transport Offices and the O.C., Armed Forces Supplies, Reggio (Army Supply Staff), the out station of C.-in-C. South Transport Staff at Reggio, the main supply station of the Air Force and corresponding stations on the Sicilian side. None of these authorities had much contact with each other. Their spheres of responsibility were not clearly defined, and naturally enough individual stations were out to secure all they could for their own branch of the Service, so that there was continual friction.

The absence of a unified command was having a disturbing effect on planning the allocation of shipping space and the question of routes to be used, especially as communications were bad at the outset.

The expedient course therefore seemed to be to extend the daily conferences and call in representatives of all units directly or indirectly concerned in ferry traffic.

At these conferences, Service requirements in respect of shipping space and targets to be achieved were ascertained, and priorities established in the event of a shortage of shipping space. After that the transport programme was drawn up. At the same time, all questions concerned with preparations and subsidiary matters were discussed and appropriate directives issued. This daily conference gradually turned the office of N.O. i/c Sea Transport into a central authority recognised by all Service units as the responsible authority for directing the movement of German supplies at sea in the Sicily area. The conference also served a useful purpose in instructing all those present in the general situation locally.

Daily conferences were held right up to the last day of ferry operations and proved most successful.

Cooperation with the Italians

N.O. i/c, Sea Transport viewed relations with our Italian ally in the light of sober reality. With all the goodwill existing on both sides, an Italian effort or contribution to sea transport was no more expected than any other military achievement.

On the other hand, the Italians were cordially invited to make use of the German organisation. For a time, from about mid-June to mid-July, Italian representatives made fairly regular, if unpunctual, appearances at the daily conferences. Under an order from C.-in-C. South, up to 25% of Siebel ferry space was placed at their disposal. This allocation was never used to the full. Only on one or two days did Italian ferries sail with more than 20 vehicles; in general they confined their demands to the ferrying of single lorries, and in the course of the month these too ceased. On the other hand they had quite a contingent of individuals, both civilian and Service, using the Cannitello - Faro route.

Relations with Italian authorities in Calabria were good right up to the last moment. Those primarily concerned were the representative of the Comando Marina at Reggio, Captain Tesi, and his liaison officer Count Pavoncelli. Collaboration with the Comando Marina at Messina was not so good. It was just possible to get on with Admiral Barone, but there was always friction with his Chief of Staff, Captain Cei Martini, who gave the impression of being definitely anti-German.

Method of Ferrying

The quantity of supplies moved to Sicily was conditioned by the amount of shipping space available. The loading of supplies directly on to the ferry boats would certainly have meant that a much greater weight of supplies was carried, but the loading and unloading involved made only one crossing a day possible. It therefore proved more practicable to secure a direct run between the supply depot on the mainland and the supply depot in Sicily by ferrying over the lorries complete with their loads. Once the organisation was running smoothly, up to 80% of the lorries engaged on this work were able to make two crossings a day. Unfortunately, only about 100 lorries at the most were available for the routine movement of supplies across the Strait. With more lorries, the ferry performance could have been more than doubled straightaway.

Detailed organisation by each flotilla, with a carefully worked out sign signalling and berthing system for each ferry, gradually reduced the time spent in loading: very fine performances were achieved with a bare 20 minutes for a Siebel ferry (9 - 12 vehicles according to size) and 6 - 8 minutes for a ferry barge (5 - 6 vehicles).

Type of ferry

The best vessels for the purpose proved to be the Siebel ferries, because they could take a large number of vehicles, especially those with trailers, for which the engineers' landing craft were less suited. The Siebel ferry, too, by going alongside a jetty, largely fulfils the requirement that as many vehicles as possible should drive straight ahead on to the ferry and straight ahead off it. A more expedient design of superstructure (moving it aft) would reduce the amount of arranging at present necessary. It is also important that the crews' quarters should be accessible when the ferry is fully loaded. It was for this reason that it was not possible to load a Siebel ferry just before dark and sail her first thing in the morning.

The ferry barge is less suited for loading with vehicles because of the wear and tear.

Ferry Points

The movement of supplies started slowly. At the outset there was only one pontoon jetty (the "sea serpent" of Engineer Landing Battalion 771) for Siebel ferries at Gallico and one at Paradiso, Messina, one jetty for landing craft at Cannitello and one at Faro, and one ferry point for ferry barges at Catona and one at San Salvatore, Messina.

An immediate start was made with the construction of sufficient ferry points to meet the demands of heavy traffic and growing enemy air attacks. Berths also had to be found for ferry barges on long distance traffic. The principles followed in the construction of these ferry points and jetties are contained in the Appendix.

At the end the following ferry points were available in the Messina Strait for the final withdrawal:

<u>Messina Side</u>		<u>Reggio Side</u>
	<u>Route I</u>	
Faro North	Ferry Barges	Cannitello North
Faro Centre (jetty)	Siebel Ferries	Cannitello Centre (jetty)
Faro South	Landing Craft	Cannitello South
	<u>Route II</u>	
Ganzirri North	Ferry Barges and Landing Craft	Pezzo North
Ganzirri South (Sea Serpent)	Siebel Ferries	Pezzo South (jetty)
	<u>Route III</u>	
Paradiso (Sea Serpent)	Siebel Ferries	Catona North (jetty)
	Ferry Barges }	Catona Centre Catona South

Messina SideReggio SideRoute IV

San Salvatore and
two subsidiary
landing stages

Ferry Barges
Siebel Ferries

Gallico North
Gallico Centre (jetty)

Route V

Pistunina

Ferry Barges

Gallico South

Also for berthing ferry barges:

Galati

Ferry Barges

Occhio (3 jetties)

Ponte Schiavo

Plans were drawn up for establishing stations for ferry barges between Messina and Catania at Cape Molini, Ionia and Giardini, and north of Messina at a point 2 km west of Milazzo. After fighting had begun on the island, these stations were used as long as the military situation permitted. They were never fully developed. At Bagnara a fuel station was set up, which operated well until the railway line was destroyed. Two jetties for ferry barges, with approach roads, were also set up at Gioia Tauro.

"Sea Serpents"

The "sea serpents" of Engineer Landing Battalion 771 proved a useful jetty for Siebel ferries. They also provided an emergency reserve against the possibility of a jetty being destroyed by bombing, although in practice they were not needed. Before the first jetties were set up, Siebel ferries would have had no wall to go alongside, had it not been for this expedient. The "sea serpents" also proved indispensable where a rocky bottom prevented piles being driven.

The Engineer Landing Battalion had to rely wholly on the Navy for its stores and accessories (ropes, anchors, fuel, etc.). In my opinion this raises the question as to whether this Battalion should not be taken over by the Navy, where it would be easier to recruit reserve personnel for it. In my opinion, the Battalion can be engaged anywhere where Siebel ferries operate, and its "sea serpent" company is a necessary adjunct to these craft.

Steel Landing Strips and Derricks

It was obvious, especially at the end of the ferry period, that some more convenient way must be found of berthing ferry barges on the beach than making approach roads over the sands, which are often 50 metres or more wide. This laborious operation takes days, even weeks, to complete.

The answer is a steel landing strip. A requisition was made for them right at the beginning, but one difficulty after another arose and they never materialised. In my opinion all ferry barges should be equipped with several (10 - 20) metres of steel landing strip so that, wherever they are, they can put their landing strips together and discharge or take on vehicles.

Derricks should also be provided to facilitate the loading and unloading of ferry barges. Industry has plenty of them and they would only need slight modification. Even with a large labour force, a barge cannot be

unloaded as quickly as it can be mechanically, because not enough men can get into the small space. But apart from this, men are usually not on tap when a barge arrives unexpectedly. The whole ferry problem in the Messina Strait would probably have taken on a different look if sufficient mechanical devices had been available. Goods could have been ferried over instead of loaded lorries, thus relieving the shortage of these vehicles.

Communications

Communications were a permanent problem right up to the end. There were naval radio stations at Reggio, Messina, Palermo, Catania. They carried out their duties up to the very last minute, and at times, during the temporary breakdown of other Armed Forces radio stations, had to take over all Service radio traffic. The naval radio station at Reggio, in particular, was so rushed for a time after the Reggio teleprinter office has ceased to function that the rapid transmission of important signals was seriously jeopardised. At times the despatch of telegrams took up to 36 hours. At that time the pressure of work was so great that all signals submitted by the different units for transmission had to be closely examined to see whether it was absolutely necessary to send them as signals. As early as the end of July, the teleprinter office at Reggio was knocked out by enemy action and played no further part in communications. The nearest radio station was at Naples; that proved extremely awkward when Reggio ceased to function. A proposal made by N.O. i/c, Sea Transport to the effect that a terminal for radio stations should be set up somewhere near Vibo Valentia could not be put into effect, although the proposal was recommended by the Staff Officer, Communications with C.-in-C., South. The daily courier service to Rome operated by Garrison Commander, Reggio was of no use to us because Garrison Commander, Reggio moved to Gioia Tauro in mid-July. When Reggio radio station ceased operating we ran our own courier service to Naples. There was no direct telephone communication with Messina. The only line was by way of Catania, and was practically useless because conversation was never intelligible. Another trouble was that there were practically no facilities for telephoning the authorities in Rome. The only connection, that via Catania, was scarcely intelligible and later ceased altogether. It would be an advantage if the Navy were provided with beam transmitters such as the Air Force has.

Another serious disadvantage was the bad communications between XIV Panzerkorps and other army units, especially the 1st Paratroop Division in Calabria. Signals could only be transmitted, and then not always, over the naval radio system to Rome and relayed from there over the army radio system. But that meant intolerable delay. An effort must be made to secure good radio communications between the Armed Forces H.Q. and the Navy H.Q. in combined operations. In my opinion, such communications can only be established by fitting out the naval radio stations with army equipment and instructing them in army signals procedure. I consider that this question is so important that it should be made the subject of detailed investigation. A number of failures which arose would not have arisen with good communications.

A VHF link was established by means of army stations between N.O. i/c and Sea Transport Office, Messina. This link went some way towards remedying the lack of rapid communications between both sides of the Messina Strait and especially with the German Chief of Staff at Messina. In order to transmit secret information by VHF, a requisition for the Naval Signal Code was made, but it did not arrive in time. For practical reasons the use of Code M was out of the question. An emergency code was introduced and was later used for communication by army radio between N.O. i/c and Carnitello, Faro and Gioia Tauro (by Engineer Landing Battalion 771). For such purposes, however, there

should be a simple code available and the unit should not be left to its own devices. If there are such procedures in existence the Senior Communications Officers must know of them. Instead of being able to help, however, the Naval Communications Officers could do nothing but point out that this procedure (based on Foreign Office systems) was inadmissible. Unfortunately, the army communications mentioned were not established until the last days, so that little was felt of their beneficial effect. Telephone communications between individual units in the Messina Strait were extraordinarily bad. There were continual breakdowns, and not only because of enemy action. Nevertheless, in due course telephone communication was established with all units in the Messina Strait directly or indirectly concerned with ferry traffic. In some cases this was done by joining up with the circuit of A.A. Brigade 22, although at the price of frequent interruption when the guns were in action. On the other side, telephone communications were established in this way with Messina in the end, and in particular with the Operations Officer of XIV Panzerkorps, who was there towards the end. These communications provided an excellent service. Little use could be made of motor cyclists for communications purposes, partly because of a shortage of serviceable cycles and partly because of the long distance separating units and ferry points.

The Operational Side

The first requirement of some importance was to ferry across the Hermann Göring Division. 600 - 800 vehicles and the corresponding number of men had to be taken across daily. Although from previous experience there was no guarantee that the target figures could be achieved, in actual fact the 420 vehicles that arrived on the first day were all ferried over without hitch. On subsequent days the Division did not require the full ferry capacity, and so the remaining ferry space was used for moving other supplies.

Throughout the period of operations all requirements for ferry space were met. On the other hand, there were instances where the estimated demand was far in excess of what was actually needed. The Hermann Göring Division was a particularly crass example, and later there was the 29th Panzer Division, and others as well. It applied equally to quantities and to timetables set. The repeated outcome was that not only was urgently needed shipping space blocked, but crews and working parties were put to unnecessary strain.

The daily ferry performance increased considerably during June and July, on some days reaching more than 1000 tons. Not once, however, was the maximum ferry capacity achieved.

Considerable difficulties lay in the way of making a precise calculation of ferry performances. Although a count was made both on board the ferry craft and ashore, considerable variations in the totals given by different stations could not be avoided. These variations, which were due to different methods of estimating as well as to errors in the rapid loading and unloading, cannot have assumed any great importance in the final result. In any case, the figures given are definitely less than the actual ferry performance. Moreover, the figures for the first weeks refer to pure ferry traffic and do not include long range shipments.

The following are the figures for transport to Sicily, compiled from the data available:

	<u>Men</u> (no.)	<u>Vehicles</u> (no.)	<u>Supplies</u> (tons)
June	17,773	6,059	11,964
July	40,116	6,889	15,815
August	<u>1,687</u>	<u>741</u>	<u>1,840</u>
Total	<u>59,576</u>	<u>13,689</u>	<u>29,619</u>

And from Sicily to the mainland:

1 - 17 August	38,846	10,356	14,946
June - August	67,000	19,550	24,000

Also from 15 to 17 August, 13,500 wounded in landing craft.

With the beginning of fighting in Sicily, the movement of supplies across the water soon entered a new stage. For when it became obvious that at least a large part of the island would have to be given up, plans had to be made for the withdrawal of material stored there. The first places for consideration were the large depots at Palermo, containing about 15,000 tons of very valuable Armed Forces supplies of all kinds. In the prevailing situation, only ferry barges could be used. Ferry barges, which had been taking material to Palermo only a few days before, had now, where available, to be used for bringing material back. Unfortunately, although every effort was made, it did not prove possible to sail the few ferry barges engaged on this work more than twice. The last group of ferry barges lost three of their number through low-level air attack while outward bound and had to abandon the operation off Cape St. Stephano because of the sudden and unexpected surrender of Palermo. From this point onward, low-flying aircraft steadily intensified their attacks against our vessels and supply lines, at first in Sicily and then soon in Calabria as well. Our ferry barges came under intense low-level air attack and naval bombardment on the route to Catania, and once Catania harbour had been put out of action they could only discharge at Molini and Ionia during the night. That also put the ferry points at Occhio, Galati and Ponte Schiave out of action.

A.A. Defence

Once again, the A.A. defence ordered by the Air Force was completely inadequate. The problem of A.A. defence for ferry traffic had become increasingly important since the beginning of heavy enemy air activity and the almost complete absence of German fighters. At the outset the Air Force did not appreciate the need for strong A.A. protection for ferries to the extent that the Navy did, but subsequent events justified the Navy's demands. Right up to the end, however, with the exception of the Messina Strait, the Air Force was unable to provide adequate A.A. defence for the unloading stations. Naval A.A., from the ferry barges in particular, was by no means adequate defence against the many low-level attacks, although a fair number of aircraft was shot down. The enemy was unable to achieve any notable successes against ferry points where adequate light A.A. was in action, such as Catona, Gallico, Paradiso and Cannitello. If there had been sufficient supplies of ammunition, the A.A. defences in the Messina Strait would certainly have been able to achieve much greater success. The enemy's task was made enormously easier by the fact that the heavy A.A. Batterien had literally only a few rounds of ammunition available towards the end.

A most unfortunate feature in this connection was that incoming barges often did not know exactly what cargo they were carrying, or there was no means of finding out. One barge arriving with "88 mm A.A. ammunition" was sent first to Ionia and then to Messina, and finally had to be unloaded on the mainland because it was the C 41 type of 88 mm ammunition, which could only be used there. Similarly, a barge with "2 cm ammunition" was sent to Gallico: the cargo was 20 mm ammunition, but of type C 30, while the ferry barges for which the ammunition was intended could only use type C 38. These are only a few examples of the wastage that could have been avoided if accurate cargo lists had been made known at the proper time. Not only was material lost and vessels were exposed unnecessarily to danger but forces and ferry points were tied down often at the expense of more important transports.

Muddled demands concerning unloading points inadequate A.A. defences for ferry stations and preparations for the withdrawal made it imperative that there should be frequent and direct contact with the commander-in-chief in Sicily. This contact was put on a firm footing when General Hube took over command. Immediately, disciplined organisation and a sense of purpose were apparent in the direction of ferry traffic. Close cooperation sprang up between the N.O. i/c, Sea Transport and the Quartermaster Abteilung of XIV Panzerkorps, and in the end continual personal and telephone contact between the two established the mutual confidence necessary for the successful conclusion of the operation.

Organisation

Not only was recognition accorded to the position of N.O. i/c, Sea Transport by the Army authorities, but full use was made of the N.O. i/c by Army units within the framework of their own operations. The fact that N.O. i/c, Sea Transport came directly under XIV Panzerkorps acted as a counterbalance against other Army and Air Force units. It would therefore have been in the Navy's interest to maintain this position and strengthen it as much as possible. There was no change in this position when the appointment of Colonel Baade as Fortress Commandant, Messina Strait was made and all formations in the Messina Strait were brought under his command in matters of operational administration. Colonel Baade had no powers to intervene in ferry traffic. But then the Navy appointed a Senior Officer, Patrol Forces, Messina Strait and a Senior Coastal Artillery Commander, Messina Strait, with the result that in the end, counting the German Chief of Staff, Messina, there were four naval stations. As Senior Officer, Patrol Forces, Captain von Kamptz felt that these stations should be merged into one organisation and on his own suggestion was made the senior naval authority. Unfortunately, at the same time he was put under the Fortress Commandant, Messina Strait, which meant that the Navy was relegated from its position of parity with the Army divisions to a much lower status. The disadvantages of having such devious service channels (XIV Panzerkorps - 1st Paratroop Division - N.O. i/c, Sea Transport) soon became apparent in the form of contradictory orders, excessive delay, and so on. Things were aggravated by the frequent absence of Captain von Kamptz, who was unable to attend any of the vital Panzerkorps meetings and was therefore never properly informed about the situation. Matters were not put right until three days after LEHRGANG had begun, when direct telephone communication with the Operations Officer of XIV Panzerkorps succeeded in eliminating all the intermediate stations (the 1st Paratroop Division had been eliminated in the meantime). In my opinion, it is absolutely essential in combined operations of this nature that the senior naval station should come directly under the army H.Q.; and I feel it is my duty to point out the drawbacks that inevitably occur when a station which has gained experience in a special job is subordinated at the last minute to one not acquainted with the circumstances. In this respect, certain disadvantages were already evident in the seniority of S.O., Patrol Forces, Messina Strait,

but even worse was the appointment of Captain Diederich as the deputy of Captain Kamptz, for he arrived in the Messina Strait after LEHRGANG had begun and in the four or five days that he was there naturally could not make any impression, but could only play the role of an intermediary wholly dependent upon the N.O. i/c, Sea Transport. This intermediate office was bound to produce confusion in the Army as to the delineation of authority in the naval stations. Even in Sicily traffic, the Army - as was only natural - did not always show a complete understanding for the necessity of naval commands. It is true that misunderstandings and differences of opinion could always be put right by personal interview; but the new organisation provided an opportunity for playing off one naval station against another, which undoubtedly contributed to the prevailing lack of understanding, and only the successful outcome of ferrying convinced Army authorities of the rightness of naval orders.

If a senior naval authority was to be created, in the opinion of this command only the N.O. i/c., Sea Transport should have been considered, for it was he who had to work most closely with the army authorities and he who could never be by-passed. It must also be stated that the army authorities usually saw local breakdowns of a temporary nature and generalised on that. It is obvious that difficulties and breakdowns are permanently arising in such a large operation. The Navy cannot and must not be held responsible for every tiny wheel running smoothly. The army officer embarking on the spot is always able to ensure that loading and unloading proceed more quickly if he intervenes in the proper way. What should be taken into account is that things look different to someone who wants to be ferried over quickly himself than to those who are ferrying continuously day and night for days on end. For instance, sometimes it was objected that the ferries did not always shove off again immediately from the mainland, whereas in actual fact they were waiting until there was a berth free on the other side, where there were always one or two ferries hove to. The Navy's achievement was to have created with the smallest resources an organisation capable of fulfilling the most exacting demands, and fulfilling them on a scale previously not considered possible: so much so, in fact, that the Army never taxed it to the full.

The crucial moment came when it became necessary to evacuate all our troops from Sicily. N.O. i/c, Sea Transport guaranteed XIV Panzerkorps that 12,500 men would be ferried over per day, together with some of their material. Ferrying was to be carried out at night only. Probably both the Army and the Navy were going on the assumption that daylight ferrying would not be possible because of fighter-bomber attacks. If daylight ferrying did prove feasible it was to be used to bring over vehicles. The other vehicles were to be destroyed. The Panzerkorps drew up a plan of operations along these lines, allowing for five nights of ferrying. Sufficient time was available for the preparation of this operation, which had the code name "Lehrgang". The Army wanted ferry routes I - IV. Routes I and II were to be allocated to the 29th and 15th Panzerdivision, routes III and IV to the Herman Goering Division, the 1st Paratroop Division and Corps H.Q. of XIV Panzerkorps.

Those in charge of sea transport expressed certain objections, based on experience, to night ferrying. In the first place, darkness presented difficulties in the matter of in-shore movement and the loading and unloading of cargo. Then there was the inevitable strain on crews and engines, and the possibility of high-level air attacks had to be taken into account at night.

When it turned out that daylight ferrying was perfectly feasible, a request was made for night ferrying to stop. The Army, however, insisted that there should be night ferrying. Nevertheless, the experience of night ferrying during Operation "Lehrgang" fully justified the misgivings of the sea transport authorities. Although the ferry nights came during the period of full moon because "Lehrgang" started late, not enough Army units arrived during the night - except for the second night - and the overall night performance remained considerably less than that of the day. Moreover, the jetties at Faro and Ganzirri (routes I and II) were so badly damaged by high-level air attacks that lasted from 2100 to 0500 that ferry traffic at these points had to be suspended for the first three nights. The devotion to duty of all crews succeeded in mastering the difficulties arising from engine strain. The craft assigned for Operation "Lehrgang" were 14 ferry barges, 8 Siebel ferries, 10 landing craft, 3 Engineer Siebel ferries, 2 A.A. ferries, 1 naval gun barge, 6 I-boats and 30 Engineer assault craft. On 7 and 8 August, however, for urgent supply reasons, an order was given from Rome for 9 ferry barges to be sent to Naples. That meant that at the beginning of Operation "Lehrgang" only 5 ferry barges were available. On 13 August the number rose to 7. When "Lehrgang" commenced at 1800 on 11 August the following craft were available: 5 ferry barges, 7 Siebel ferries, 4 Engineer Siebel ferries, 10 landing craft. The A.A. ferries, naval gun barge, I-boats and assault craft were used as reserve. On 16 August the following were available: 7 ferry barges, 6 Siebel ferries, 6 landing craft, 3 Engineer Siebel ferries, the naval gun barge, 3 A.A. ferries, 6 I-boats and W-boats, 30 assault craft. On the last day one ferry barge and 2 Siebel ferries were destroyed by bombs. The withdrawal of troops was carried out so brilliantly that the enemy did not realise the real nature of the operation until the third day of ferrying and did not make an all-out attack until the fourth day. The operation ended at 0700 on 17 August. Ferrying was stolidly maintained in the face of increasing day and night attacks by the enemy air force. Two circumstances which told considerably in the final effort are worth mentioning:

1) The improvement introduced by German Director of Sea Transport, Italy in the armament of ferry barges, many of which were equipped with 37 mm and 20 mm C 38, partly from Naval Seagoing A.A. Command, South and the provision of shields for these guns. These afforded quiet and security to the gun crews and were an essential factor in the successes achieved. Both these measures should be implemented for all ferry barges and it is also considered essential that ferry barges should be equipped with a 20 mm quadruple A.A. mounting in the bows. In this context, attention is drawn to the fine successes which Siebel ferries achieved against enemy aircraft with their quadruple A.A.

2) The equipping of ferry craft with barrage balloons also proved very successful. These were filled and manipulated ashore and handed over complete to the ferries, or lowered again. Only in the case of landing craft did balloons prove impracticable, as these craft berthed so closely together that the balloon cables fouled those of neighbouring craft and the balloons broke adrift. Definite observations were made to the effect that balloons acted as a deterrent to the enemy and I consider that the ferries were more effectively protected by the balloons than the landing stages were by A.A., however strong the latter defences may have been.

Although considerable losses were sustained among ferry craft, the aim of the operation, that of withdrawing all men and vehicles to the mainland, was successfully accomplished. Tribute was paid to this achievement by the Officer Commanding, XIV Panzerkorps, General Hube, in the following signal:

"To: N.O. i/o, Sea Transport, Messina Strait,
Captain von Liebenstein.

Weeks of severe testing, culminating in the last few days in ceaseless operations in the face of unremitting air attacks, have distinguished the self-sacrifice and devotion to duty of the units under your command. To them today, on the occasion of the successful completion of the withdrawal from Sicily, I extend my special appreciation and gratitude. Their finest reward is the proud knowledge that through their sacrifice not a single German soldier, gun or vehicle has been surrendered to the enemy.

Signed: Hube
General der Panzertruppen."

(Signed) Freiherr von Liebenstein.

The Choice of Sites for Ferry Points in the
Messina Strait

The movement of Armed Forces supplies to Sicily devolved upon finding suitable points where ferry craft could load and unload. The ports at the narrows, San Giovanni and Reggio di Calabria on the mainland and Messina on the Sicilian side, were spacious and provided with up-to-date installations. But they were continually subjected to high-level bomber attacks, and very soon it became impossible to use them. The vessels used for ferrying, however, - naval ferry barges, Siebel ferries, naval gun barges, landing craft and I-boats - are not dependent upon properly constructed harbours. If the coastline allows, they can tie up anywhere there is a suitable ferry point. These ferry points had to be found in the Messina Strait. Choice of site depended upon the following factors:

- (a) the two points must lie approximately opposite each other.
- (b) Jetties to be linked by road to the main trunk roads running parallel to the Messina Strait. Both in Calabria and south of Messina the railway line runs mostly between the shore and the main road. There are only a few tunnels under it and it was near these that the ferry points had to be situated.
- (c) An essential factor in the choice of site was that some of the jetties should be to leeward in bad weather (either northerly or southerly winds).
- (d) Changeable and difficult currents had to be taken into account.
- (e) As a precaution against air attack, jetties had to be dispersed over a wide area and also situated apart at the actual ferry points, so as to avoid serious bomb damage.
- (f) In the case of Siebel ferries it was necessary to have loading jetties 1.4 metres deep (half-tide mark).

All this was taken into consideration when the project was started to set up 12 ferry points on each side of the Messina Strait. Of these, 2 on each side were meant for landing craft, 5 for ferry barges and naval gun barges and 5 for Siebel ferries.

There was no difficulty about berths for landing craft and ferry barges.

It was sufficient to have connecting roads wide enough at the point of loading for large vehicles to manoeuvre.

From the start, one of the most difficult problems seemed to be to keep the few narrow connecting roads clear. Right up to 17 August 1943, however, no connecting roads were so badly damaged that they could not be repaired within a few hours.

The provision made for bad weather proved justified. Even in a strong wind, either the southern or northern ferry points had enough shelter for traffic to be maintained.

At the outset Siebel ferries were loaded from "sea serpents", but there was only one on each side of the Strait, and so it was essential that jetties should be erected. Two different types of landing stage were considered.

Box-Girder Pier

In this type of construction, the piles driven into the bed were connected by planks and the resulting box form filled with stones and gravel. The advantage of this construction was that it required less wood and could be put up in a very short time. The drawback was, however, that with a strong current such as that at the northern end of the Messina Strait there was a danger of the pier being undermined or its efficiency impaired by silting.

Trestle Piers

The provision of standard piers with driven-in piles, balks and wooden decked top eliminated the problem of currents but required very much more wood and considerably longer to construct. As against four box-girder piers, therefore, only one trestle pier was erected. Both designs answered well.

According to the Pilot, the difference between high and low water in the Messina Strait is about 50 cm. But the tide gauges indicated the possibility of a difference of up to 150 cm. As, however, all reports were unanimous in stating that such a great difference only occurred on rare occasions in exceptional weather conditions, the pier was built for the normal difference, that is, upper edge of the pier 50 cm above water level. Both types of pier were only emergency solutions for such time as the tide level remained more or less stationary, and in the course of time would have had to be replaced by other piers more suitable to the changing level of water.

(Signed) Freiherr von Liebenstein.

GLOSSARY

B 4

F (with number)

Hohlstab

I (with number) {
I-boat

Naval Ferry Barge

Naval Gun Barge

Otto

Sea Serpent

SF (with number) {

W-boat

- Aviation spirit. Used in Siebel ferries.
- Ferry barges. Nos. 100 to 800, type A - C: length 47 metres, breadth 6.5 metres, freeboard 2.3 metres, armament 1 x 75 mm or 1 x 37 mm gun, 1 or 2 x 20 mm quadruple turret A.A. gun. 20 mm steel plating on steering house and machine room above deck. Displacement: 155 tons. Speed 10.5 knots.
- Type of towed minesweeping gear, used for sweeping acoustic mines.
- Small craft (20 tons) armed with one 20 mm A.A. gun. Used for ferrying, capable of carrying 40 soldiers equipped or 1 to 2 tons equipment. Speed 7 knots.
- see F
- Type employed in this operation was of 130 tons displacement. Armament: 1 x 37 mm and 2 x 20 mm (4 turret) A.A. and probably steel plating. Speed 8 knots.
- Normal M/T fuel
- Type of pontoon bridge
- Type employed in this operation had displacement of 130 tons. Armament: 2 or 4 x 37 guns, 2 x 20 mm twin turret A.A. guns, no steel plating. Speed 8 knots.
- Whaler

SECRET

1

APPENDIX 17

EXTRACTS FROM WAR DIARY
OF FORTRESS COMMANDANT, MESSINA STRAIT
(Colonel Baade)
14th July to 25th August, 1943

Original Document Reference:
AGO(CRS) Washington, No. 35746/1
and No. 35746/2

TRANSLATED BY:
AIR MINISTRY, A.H.B.6
December, 1956
TRANSLATION VII/161

EDITOR'S NOTE

1. The Allied landings in Sicily (Operation "Husky") took place on the 19th July, 1943, after nine days of devastating air attacks against Axis installations on the Island with particular emphasis on the airfields. For a month the German forces offered tenacious resistance, but were steadily pushed back into the north-east corner of the Island.
2. The vital importance of maintaining supplies across the Messina Strait was early realised by the German Commander-in-Chief South (Field Marshal Kesselring) and on the 14th July, he appointed Oberst (Colonel) Baade as Fortress Commandant, Messina Strait, to be responsible for the defence of the area. The actual traffic across the Strait was controlled by the Naval Officer in Charge, Sea Transport (Captain von Liebenstein).
3. With the Allied capture of Catania on the 5th August, and Adrano on the 7th, full-scale evacuation of the Axis forces became inevitable and on the 8th August, orders were issued to prepare for a planned withdrawal across the Strait. "Operation Lehrgang", as the German plan was called, started on the 11th August, and continued until the early hours of the 17th August. During this period ferries and landing craft, using four routes across the Strait, carried approximately 40,000 men, 10,000 vehicles and tanks and 15,000 tons of equipment to the Italian mainland. This remarkable achievement was due primarily to extremely careful planning and a highly efficient organisation; but the fighting qualities of the German ferry crews and Flak gunners were also an important factor. As Captain von Liebenstein said in his final Order of the Day "It required not only good organisation but endurance, hard work and fighting spirit to carry out this operation of historic importance.....Such co-operation made it possible to withdraw our comrades from Sicily almost to a man and to bring back far more material than was ever expected".
4. Captain von Liebenstein's War Diary covering the period of evacuation has already been issued as A.H.B. Translation No. VII/156 and this publication includes a map showing the German ferry routes; a post-war essay on the evacuation, written by General Fries, is contained in A.H.B. Translation VII/94. The War Diary of the Commandant, Messina Strait (Colonel Baade) has recently become available to us and provides valuable confirmatory and complementary evidence, especially on the measures taken to ensure the safe passage of the ferries. The implementation of these measures, in particular the powerful concentration of Flak batteries and the heavy armament of the ferries themselves, played a vital part in the success of the operation.
5. It remains to be said that the evacuation of Italian troops and equipment was carried out, also successfully, as a separate operation under Italian control.

ORDER

C. in C., South (Naval Operations Division)
No. 3892/43

14 July, 1943

1. The maintenance of supplies across the Messina Strait and the defence of the Strait itself are matters of vital importance in the battle for Sicily. I expect all H.Q. personnel and units engaged in operations to do their utmost and to impress upon all men that what they do is of importance to the successful outcome of the fighting.

2. (a) A unified and disciplined command is essential to the defence of the Strait. I appoint Oberst Baade German Commandant, Messina Strait, with the authority of a Fortress Commandant. He will be subordinated to the Commandant of the German Armed Forces in Sicily. His position in relation to the Italian military authorities is still being determined.

(b) Command limits:

On the west side: a line Divisto - Rometta - S. Teresa;
On the east side: Scilla - Calanna and continuing along the demarcation line between 6th and 7th Italian Army.

(c) The following are subordinated to the Commandant, Messina Strait:

The German task forces engaged in his command, naval units and Flak Batterien* within the command, Naval Gunnery Abteilung 616, which is being brought up; also, in the event of a direct attack on the Messina Strait, N.O. i/c Sea Transport, Messina Strait and all other troops and stations of the German Armed Forces.

(d) The duty of the Commandant, Messina Strait is to defend the area under his command. The movement of ferry traffic and supplies, and all matters connected therewith, will continue to be the responsibility of the authorities entrusted with these tasks. Except in the event of direct attack on the Messina Strait, no units engaged on these tasks may be withdrawn without the approval of these authorities.

(e) The staff of the Commandant, Messina Strait is to be set up through Headquarters channels. It is to be kept as small as possible.

(f) Oberst Baade will take up duties immediately. He will report to his H.Q. and will submit his communications requirements to the Officer-in-Command, Armed Forces Communications with C. in C., South.

3. German Naval Command, Italy will consider measures to protect the Messina Strait against enemy attack from the south. They will collaborate with Supermarina and will report decisions made.

4. Luftflottenkommando 2 will consider measures for reinforcing A.A. defences and will report its intentions without delay.

5. German General with H.Q. Italian Armed Forces is requested to inform the Commando Supremo of the appointment of a German Commandant, Messina Strait.

Kesselring

(signed) Neubauer
Kapt.z.See

* The German terms "Batterie" has no exact English equivalent, and has therefore been retained in the original throughout this translation. It corresponded roughly to a British A.A. troop.

Commandant, Messina Strait
(Oberst Baade)

Battle H.Q.
19 July, 1943

Orders for the Defence of the Messina Strait
(Mainland Zone)

In my capacity as Commandant, Messina Strait, I am in command of the German combat troops, the emergency units and the German Flak Batterien stationed in this area and, in the event of a direct attack on the Messina Strait, the Naval Officer i/c sea transport and all other troops and installations of the German armed forces would come under my command.

At present, the following units are available on the mainland:-

- (a) Fortress Battalion 926 (comprising 4 companies),
- (b) 3 Flak Abteilungen,
- (c) Emergency units.

A line linking Scilla, Calanna and Cape dell'Armi marks the limit of the 29th Infantry Division's sector. The mainland zone is subdivided into 3 defence sectors, as follows:-

Northern defence sector

C.O.: Major Roeske

The sector extends from Scilla up to (but not including) Reggio.

(a) Flak

- 3 10.5 cm. Batterien.
- 3 8.8 cm. Batterien 41
- 1 8.8 cm. Batterie (half Italian)
- 1 four-barrelled gun section (at Cannitello)
- 1 four-barrelled gun section (at Gallico)

(b) Emergency units

Officer i/c the Scilla -
Villa San Giovanni area : Oberleutnant Fröhlich (Engineers)

Officer i/c the Catona area: Leutnant Rössler (Army Supply Staff)

Officer i/c the Archi area : an Army Supply Staff officer.

Central defence sector

C.O.: Major Muckenberger

The sector extends from Reggio up to (but not including) Occhio.

(a) Flak

- 1 8.8 cm. Batterie 41
- 1 8.8 cm. Batterie (half Italian)
- 1 2 cm. Batterie (12 guns, half Italian)

(b) Emergency units

Officer i/c all emergency units in the central sector:
Hauptmann Rupp

Southern defence sector

C.O.: Hauptmann Schweiger

The sector extends from Occhio to Cape dell'Armi and includes the strong points of Melito and Cape Spartivento.

(a) Flak

- 1 10.5 cm. Batterie
- 2 8.8 cm. Batterien (half Italian)
- 1 8.8 cm. Batterie (unmanned)
- 1 four-barrelled gun section (6 guns: unmanned)
- 1 four-barrelled gun section (at Melito)
- 1 four-barrelled gun section (at Cape Spartivento).
- 1 8.8 cm. Batterie

One company from Fortress Battalion 926 is being transferred to the southern defence sector and will come under the command of Hauptmann Schweiger. The rest of this battalion will remain at my disposal in the central sector. It will be responsible for the reconnaissance of the whole sector from the point of view of potential enemy operations and approach routes. It will also block the streams which flow out near Reggio and will barricade the roads which lead from this town into the countryside.

The Flak guns are to be set up in such a way that it will be possible to fire either out to sea or on to the coastline from each gun position. They must be readily adaptable to ground fighting if air fighting ceases. It is essential that not one Englishman be allowed to land in my coastal sector.

These orders do not entail any changes as regards the duties of Flak in air defence.

Flak Untergruppe 3, under the command of Major Roeske, will continue to control the Flak in the whole area.

Sector C.O.s are responsible for defences in their individual sectors and the emergency units are at their disposal for this purpose. Arrangements for the bringing up and utilisation of these units are to be made with Major Senn, the German Garrison Officer, in accordance with the time schedule already fixed. In the event of an emergency, sector C.O.s will immediately instruct officers i/c emergency units to appoint two representatives for the purpose of receiving orders.

Orders will follow concerning the bringing up of transport in the event of an emergency. The basic conditions for this are laid down in the original orders issued by the German General in Rome.

Sector C.O.s will report positions of their battle H.Q.s and what means of signals communication they have.

After air raids, sector C.O.s will be responsible for seeing that the roads in their sectors are cleared of debris.

All ranks have permission to stop vehicles in order to obtain lifts.

Fortress Battalion 926 and the sector C.O.s will each send a representative to my battle H.Q. daily at 18.00 hours for the purpose of receiving orders.

My battle H.Q. is in Campo Piale (near Major Roeske's H.Q.).

These orders are not to be passed on, either wholly or in extract form. Where no facilities exist for the safe keeping of top secret documents, this communication is to be destroyed after its contents have been noted.

Signed: BAADE

Distribution:-

Northern sector
Central sector
Southern sector
German Garrison Officer, Reggio
Fortress Battalion 926
Commandant, Messina Strait

Commandant, Messina Strait
- Oberst Baade -

Battle H.Q.
23 July, 1943

Orders for the Defence of the Messina Strait
(Island Zone)

1. In my capacity as Commandant, Messina Strait, I am in command of the German combatant troops, the emergency units and the German Flak Batterien stationed in this area and, in the event of a direct attack on the Messina Strait, the officer i/c sea transport and all other troops and units of the German armed forces would come under my command.

The following units are available for duty on the island:-

- (a) 2 Flak Untergruppen, with a total of 12 heavy and 5 light Batterien. (Further Batterien are being brought up from Palermo).
- (b) Emergency units. (Arrangements for the utilisation of these units are to be made with Major Geusgen, the German Garrison Officer).

A line linking Divieto, Rometta and Santa Teresa marks the limit of the XIV Panzer Korps sector. A Flak Untergruppe, comprising four heavy Batterien and one light Batterie, is stationed north-west of the sector for purposes of coastal defence.

2. Oberstleutnant Fischer is in charge of all defences on the island.

His zone is subdivided into two defence sectors, as follows:-

Northern defence sector

C.O.: Hauptmann Menner (O.C. Heavy Flak Abteilung 281)

The boundary of the sector is marked by a line between Divieto, Rometta and Messina harbour (the lighthouse).

Strength:-

(a) Flak artillery

1st Special Batterie 41, Messina	8.8 cm.
1st Batterie, Abteilung 281	8.8 cm.
2nd Batterie, Abteilung 281	8.8 cm.
1st Batterie, Abteilung 334	8.8 cm.
2nd Batterie, Abteilung 334	8.8 cm.
2nd Batterie, Abteilung 334 A	8.8 cm.
2nd Batterie, Abteilung 304	8.8 cm.
Special Heavy Batterie 1571(S)	8.8 cm.
Special Light Batterie 2022	3.7 cm.
2nd Batterie, Abteilung 507	2 cm.
Special Light Batterie Merkelbach	2 cm.

(b) Emergency units

Arrangements for the utilisation of these units in the northern defence sector are to be made with Major Geusgen.

Southern defence sector

C.O.: Major Uhseman (O.C. Heavy Flak Abteilung 304)

The boundary of the sector is marked by a line between Messina harbour (the lighthouse), Rometta and Santa Teresa.

Strength:-

(a) Flak artillery

1st Batterie, Abteilung 523	10.5 cm.
2nd Special Batterie 41, Messina	8.8 cm.
2nd Batterie, Abteilung 281 A	8.8 cm.
3rd Batterie, Abteilung 237 A	8.8 cm.
4th Batterie, Abteilung 354	3.7 cm.
Special Light Batterie 2023	2 cm.

(b) Emergency units

Arrangements for the utilisation of these units in the southern defence sector are to be made with Major Geusgen.

3. The Flak guns are to be set up in such a way that it will be possible to fire either out to sea or on to the coastline from each gun position. They must be readily adaptable to ground fighting if air fighting ceases. It is essential that not one Englishman is allowed to land in my coastal sector.

These orders do not entail any changes as regards the duties of Flak in air defence.

The Flak artillery on both sides of the Messina Strait will continue to come under the command of the regimental commander, Oberstleutnant Fischer.

4. Sector C.O.s are responsible for defences in their individual sectors and the emergency units are at their disposal for this purpose. Arrangements for the bringing up and utilisation of these units are to be made with Major Geusgen, the German Garrison Officer, in accordance with the time schedule already fixed. Major Geusgen is subordinate to Oberstleutnant Fischer. In the event of an emergency, sector C.O.s will immediately instruct officers i/c emergency units to appoint two representatives for the purpose of receiving orders.

Orders will follow concerning the bringing up of transport in the event of an emergency. The basic conditions for this are laid down in the organisational order issued by the German General in Rome.

5. At night, a zone of the Strait, about 3 km. broad - the exact limits of which will be notified - will be immune from gunfire. The southern boundary of this zone will be lit by searchlights during the hours of darkness.

6. After air raids, sector C.O.s are responsible for seeing that the through-roads in their sectors are cleared of debris. The release of men to do this work is to be arranged through the German Garrison Officer.

7. All ranks have permission to stop vehicles in order to obtain lifts.

8. Sector C.O.s will send a representative at 17.00 hours daily to Regimental Battle H.Q. at Santa Agata, Villa Giuseppina (Flak Regiment 135 H.Q.), for the purpose of receiving orders.

9. My Battle H.Q. on the mainland is in Campo Piale (near Major Roeske's H.Q.) and my Battle H.Q. on the island is at Flak Regiment 135 H.Q.

10. These orders are not to be passed on, either wholly or in extract form. Where no facilities exist for the safe keeping of top secret documents, this communication is to be destroyed after its contents have been noted.

Distribution:-

Flak Regiment 135
Heavy Flak Abteilung 281
Heavy Flak Abteilung 304
Heavy Flak Abteilung 212
German Garrison Officer
File copy

S.O. Patrol Forces, Messina Strait

Op.H.Q. 1 August, 1943

Order for Patrol Forces for Messina Strait
Ferry Traffic

A. Command Organisation for Messina Strait patrol forces:

1. Patrol organisation on land, at sea and in the air is the main responsibility of both German and Italian Army, Air Force and Navy units engaged in the Messina Strait.
2. Orders for German-Italian naval units will be given by Commando Marina; Messina.
3. S.O. Patrol Forces, Messina Strait will be responsible for the protection of German shipping against naval attack. All German naval units in the Messina Strait will be subordinated to this command.
4. S.O. Patrol Forces, Messina Strait is, in turn, subordinated to the Fortress Commandant, Messina Strait.

B. Ferry Protection by Day:

1. Ferrying will be carried out on set routes between prepared jetties.
2. The protection of ferry traffic against naval attack is the responsibility of coastal artillery and the Air Force.
3. Where possible, preparations will be made for torpedo and mining operations.
4. Air attacks will be opposed by Flak ashore and afloat.
5. In the event of land attacks the ferry area will be defended to the very last.

C. Ferry Protection by Night:

1. If the enemy situation demands it, ferrying will also be carried out by night.
2. The protection of ferry traffic against attack by land and air is the responsibility of Army and Flak.
3. Three warning signals for defending ferry traffic against naval attack.
 - (a) On the approach of enemy naval forces, the coast will fire three white (small enemy units) or three yellow (heavy enemy units) single flares, one after the other. Coastal artillery will then open fire against the sea targets. There must be no firing into or illuminating of the ferry area. Ferry traffic will continue, but ferry vessels will carry position lights.
 - (b) If there is a danger of enemy vessels penetrating the ferry area, guard ships or the coastal defences in the vicinity will fire four green single flares. Thereupon all ferry craft and guard ships will set course immediately for the coast so as to leave a free field of fire. Coastal artillery may then open fire on the enemy, even in the ferry area. Ferry vessels will use their armament if necessary.
 - (c) The all-clear will be signalled by three red single flares. Ferry traffic will then be resumed.

4. These warning signals will not affect Army and Flak operations against attacks on land or from the air.

(signed) von Kampts
Kapt.z.See

2 August, 1943

08.00 hours: Commanding Officers' conference

General Heidrich asks what steps have been taken to accommodate troops on the mainland in the event of the island being evacuated.

Oberst Baade gives a detailed account of his duties as Fortress Commandant, Messina Strait. The demarcation lines of the sector are defined. The main resistance will be provided by the Flak. Sixty five heavy Flak Batterien have been assigned the task of concentrating on air and sea targets, whilst some Batterien are to be used exclusively for ground fighting. In addition to these, the following auxiliary units are stationed in the sector:

- 1 well-armed Fortress Construction Battalion (Army) with 40 light machine guns, 10 heavy machine guns and sixteen 8 cm. mortars;
- 1 poorly armed Construction Battalion and 1 company of a Luftwaffe Construction Battalion.

The Flak units on the mainland are subdivided into task forces and the C.O. of each task force is responsible for the defence of his sector. One 8.8 cm. and three 2 cm. Flak units are stationed near Melito for defence purposes further to the south. Outside the sector, defences are concentrated on Cape Spartivento. A Flak task force and an armoured reconnaissance patrol belonging to the LXXVI Panzer Korps are stationed near Locri.

Our main strength on the island is concentrated in the Flak, which is also being used for ground fighting. We depend upon the Flak for communications and for our link with the XIV Panzer Korps and the 26th Panzer Division.

We are co-operating with the Italian General Carbona and with Admiral Baroni (Messina).

Auxiliary units in the fortification area are no longer controlled from the Wehrmacht garrison at Gioia Tauro, but come under the command of Oberst Vullers. Kapitän von Kampts and Freg. Kapitän Jasper report on the defence measures taken by the German Navy. The projected setting up of naval artillery positions is being delayed because of interference with railway transport. The plan is to provide the sector with 10 coastal Batterien (with calibres ranging from 10.5 cm. to 24 cm.) and one railway Batterie. Eight 10.5 cm. and three 21 cm. guns are already in Italy, but their whereabouts are not known as a result of the railway disaster. Transport north of the Brenner Pass has been stopped and there is no knowing when it will get through. There are good Italian batteries in Caperina, Belaro* and Ali. The first two have infantry support, but in the case of the Ali battery there is a shortage of gun-crews. The railway artillery section which was to have been installed near Catanzaro is held up in the Naples area.

* This should probably read Pellaro (translator).

In the sector there is a 900 ton Aviso equipped with radar to guard against sudden attacks. 6 minesweepers are protecting the ferrying from surprise attack. It is suggested that torpedo batteries be set up in the Messina area to strengthen the defences. It is not expected that the Italian Navy will participate.

Freg. Kptn. von Liebenstein reports on the organisation of the ferry service. The following vessels are available for the evacuation:

- 9 Siebel ferries
- 12 landing craft
- 14 naval ferry barges
- and one floating crane.

In reserve there are 41 assault craft, 40 rubber landing dinghies and 10 rubber dinghies. Crews must be provided by the divisions on the island. It will not be possible to allocate one ferrying point per division, as large vehicles with trailers can only be transported on a certain type of ferry.

Oberst Baade reports on the following:

- (a) the steps that have been taken on the mainland for the reception and further transit of evacuated troops and vehicles,
- (b) the organisation of road traffic,
- (c) the unloading stations for heavy cargoes,
- (d) the distribution of divisions on the road network,
- (e) the employment of military police,
- (f) the steps taken to avoid road congestion etc. Organisation on the island is the responsibility of the individual divisions.

General Heidrich says that the most rigid organisation is necessary on the island. The evacuation plan must be drawn up and practised, since, if it had to be put into operation, many complications would arise which cannot be foreseen at the moment. He will take steps at Corps H.Q. to ensure that reliable officers are entrusted with the task of organisation on the island at once. Staff officers will have to be installed on the mainland for the reconnaissance of reception areas, the control of water supplies etc. Links must be established with the General's H.Q.

Divisions must report daily the arrival of officers and men, cars, lorries, tanks, assault guns and anti-tank guns. Reports will be sent by radio. This will also apply to those sections of the 29th Division which are under the command of LXXVI Korps. A reporting centre will be set up in the Villa San Giovanni area to co-ordinate signals traffic. It is everybody's duty to resist the enemy paratroop units and landing troops with all available means.

Orders issued by Oberst Baade on 6 August, 1943,
for the Defence of the Messina Strait,
10.30 hours, Battle H.Q. (Hauptmann Paul)

The Flak commandant will continue to be the officer responsible for defences. An infantry officer will co-operate with him in matters concerning the infantry and its duties.

	<u>Officer i/c Defence</u>	<u>Infantry Officer</u>
Northern sector:	Major Roesky	Oberleutnant Fröhlich
Central sector:	Hauptmann Zimmermann	Hauptmann Rupp
Southern sector:	Hauptmann Schweiger	The officer i/c the recently attached Paratroop Company.

Oberst Vüllers will make the necessary decisions in the matter of general defence measures. He will assist and advise the Flak commandant.

Signals: Everyone will be sent a copy of a plan showing radio communications, of which each responsible officer is to make use in the course of his individual duties. The Flak have 3 W/T stations at their disposal. Direct communication exists between sectors. All sectors are linked with the Flak Regiment. The W/T stations are only to be used for sending reports on the enemy. Officers i/c sectors are asked to instruct radio personnel in the use of code tables etc.

We are setting up our own intercept stations so that reliable reports may be disseminated.

By order of the general, demolition points and mines are to be guarded.

Ferry Traffic: The Korps (i.e. XIV Panzer Korps - translator) intends to evacuate the troops by night. Experience has shown that the enemy has a healthy respect for our heavy concentrations of Flak in the Messina Strait. Oberst Baade's suggestion:- Evacuate by day and move up by night.

Oberstleutnant Fischer: asks whether the Flak will be evacuated from the island before or after the infantry guard units.

Oberst Baade: replies that the decision will be taken jointly by the local Flak and Infantry commanders. Details concerning battle headquarters are under consideration. The Panzer Korps must send liaison officers.

14 August, 1943.

07.00 hours Morning report: Three enemy destroyers shelled the Pellaro area from off Saline. Italian coastal batteries returned the fire. The destroyers made off. No other incidents.

Baade.

16 August, 194314.00 hours Battle Report, 5th Panzer Artillery Regt. 33

On 16 August, between 07.05 and 07.35 hours the Batterie fired 14 rounds at enemy destroyers, a medium-sized ship (presumably a cruiser), and at several boats which were trying to enter the Messina Strait. As a result of accurate fire, the vessels spread a smoke screen and were forced to withdraw.

At 09.20 hours Oberst Baade reported by telephone that the enemy had reached Scaletta, about 22 km. S.W. of the 5th Batterie's observation post. The Batterie received orders to fire and from 09.35 to 10.05 hours heavy concentrations of enemy vehicles on the road near Scaletta were attacked, 11 rounds being fired. The firing was accurate and this detachment continued to be our main target.

Details of Ferrying Duties performed by Engineer Landing Battalion 771
(Hauptmann Paul) from August 1 to 15, 1943

The following were ferried from Sicily to the mainland:-

3,305 lorries	(Landing craft
1,255 cars	and ferry barges
483 motor-cycles	were used.
37 tractors	Average:
6 tanks, Mark 4	10 landing craft,
35 guns	3 ferry barges).
27,814 men*	
9,936 tons	

*Including 13,532 wounded evacuated to Scilla.

During the last night the following were evacuated on 4 ferry barges:-

413 men	} Totalling
35 lorries	
34 8.8 cm. guns	
8 tractors	
1 trailer	
1 tank, Mark 4	626.3 tons

Out of a total of 18 landing craft, 11 were lost, 4 of which were hospital boats.

Disposition of Units belonging to the Messina Strait Defence Sector

Unit	Off'rs	Off'cls	NCO's	Men	Carbine 98	Sub Machine Guns	Machine Guns	2 cm. AA	Trucks	Landing Craft	Ferries	Large Assault Weapons	Small Assault Weapons
Engineer Landing Battalion 771	12	2	82	510			37	8	14 (55½ tons)	17	4	4	41
Engineer Construction Battalion Italy	2	-	15	140	144	3	2	-	1 (3 tons)	-	-	-	-
Auxiliary Units N.O. i/c Sea Transport	2	-	6	30	31	-	3	-	2 (6 tons)	-	-	-	-
Construction Battalion 432	22	-	6	48	212	-	-	-	-	-	-	-	-
Supply Kompanie (Air Force) 5/VII	1	-	32	120	130	3	2	-	3 (9 tons)	-	-	-	-
Supply Control Staff (Air Force) 4/VII	2	-	20	30	45	2	2	-	1 (3 tons)	-	-	-	-
II Paratroop Regt. 7 Kompanie	1	-	30	59	27	21	10	-	Anti-tank rifle 41 1	Light Mortar 2	Verrey pistol cart- ridge 6	Dis- charger oup 4	-

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APPENDIX 17

Vessels engaged	Ferry Barges	Siebel Ferries	Assault Siebel Ferries	Naval Gun Barges	I-Boats	Whalers	Losses	Trucks	Heavy Lorries	Trailers
2nd Landing Craft Flotilla	12	-	-	2	-	-	5 ferry barges	5	1	2
4th Landing Craft Flotilla	24	-	-	-	-	-	2 ferry barges	-	-	-
10th Landing Craft Flotilla	-	7	3	-	7	4	5 Siebel ferries 2 I-Boats	3	-	-

Armament of Vessels

	8.8 cm. A.A.	7.5 cm. A.A.	3.7 cm. A.A.	Four - barrelled A.A.	2 cm. A.A.	DSR Equipment (Radar)	Machine Guns	Sub- Machine Guns	Pistols
2nd Landing Craft Flotilla	4	12	2	-	28	8	5	2	17
4th Landing Craft Flotilla	-	24	-	-	48	-	-	-	-
10th Landing Craft Flotilla	5	-	3	11	6	-	4	-	2

Each man is also equipped with rifle and hand grenades.

Strength of Flak in the Messina Strait area on 25 July, 1943,
(based on map supplements to Oberst Baade's
War Diary and entries in the Diary itself)

1. Mainland Zone

Untergrupped San Giovanni
(Res. 167)

(Northern Sector)

Unit	Calibre	No. of Guns
2./167	8.8	4
2./167A	8.8	4
1./287	10.5	4
2./287	10.5	4
4./287	10.5	4
3./523	10.5	4
1545 z.b.V. (Special Batt.)	8.8/41	6
1554 z.b.V. (Special Batt.)	8.8/41	6
1599 (Italian)	8.8	4
1600 (Italian)	8.8	4
2029 z.b.V. (Special Batt.)	2 cm.	6

Untergruppe Reggio (heavy 8.841,
four-barrelled, Messina)

(Central Sector)

Unit	Calibre	No. of Guns
3./281A	8.8/41	4
1./507 (4-barrelled)	2 cm.	12
1601 (Italian)	8.8	(4-6)
Italian	8.8/41	(4-6)
1546 z.b.V. (Special Batt.)	8.8/41	6
1555 z.b.V. (Special Batt.)	8.8/41	5

Untergruppe Bocale (363, heavy)

(Southern Sector)

<u>'Bittihn' emplacement:-</u>		
1577 z.b.V. (Special Batt.)	8.8	5
<u>'Bencard' emplacement:-</u>		
1./167A	8.8	5
"	2 cm.	2
<u>'Meller' emplacement:-</u>		
4./452	8.8	5
"	2 cm.	2
<u>'Vetter' emplacement:-</u>		
363	8.8	3
"	2 cm.	2
<u>'Beel' emplacement (Melito):</u>		
2029 z.b.V. (Special 4-barrelled Batt.)	2 cm.	3
3./264	8.8	6
"	2 cm.	2
<u>Cape Spartivento:-</u>		
V./5237 (4-barrelled)	2 cm.	3

Strength of Flak in the Messina Strait area on 25 July, 19432. Island ZoneUntergruppe Messina-Nord (281)(Northern Sector)

Unit	Calibre	No. of Guns
1./281	8.8	4
2./281	8.8	3
Four-barrelled M. (Naval)	2 cm.	2
II/M. (Naval)	2 cm.	2
III/M. (Naval)	2 cm.	2
IV/M. (Naval)	2 cm.	3
2./304	8.8	4
1./334	8.8	4
2./334	8.8	4
2./334A	8.8	2
2./507	2 cm.	5
I.2./507	2 cm.	2
II.2./507	2 cm.	3
III.2./507	2 cm.	3
IV.2./507	2 cm.	4
I./2022	3.7	3
III./2022	3.7	3
IV./2022	3.7	3
I.z.b.V.41 (Special Batt.)	8.8/41	4

Untergruppe Messina-Süd (304)(Southern Sector)

Unit	Calibre	No. of Guns
3/.237A	8.8	4
2./281A	8.8	3
1.4./354	3.7	3
1/523	10.5	4
2023 (4-barrelled)	2 cm.	3
II./2023	2 cm.	2
IV./2023	2 cm.	3
2.z.b.V.41 (Special Batt.)	8.8/41	4

Untergruppe Milazzo (212)(Northern coast of Sicily to the
rear of Untergruppe Messina-Nord)

1./212	8.8	2
3./212	8.8	4
1573	8.8	4
II./2022	3.7	3
2024 (4-barrelled)	2 cm.	3
I./2024	2 cm.	3
II./2024	2 cm.	3
III./2024	2 cm.	3
IV./2024	2 cm.	3

State of Flak and Ammunition on 14 August, 1943

	<u>No. of Guns</u>	<u>Proportion of Ammo. Issue held*</u>
<u>Messina</u>	47 2 cm. }	
	5 four-barrelled guns }	1.5
	10 3.7 cm.	1.7
	31 8.8 cm.	3
<u>Mainland</u>		
<u>2 Untergruppen</u>	35 2 cm. }	
	25 four-barrelled guns }	0.8
	46 8.8 cm.	3.4
	20 8.8 cm. 41	2
	16 10.5 cm.	1.8
<u>Army Flak 302</u>	29 2 cm.	0.5
	24 four-barrelled guns	0.5
	6 3.7 cm.	0.1
	2,700 rounds are held in addition to this	
<u>Navy</u>	28 2 cm. }	
	11 four-barrelled guns }	1.1

10.35 hours Report from Wachtmeister Bamberger, received by Hanstein.

* Note: The back issue of ammunition (Munitionsausstattung) was as follows:-

2 cm.	1200 rounds per gun
3.7	800 rounds per gun
8.8 cm.	240 rounds per gun
10.5 cm.	175 rounds per gun

FIGHTER PROTECTION OF SALERNO CONVOYS ON8 SEPTEMBER, 1943BY THE AUGMENTED PALERMO SECTOR

Convoy	Code Name	Type of Aircraft	Sortie Strength	Times	
				On	Off
NSF.1	Gladstone	Beaufighter	16	0600	1400
		Spitfire	12	1400	1600
		Lightning	4	1600	1800
			4	1700	1900
			4	1800	2000
TSF.1	Ferguson		2	1900	2000
		Spitfire	32	0600	1400
		Lightning	4	1400	1600
			4	1500	1700
			4	1600	1800
			4	1700	1900
			4	1800	2000
			4	1900	2000
			4	1900	2000
			4	1900	2000
FSM.1	Kraal I	Spitfire	10	0600	1100
FSS.2	Rockfield	Spitfire	10	0600	1100
F.S.M.1 & FSS.2	-	Spitfire	8	1100	1300
		Lightning	4	1300	1500
		Lightning	4	1400	1600
		Lightning	4	1500	1700
		Lightning	4	1600	1800
		Lightning	4	1700	1900
		Lightning	4	1800	2000
		Lightning	4	1900	2000
		Spitfire	12	0600	1200
		Spitfire	12	0600	1200
T.S.M.1 TSS.2 TSM.1 & TSS.2	-	Spitfire	20	1200	1700
		Lightning	4	1700	1900
		Lightning	4	1800	2000
		Spitfire	6	0600	0900
		Spitfire	6	0600	0900
FSS.1 TSS.1 FSS.1 & TSS.1	-	Lightning	4	0900	1100
			4	1000	1200
			4	1100	1300
			4	1200	1400
			4	1300	1500
			4	1400	1600
			4	1500	1700
			4	1600	1800
			4	1700	1900
			4	1800	2000
FSS.3	Rockfield III	Spitfire	4	1900	2000
			28	0600	2000

Notes: Spitfire patrols were of 2 hour's duration.
 Beaufighters' and Lightnings' were of 2 hours' duration.
 Sections of 4 Lightnings were dispatched every hour, so that after the first hour of patrol there were 8 aircraft on each convoy or pair of convoys.

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APPENDIX 19

OPERATIONAL ITALIAN WARSHIPS AND SUBMARINES SURRENDERED TO THE ALLIESSEPTEMBER, 1943

Type	Name	Tonnage (Standard Displacement)
<u>Battleships</u>	Italia (ex Littoria)	41,356
	Vittoria Veneto	42,100
	Andrea Doria	23,622
	Caio Duilio	23,622
	Giulio Cesare	23,622
<u>Aircraft - tender/transport</u>	Miraglia (ex Citta di Messina)	4,880
<u>Cruisers (heavy)</u>	Duca degli Abruzzi	7,874
	Garibaldi	7,874
	Montecucoli	6,841
	Savoia	7,283
	Duca D'Aosta	7,283
	Cadorna	5,008
<u>Cruisers (light)</u>	Pompeo Magno	3,362
	Scipione Africano	3,362
<u>Destroyers</u>	Legionario	1,675
	Velite	1,675
	Granatiere	1,620
	Oriai	1,568
	Grecale	1,449
	Riboty	1,383
	Monzambano	967
<u>Torpedo Boats</u>	Orione	855
	Ariete	o 850
	Aliseo	o 850
	Animoso	o 850
	Ardimentoso	o 850
	Fortunale	o 850
	Indomito	860
	Clio	679
	Calliope	679
	Libra	679
	Aretusa	679
	Cassiopea	652
	Sagittario	642
	Sirio	642
	Nicola Fabrizi	635
	Giacinto Carini	635
	Antonio Mosto	616
	Giuseppe C Abba	616

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APPENDIX 19

Types	Name	Tonnage (Standard Displacement)
<u>Corvettes (escort vessels)</u>	Ape Chimera Cormorano Danaide Driade Fenice Flora Folaga Gabbiano Gru Ibis Minerva Baionetta (ex Partigiana) Pellicano Pomcna Regina Elena Scimitarra Sfinge Sibilla Urania	565 565 565 565 565 565 565 565 565 565 565 565 565 565 565 565 565 565 565
<u>E-Boats (Mas.)</u>	11, 33, 54, 55, 56, 61, 64, 74, 433, 516, 540, 548. 12 at 20 tons	240
<u>Gunboat</u>	Ernesto Giovannini	182
<u>Minelayers</u>	Azio Barletta	615 1,975 gross
<u>Survey vessel</u>	Cherso (ex Amalfi)(Austrian)	3,988
<u>Tankers (fuel)</u>	Tarvisio Urano Nettuno	10,910 10,555 9,555
<u>Tanker (water)</u>	Po	3,336
<u>Training Ships</u>	Vespucci Colombo	3,545 2,790
<u>Hospital ships</u>	Principessa Giovanna Toscana	8,955 9,442
<u>Submarines</u>	Ammiraglio Cagni Atropo Zoea Dandolo Marea Vortice Benedetto Brin Otaria Menotti Fratelli Bandiera Manara Squalo Bragadino Corridoni	1,461 1,190 1,121 941 900 900 896 863 815 815 815 810 803 803

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APPENDIX 19

Type	Name	Tonnage (Standard Displacement)
<u>Submarines (contd.)</u>	Ruggero Settimo	797
	Vettor Pisani	791
	Mameli (ex Masaniello)	770
	Speri	770
	Platino	714
	Nichelio	714
	Alagi	620
	Giada	620
	Onice	620
	Turchese	620
	Diaspro	620
	Jalea	599
	Galatea	591
	Settembrini	797
	Da Procida	770
	Axum	615
	H.1	336
	H.2	336
	H.4	336
	Notes:-	
	(1) The submarine Bronzo was captured by the Allies on 12/7/43.	
	(2) The Toti was disarmed and became non-operational 1 May 43. (Navi Perdute)	
<u>Submarines (midget)</u>	C.B.8	36
	C.B.9	36
	C.B.10	36
	C.B.11	36
	C.B.12	36

Source for the above details:- C.B.1815 (Apl.44) Admiralty.

THE CORSICAN EVACUATION AIR LIFTSUMMARY OF TRANSPORT WORK UNDERTAKEN BY TRANSPORTFLIEGERGESCHWADER 5DURING SEPTEMBER, 1943

GRUPPE	<u>II./T.G.5</u>	<u>II./T.G.2</u>	<u>III./T.G.2</u>	<u>III./T.G.4</u>	<u>Combined Total</u>
No. of sorties	47	482	1,528	156	2,213
No. of km. flown	47,490	266,750	518,600	193,700	1,026,540
Material moved:- Ammunition (tons)	30.00	-	32.50	103.83	166.33
Fuel (cubic metres)	195.50	13.60	56.60	-	265.70
Flying equipment (tons)	21.00	54.20	289.90	4.00	369.10
Other equipment (tons)	144.20	122.50	219.60	42.76	529.10
Total weight of materials moved (tons)	390.70	190.30	598.60	150.59	1,329.23
No. of men flown out	274	628	849	100	1,851
No. of unwounded men flown back	35	4,098	12,243	2,820	19,196
No. of wounded men flown back	22	290	699	34	1,045
Amount of material flown back (tons)	39.00	171.80	45.70	-	256.50
Amount of fuel used (cu. m.)	294.940	585.800	1,233.169	439.110	2,553.019

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APPENDIX 20

THE CORSICAN EVACUATION AIR LIFTSUMMARY OF TRANSPORT WORK UNDERTAKEN BY TRANSPORTFLIEGERGESCHWADER 5DURING OCTOBER, 1943

GRUPPE	<u>I./T.G.5</u>	<u>II./T.G.5</u>	<u>III./T.G.4</u>	<u>Combined Total</u>
No. of sorties	27	6	23	56
No. of km. flown	38,135	3,800	9,200	51,135
<u>Material moved:-</u> Ammunition (tons)	20.50	-	-	20.50
Fuel (cubic metres)	66.20	-	-	66.20
Flying equipment (tons)	39.95	6.00	-	45.95
Other equipment (tons)	27.835	29.10	1.00	57.835
Army equipment (tons)	10.14	-	9.00	19.14
Total weight of material moved (tons)	164.625	35.100	10.000	209.725
No. of men flown out	173	13	-	186
No. of men flown back	421	-	341	762
No. of wounded men flown back	104	-	-	104
Amount of material flown back (tons)	89,575	-	-	89,575
Amount of fuel used (cubic metres)	279.10	23.28	20.70	323.08

CORSICAN EVACUATION AIR LIFT TOTALS

	September	October	Total
<u>Men unwounded</u>	19,196	762	19,958
<u>Men wounded</u>	1,045	104	1,149
<u>Material (in tons)</u>	256.50	89.575	346.075

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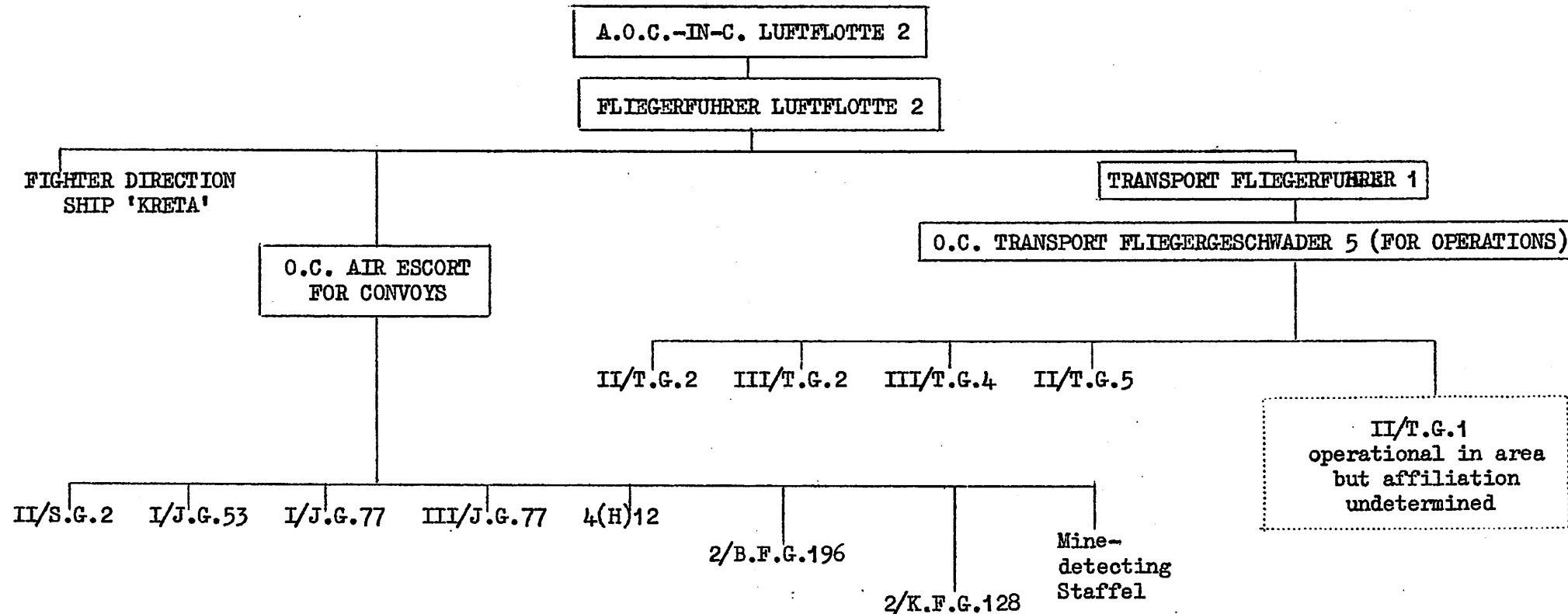
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APPENDIX 21

THE GERMAN AIR FORCE
IN THE EVACUATION OF CORSICA
(19 September to 2 October 1943)

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Page 4	<u>Transport Fliegergeschwader 5</u> - Strength
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THE EVACUATION OF CORSICACHAIN OF GERMAN AIR FORCE COMMAND

Source: War Diary of T.G.5 and G.A.F. records (A.H.B.6 Document No. 8A.640 and C.934 30 5.56 etc.)

GERMAN AIR FORCETRANSPORT FLIERGERGESCHWADER 5ORDER OF BATTLE

Period during 1943	Superior Authority	Subordinate Formations	Base
1 June-15 Oct.	Transport Fliegerführer 1: Rome, later Viareggio.	I./T.G.5	Pomigliano. From July onwards: Pistoia. Note: no aircraft in Italy
25 Aug.-15 Oct.		<u>II./T.G.5</u>	<u>Pisa</u> or Airasca (near Turin)
1 June-15 Oct.		III./T.G.1	Pratica di Mare or Pistoia. Note: did not participate in the evacuation
30 July-15 Oct.		<u>III./T.G.2</u>	<u>Lucca</u>
1 June-22 Sept.		IV./T.G.3	Metato or South Siena. Note: no aircraft.
23 Aug.-15 Oct.		<u>II./T.G.2</u>	Metato. From 15 Sept. onwards: <u>Ferrara</u> .
23 Sept.-13 Oct.		<u>III./T.G.4</u>	To 24 Sept. Pratica di Mare. 25 Sept. <u>Pisa</u>

Notes:

- (i) The Gruppen underlined participated in the evacuation of Corsica: the bases used for that operation are also underlined. From 24 September, aircraft used forward bases at Cecina and Campiglia.
- (ii) Although it does not appear in the above Order of Battle, it would appear that II.T.G.1 also participated in the evacuation of Corsica, as it sustained some losses in the evacuation area (Elba etc.). Its base cannot be determined, but was probably in the Pisa area.

Source: War Diary T.G.5 (A.H.B.6 Document No. 8A 640).

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APPENDIX 21

GERMAN AIR FORCETRANSPORT FLIEGERGESCHWADER 5STRENGTH - (20 AND 30 SEPTEMBER 1943)

<u>UNIT</u>	<u>Type of a/c</u>	<u>Total No. of a/c 20 Sept.</u>	<u>Serviceable aircraft 20 Sept.</u>	<u>Total No. of a/c 30 Sept.</u>	<u>Serviceable aircraft 30 Sept.</u>
<u>III./T.G.1</u>	S.M.82	Nil (*)	Nil (*)	20	9
<u>II./T.G.2</u> (**)	Ju.52	50	27	44	25
<u>III./T.G.2</u> (**)	Ju.52	48	32	48	31
<u>IV./T.G.3</u>	Ju.52	Nil	Nil	Nil	Nil
<u>III./T.G.4</u> (**)	Ju.52	37	30	35	15
<u>I./T.G.5</u>	Me.323	Nil	Nil	Nil	Nil (✓)
<u>II./T.G.5</u> (**)	Me.323	25	16	17	4

(*) This Gruppe had handed over its Ju.52s to II. and III./T.G.2.

(✓) The only operational aircraft were those in Staffel 3 on the Russian front.

(**) The 4 Gruppen which participated in the evacuation of Corsica.

Note:-

Although not appearing in the Order of Battle of T.G.5 (which controlled the above units), it would appear that II./T.G.1 was also operating, as it sustained some losses in the evacuation area (Elba etc.). This Gruppe had a strength of 44 Ju.52's, of which 15 were serviceable. (30 Sept.).

Source:-

War Diary of T.G.5 (A.H.B.6 Document No. 8A.640).

GERMAN AIR FORCESUPPORTING UNITS - CORSICA EVACUATIONSTRENGTH - ON 30 SEPTEMBER 1943

<u>UNIT</u>	<u>Type of a/c</u>	<u>Total No. of a/c 30 Sept.</u>	<u>Serviceable aircraft 30 Sept.</u>
<u>II./S.G.2</u>	F.W.190 & Hs.129	25	13
<u>4(H)12</u>	Me.109	4	3
<u>2./B.F.G.196</u>	Ar.196	12	5
<u>2.K.F.G.128</u>	Ar.196	12	3
<u>I./J.G.77</u>	Me.109	28	18
<u>III./J.G.77</u>	Me.109	26	16
<u>I./J.G.53</u>	Me.109	39	23
	Total	146	81

ORDER OF BATTLEON 28 SEPTEMBER 1943

<u>Formation</u>	<u>Base</u>
<u>Fliegerfuhrer Luftflotte 2</u>	Pisa
<u>O.C. Air Escort for Convoys</u>	Pisa
<u>II./S.G.2</u>	Grosseto
<u>I./J.G.53</u>	Grosseto
<u>III./J.G.77</u>	Metato
<u>4(H)12</u>	Metato
<u>I./J.G.77</u>	Cecina
<u>2/B.F.G.196</u>	La Spezia
<u>2/K.F.G.128</u>	La Spezia
<u>Mine-detecting Staffel</u>	Pisa

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APPENDIX 22

OPERATION "SCHLUSSAKKORD"

THE FINAL SHIPPING OPERATION IN THE EVACUATION OF CORSICA

(3 October 1943)

CAPTAIN VON LIEBENSTEIN'S PLAN

1. For S.S. Brigade and Restbattalion 906 1469 men
At 1900 hours, 15 M.F.P's in 3 groups of 5 in the New Harbour.
2. For 90th Panzer Grenadier Division (except Battalion 906), plus
200 Pioneers (Works) 440 men
At 1800 hours, 8 M.F.P's in 2 groups of 4 in New Harbour.
3. For Flak personnel 400 men
At 1900 hours

2 Siebel Ferries	80 men
2 Kampf Siebel Ferries	50 men
3 I-boats	60 men
1 W-boat	10 men
4 L-boats	120 men
1 F.L.B-boat	<u>100 men</u>
	<u>420 men</u>
4. Sea Transport Office Staff and demolition squads
at 2200 hours

4 R-boats	100 men
4 I-boats	100 men
	<u>200 men</u>
5. Army Commander, Sea-Transport Director and Naval Signals units

2 R-boats
1 M.F.P.
6. Reserve:-

<u>S.G.11</u>	50 men
4 L-boats	120 men
1 M.F.P.	100 men
4 R-boats	120 men
	<u>390 men</u>

All M.F.P's, S.F's, I.-W-and L-boats to Piombino.

All R-boats and the F.L.B.-boat to Leghorn, via north of Elba and then coastwise.

Source: Sea Transport Director Corsica's report in PG/49605
(F.D.S./Admiralty).

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APPENDIX 23

THE GERMAN SPECIAL FERRY SERVICE
OPERATIONS IN THE MEDITERRANEAN
AUGUST TO DECEMBER 1943

by

Colonel Fritz Siebel

Translation of Report prepared for H.Q. European Command
Office of the Chief Historian in May 1947
(Cabinet Office Enemy Documents Section A.L.1666/D-159)

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1 June to 17 September 1943

Upon completion of the African campaign, 3 Siebel ferries, 1 flak ferry (ferry equipped for flak defence) and 1 infantry transport of the remaining Siebel ferries and infantry transports were, after 31 May 43, committed to Sardinia, in the harbour of Olbia (Terranova).

German forces on Sardinia were made up of the 90th Panzer Grenadier Division, elements of the Moelders Fighter Wing and flak units of regimental strength, as well as various attached batteries.

During that period, the provisioning of Sardinia was for the most part handled via Olbia harbour. A Luftwaffe supply depot was set up a few kilometres South of Olbia, and there was a naval ration supply depot near Palau in the vicinity of the Olbia-Santa Teresa road. Olbia itself had been virtually cleared of all civilians, while public conveyances were no longer functioning, which was also the case throughout the northern part of the island. It was no longer possible to call on the harbour of Olbia, because of the ships which had been sunk in air attacks right at the pier. These attacks had also destroyed the harbour installations; no further clearance operations were effected. Consequently, the ships were anchored in a roadstead, while the lighterage was handled by the Siebel ferries, protected by the flak ferry.

Besides this transportation by water, a daily supply service to Olbia by air was conducted by transportation units stationed at Naples.

Owing to the daily air attacks and the ever-increasing submarine menace, the shipping traffic using Olbia harbour was re-routed to the area formed by the islands of Corsica, Sardinia, Maddalena and Caprera, which constituted one of the most important Italian defensive regions. This also put an end to the operations in the harbour of Olbia of the vessels of the Special Ferry Service. Beginning 10 June 43, these vessels were stationed at Bonifacio on Corsica, from where they conducted ferry operations between Bonifacio and Santa Teresa. Additional Siebel ferries and infantry transports handled the lighterage at Palau.

Supplies for Corsica were, as a rule, transported by sea from Leghorn to Bastia. In addition to the naval tank landing craft, larger ships were also utilized for this transportation service. Transportation by air was limited and was routed from Leghorn, Pisa and Florence to Borgo airfield (14 kilometres South of Bastia).

Except for one S.S. supply in the Aulène-Quenza area, there were no German ration supply depots on Corsica. On the occasion of the evacuation of Sardinia, the naval supply depot located at Palau was transferred from there to Bonifacio, while at the beginning of August, a large ration supply depot was transported by naval tank landing craft from Genoa and set up within a short time at Porto Vecchio, after a number of piers had been constructed there.

The traffic on the island was handled by motor vehicles. The Bastia - Porto Vecchio railway line, a narrow gauge railway - which ran once a day, - was not used for transporting German supplies. After the Badoglio coup, railway traffic was suspended.

At first, there was but little ferry traffic between Sardinia and Corsica via the Strait of Bonifacio. The distance between Bonifacio and Santa Teresa was 10 sea miles. Not until some of the supplies for Sardinia were routed via Bastia did the ferry traffic assume greater proportions.

After the Naples workshops had been dismantled and transferred to Port St. Louis (at the mouth of the Rhone River) the number of Siebel ferries and infantry transports committed at Bonifacio and Maddalena was constantly on the increase. On 21 June 43, 3 infantry transports and 1 repair ship

(this was an infantry transport which had been equipped as a floating workshop) arrived in Olbia, at the disposal of the naval transportation centre, while 2 vessels were transferred to Maddalena, and 1 repair ship to Bonifacio. On 8 July 43, 2 Siebel ferries and 4 infantry transports arrived in Maddalena, where they were assigned to lighterage duties. On 14 July 1943, 1 flak ferry and 1 Siebel ferry departed for Naples. On 12 August 1943, the flak ferry returned to Bonifacio and, in days which followed was responsible for protection of the Strait of Bonifacio, while the Siebel ferry was converted at Naples for use as a flak ferry and assigned to service in the Strait of Messina. On 15 August, 1943, 2 Siebel ferries and 5 infantry transports arrived at Bonifacio. The infantry transports were transferred to Maddalena. Consequently, the various vessels were committed as follows:-

- (a) In Bonifacio. 1 flak ferry, 6 Siebel ferries, 1 repair ship
- (b) In Maddalena 12 infantry transports.
- (c) In Olbia 1 infantry transport

At the end of July, the evacuation of Sardinia was started on a small scale. At the same time, 2 Siebel ferries which, until then, had been stationed at Maddalena, were also pressed into service for ferry operations. Not until the Badoglio coup did the transportation problem become acute.

Beginning on 11 September, all vessels of the Special Ferry Service, including the infantry transports stationed at Maddalena, were committed for continuous day and night service between Palau and Bonifacio, regardless of prevailing weather conditions. Necessary engine repairs were taken care of while ferry operations were proceeding. Leaks in pontoons were plugged by means of empty canisters or tree trunks. The flak ferry was responsible for protecting the Strait of Bonifacio. By 18 September 1943, the evacuation of Sardinia had been completed, and all troops with their weapons and equipment ferried across to Corsica (Bonifacio). The pursuing enemy forces at that time had reached Palau.

Up to 10 September, the Siebel ferries and infantry transports in the Strait of Bonifacio had handled the following:-

4,388 troops	12 field kitchens
11,525 tons of equipment	3,600 canisters of gasoline
967 tons of ammunition	4,500 containers of oil
306,000 rounds of carbine ammunition	670 cubic metres of fuel
7,298 75 mm. shells	252 cases of hand grenades
327 mortar shells	24 guns

After that date, no further records were kept concerning the transportation performances of the ferry service. However, during the period from 11 to 18 September, 1943, the entire 90th Panzer Grenadier Division, as well as the chief of anti-aircraft forces on Sardinia, with armament and equipment, were transported from Sardinia to Corsica.

The only Italian units transported from Sardinia to Corsica were those of the Nembo Parachute Division, who crossed on an Italian ferry. This detachment disarmed the crew of the Bonifacio fortress, and a short while later was transferred to Italy.

During the entire operation 1 infantry transport was lost. On 9 September, 1943, while crossing from Maddalena to Palau, this vessel was attacked by Italian batteries of various calibre up to approximately 88 mm. and sunk. The crew swimming in the water was fired on with machine guns.

The Italian submarines, which were still operating up to the time of the Badoglio coup, were demolished by the German Navy, because, owing to the lack of personnel, it was impossible to transfer these ships.

It is noteworthy that beginning with the middle of July 1943, the young male population left their villages to join the Maquis (the underground movement). These elements were provided by air with weapons, ammunition and supplies from America, and were also furnished with Italian tanks and artillery. The partisans raided the S.S. hospital near Quenza in the centre of the island, and looted the S.S. ration supply depot.

18 SEPTEMBER to 3 OCTOBER 1943

On the morning of 18 September, 1943, all Siebel ferries and infantry transports were transferred from Bonifacio via Porto Vecchio to Bastia, from whence, reinforced by Siebel ferries and infantry transports which had been used for operations in Sicily, and in conjunction with naval vessels - mostly tank landing craft - they continued the evacuation of Corsica, which had already started. The ferry service functioned between Bastia and Leghorn and Bastia and Piombino, and in some instances, in order to gain time, the vessels also ran for a period to Porto Ferrajo (Elba). Travelling between Bastia and Leghorn, it was necessary to cover a distance of 67 nautical miles,⁽¹⁾ while the distance between Bastia and Piombino amounted to 48 nautical miles. The Siebel ferries operated without escort, and, in conjunction with infantry transports, travelled between Corsica and Italy.

On 21 September, at 1315 hours, while the evacuation of Corsica was under way, a heavy air attack was launched on the harbour of Bastia, during which several transports caught fire, and which caused serious damage and conflagrations in the city proper. During the night of 22 September, 1943, from 0340 to 0430 hours, another heavy air attack on city and harbour caused considerably greater damage than the preceding attack. At the same time, enemy submarine activity was intensified. For instance, on 24 September 1943, the transport Champagne, a re-converted 10,000 ton tanker (which, however, was able to carry only 80 to 90 motor vehicles owing to the lack of between-decks), while still docked in Bastia harbour, was slightly damaged by a torpedo. In days to follow, other torpedoes detonated in the harbour, without however, causing any damage. On 27 September, 1943, the transport Champagne which, unprotected, was beached outside the harbour, was torpedoed once more and rendered unnavigable after it had been under steam for 36 hours, and had failed to sail for lack of convoy escorts. On 25 and 28 September 1943, at about 1400 hours, air attacks were launched on the Borgo airfield which was not occupied.⁽²⁾

Towards the end of September, Bastia was the only city in Corsica still in German hands. On 30 September 1943, the city outskirts were already under fire from machine guns and mortars; however, we succeeded in driving the enemy forces (Moroccan troops) back to the mountains.

On the evening of 3 October, 1943, the evacuation of Corsica came to an end with the loading on a Siebel ferry of the last 88 mm. flak battery, which the same afternoon had been engaged in ground combat. From 1700 hours, Bastia harbour was under constant bombardment by heavy mortars which, however, did not cause any damage. By then, the enemy had entered the city. The German ships in the roadstead provided protection for the last Siebel ferry. Approximately 50 motor vehicles were left behind.

(1) One nautical mile = 6,080 feet.

(2) Ghisonaccia was used up to 25 September and the Borgo and Poretta fields from the 26th.

In spite of air and torpedo attacks, the Special Ferry Service lost no vessels at sea. One Siebel ferry which, in spite of leaking pontoons, was overloaded by the Navy sank while en route from Bastia to Leghorn; no lives were lost. During the air attack on Bastia harbour on 22 September, 1943, as described above, 2 Siebel ferries were destroyed by bomb hits.

Operations on Sardinia and Corsica were particularly handicapped by the lack of spare parts for ferries and infantry transports, which were impossible to obtain on Sardinia or Corsica; even the procurement of oxygen carbide was attended with considerable difficulties. This was further complicated by the fact that road conditions on Sardinia were extremely poor. Not until 26 August 1943, did any appreciable quantities of spare parts arrive in Bonifacio. That alone made it possible to complete the evacuation of Sardinia, which was handled exclusively by the vessels of the Special Ferry Service. Moreover, the unhealthy climate of Sardinia, and particularly the southern tip of Corsica, which was a notorious malaria region, caused numerous malaria cases among the troops.

4 OCTOBER to 31 DECEMBER 1943

After the evacuation of Corsica had been concluded on 3 October 1943, all vessels, totalling 11 Siebel ferries and about 30 infantry transports, were assigned to transporting supplies to Elba and outposts along the Italian coast from Piombino to San Remo.

For the moment, there were no German troops on Elba or any defensive installations which might have interfered with an enemy landing. Generally such fortifications, constructed on a small scale and temporary basis, consisted of nothing but barbed wire entanglements. The old-model Italian guns on Elba were, as a rule, manned by Italian volunteers who had received insufficient training.

After the Badoglio coup, all outpost duty ceased along the west coast of Italy. Thus, by the beginning of October, the Italian speedboats in the harbour of Piombino had not yet resumed operations. I am not able to cite any figures concerning the supplies transported to Elba; however in view of the small garrison, the amount was inconsiderable.

On 15 October 1943, 2 flak ferries were set on fire while engaged in night combat in the Strait of Piombino with enemy gunboats superior to them in number, armament and speed. On the previous day, these flak ferries had received orders concerning departure and position from the 6th Security Division; these orders were transmitted by telephone from Leghorn to Piombino and, in some instances, Italian circuits were pressed into service.

In anticipation of a new assignment, all infantry transports in Piombino were pulled ashore for general overhaul by means of a mobile slip which had been repaired by the Special Ferry Service. This made it possible, at the end of December 1943, when the order was given to dismantle, to load all infantry transport on railway trucks at Genoa, so as to make them available for new commitments in the Adriatic and Aegean Seas. The remaining 9 Siebel ferries were taken apart at Port St. Louis, loaded on railway trucks and overhauled at Antwerp; subsequently they were assigned to new operations in the Adriatic and Aegean Seas.

Thus, the operations of the Special Ferry Service in this part of the Mediterranean came to an end on 31 December 1943.

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APPENDIX 24

GERMAN U-BOAT KILLSIN THEMEDITERRANEAN COMMANDNUMERICAL AND CHRONOLOGICALNUMERICAL LISTC.O.

<u>U. 73</u>	Sunk 16.12.43	<u>Wolsey</u> - Trippe, off Oran	Rosenbaum
<u>U. 74</u>	2. 5.42	(A/C C of 202 Gp. N. of Oran, and (Wishart & Wrestler	(Lindburg (Kautrat
<u>U. 75</u>	28.12.41	<u>Kipling</u> off Mersa Matruh 30 POWs	Ringlemann
<u>U. 77</u>	28. 3.43	A/C (L48 L233 V48), off Alicante	Schouder
<u>U. 79</u>	23.12.41	<u>Hasty, Hotspur</u> , off Bardia 45 POWs	Kaufmann
<u>U. 81</u>	9. 1.44	Air raid on Pola - was raised 22. .44	(Guggenberger (Krieg
<u>U. 83</u>	4. 3.43	A/C (RAF), E. of Oran	Woerisshoffer
<u>U. 95</u>	28.11.41	<u>Neth Sub. O.21.</u> , E. of Gib. POWs	Schreiber
<u>U. 97</u>	16. 6.43	A/C (Hudson) 459 Sq. RAAF, N. of Haifa	(Heilmann (Trot
<u>U.133</u>	14. 3.43	Mined off C. Phleves (Aegean)	(Mohr (Hesse
<u>U.205</u>	17. 2.43	<u>Paladin</u> ; A/C W (Bisley) of 15/SAAF. POWs	(Rexohke (Burgel
<u>U.223</u>	29/30. 3.44	<u>Laforey, Tumult, Blencathra</u> , <u>Hambledon</u> - N. of Sicily, POWs	(Waechter (Gerlach
<u>U.224</u>	13. 1.43	<u>Ville de Quebec</u> , W. of Algiers, POWs	Kosbadt
<u>U.230</u>	21. 8.44	Scuttled after grounding off Hyeres (Toulon)	(Siegmann (Eberbach
<u>U.259</u>	15.11.42	A/C 'S' (Hudson) of 500 Sq. 30 N of Algiers	Koepeke
<u>U.301</u>	21. 1.43	<u>P.212 (Sahib)</u> , W. of Bonifacio, POWs	Koerner
<u>U.303</u>	21. 5.43	<u>Sickle</u> , off Toulon	Heine
<u>U.331</u>	17.11.42	A/C of <u>Formidable</u> & 500 Sq. 820 Sq. 'Z' 'L' 'C', off Algiers, POWs	Thiesenhausen
<u>U.343</u>	10. 3.44	Trawler <u>Mull</u> , S. of Sardinia	Rahn
<u>U.371</u>	4. 5.44	<u>Pride, Campbell, Blankney, Sustain</u> , <u>Sénégalais</u> , off Djijelli	(Mehl (Finski
<u>U.372</u>	4. 8.42	<u>Sikh, Croome, Zulu, Tetcott</u> and A/C of 231 Sq., S.W. of Haifa, POWs	Newmann
<u>U.374</u>	12. 1.42	<u>Unbeaten</u> , S. of Messina	Von Fischel
<u>U.375</u>	30. 7.43	<u>P.C.624</u> , Sicilian Channel	Koenenkamp
<u>U.380</u>	11. 3.44	Toulon air raid - U.S.A.A.F.	(Roether (Brandi (Brueller
<u>U.407</u>	19. 9.44	<u>Garland, Troubridge, Terpischoe</u> , <u>Zetland, Brecon</u> - Aegean	(Kolbus
<u>U.409</u>	12. 7.43	<u>Inconstant</u> - E. of Algiers, POWs	Wassmann
<u>U.410</u>	11. 3.44	Toulon air raid - U.S.A.A.F.	Finski

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APPENDIX 24

MEDITERRANEAN BOATS

<u>U.414</u>	25. 5.43	<u>Vitch</u> , W. of Tenes	Huth
<u>U.421</u>	29. 4.44	Toulon air raid U.S.S. A.F.	Kolbus
<u>U.431</u>	30.10.43	<u>Ultimatum</u> , off Toulon	Schoeneboom
<u>U.433</u>	16.11.41	<u>Marigold</u> , Off Malaga POWs	Ey
<u>U.443</u>	23. 2.43	<u>Bicester</u> , <u>Wheatland</u> , <u>Lamerton</u> off Algiers	Pattkammer
<u>U.450</u>	9. 3.44	<u>Blankeney</u> , <u>Maddison</u> , <u>Exmoor</u> - <u>Blencathra</u> , <u>Brecon</u> , Tyrrhenian Sea	Boehme
<u>U.453</u>	20. 5.44	<u>Leddesdale</u> , <u>Termagent</u> , <u>Tenacious</u> , Central Med.	Luehrs
<u>U.455</u>	6. 4.44	Not known - prob. mined	Scheibe
<u>U.458</u>	22. 8.43	<u>Easton</u> , <u>Pindos</u> , off Pantellaria, POW	Diggins
<u>U.466</u>	19. 8.44	Scuttled off St. Mandrier (Toulon)	Thaeter
<u>U.471</u>	6. 8.44	Scuttled Toulon - after severe damage	
		Air raid U.S.S.A.F.	Kloevekorn
<u>U.557</u>	16.12.41	Rammed and sunk by Ital. TB <u>Orione</u> off Crete	Paullsen
<u>U.559</u>	30.10.42	<u>Pakenham</u> , <u>Petard</u> , <u>Hero</u> , <u>Dulverton</u> , <u>Hurworth</u> and A/C N. of P. Said	Heidtman
<u>U.561</u>	13. 7.43	<u>MTB.81</u> . Str. of Messina	Henning
<u>U.562</u>	19. 2.43	<u>Isis</u> , <u>Hursley</u> , and A/C off Cyrenaica	Heamm
<u>U.565</u>	24. 9.44	<u>Salamis</u> Air raid (U.S.A.A.F.)	Henning
<u>U.568</u>	28. 5.42	<u>Eridge</u> , <u>Hero</u> , <u>Hurworth</u> , N. of Tobruk	Preuss
<u>U.573</u>	1. 5.42	Damaged by A/C of 233 Sq. Interned Cartagena	Heinsohn
<u>U.577</u>	9. 1.42	A/C of 230 Sq. E. of Sollum	Schauenburg
<u>U.586</u>	6. 7.44	Toulon air raid U.S.S.A.F.	Goetze
<u>U.593</u>	13.12.43	<u>Calpe</u> , <u>Wainwright</u> , off Jijelli	Kelbling
<u>U.595</u>	14.11.42	Damaged by A/C of 500 Sq. causing scuttling off Oran	Quaet Faslem
<u>U.596</u>	24. 9.44	<u>Salamis</u> Air raid (U.S.A.A.F.)	Kolbus
<u>U.602</u>	23. 4.43	A/C 'N' 500 Sq. off Oran	Schueler
<u>U.605</u>	13.11.42	<u>Lotus</u> & <u>Poppy</u> off Algiers	Schutze
<u>U.616</u>	17. 5.44	<u>Macot</u> , <u>Bebb</u> , <u>Gleaves</u> , <u>Ellison</u> , <u>Hambledon</u> , and A/C 'A' 'T' 'H' of 36 Sq. S.E. Alicante	Koitschka
<u>U.617</u>	11. 9.43	A/C 179 Sq. and <u>Haarlem</u> - Shelled U-boat causing scuttling off Melilla	Brandi
<u>U.642</u>	6. 8.44	Toulon air raid (U.S.A.A.F.)	Bruenning
<u>U.652</u>	2. 6.42	A/C of 815 and 203 Sqs. off Sollum - causing scuttling	Fraatz
<u>U.660</u>	12.11.42	<u>Starwort</u> and <u>Lotus</u> off Oran	Baur
<u>U.755</u>	28. 5.43	A/C 'M' 608 Sq. with R.P. W. of Balears	Goeing
<u>U.952</u>	6. 8.44	Toulon air raid U.S.A.A.F.	Cario
<u>U.960</u>	19. 5.44	<u>Ludlow</u> , <u>Niblack</u> and A/C 'M' 'U' of 36 and 500 Sq. N. of Oran	Heinrich
<u>U.967</u>	19. 8.44	Scuttled Toulon after severe damage	(Eberbach
		air raid 11/7 U.S.A.A.F.	(Brandi
<u>U.969</u>	6. 8.44	Toulon air raid U.S.A.A.F.	Dobbert

Totals sunk:-

Inside Mediterranean	62
West of Strait of Gibraltar	6 (<u>451</u> , <u>732</u> , <u>340</u> , <u>761</u> , <u>393</u> , <u>731</u>)
	<u>68</u>

Note: U.179, U.411 and U.597 were sunk in the Atlantic.

(Source Admiralty TSD/FDS/X342/50 6 Sept. 50)

CHRONOLOGICAL LIST OF GERMAN U-BOAT LOSSES

(6204) 517

Source: TSD/FDS/X.342/50 (A.H.S./Admly.)

SECRET

<u>1941</u>	<u>1942</u>	<u>1943</u>	<u>1944</u>
16.11.41 <u>U.433</u>	9. 1.42 <u>U.577</u>	13. 1.43 <u>U.224</u>	9. 1.44 <u>U.81</u>
28.11.41 <u>U.95</u>	12. 1.42 <u>U.374</u>	21. 1.43 <u>U.301</u>	
16.12.41 <u>U.557</u>	14. 3.42 <u>U.133</u>	17. 2.43 <u>U.205</u>	10. 3.44 <u>U.343</u>
	1. 5.42 <u>U.573</u>	19. 2.43 <u>U.562</u>	10. 3.44 <u>U.450</u>
23.12.41 <u>U.79</u>	2. 5.42 <u>U.74</u>	23. 2.43 <u>U.443</u>	11. 3.44 <u>U.380</u>
28.12.41 <u>U.75</u>	28. 5.42 <u>U.568</u>	4. 3.43 <u>U.83</u>	11. 3.44 <u>U.410</u>
	2. 6.42 <u>U.652</u>	28. 3.43 <u>U.77</u>	
	4. 8.42 <u>U.372</u>	23. 4.43 <u>U.602</u>	29/30. 3.44 <u>U.223</u>
		21. 5.43 <u>U.303</u>	6. 4.44 <u>U.455</u>
	30.10.42 <u>U.559</u>	25. 5.43 <u>U.414</u>	29. 4.44 <u>U.421</u>
	12.11.42 <u>U.660</u>	28. 5.43 <u>U.755</u>	4. 5.44 <u>U.371</u>
	13.11.42 <u>U.605</u>	16. 6.43 <u>U.97</u>	
	14.11.42 <u>U.595</u>	12. 7.43 <u>U.409</u>	17. 5.44 <u>U.616</u>
		13. 7.43 <u>U.561</u>	19. 5.44 <u>U.960</u>
	15.11.42 <u>U.259</u>	30. 7.43 <u>U.375</u>	20. 6.44 <u>U.453</u>
	17.11.42 <u>U.331</u>	22. 8.43 <u>U.458</u>	5/6. 7.44 <u>U.586</u>
		11/12. 9.43 <u>U.617</u>	6. 8.44 <u>U.642</u>
		30.10.43 <u>U.431</u>	6. 8.44 <u>U.471</u>
			6. 8.44 <u>U.952</u>
			6. 8.44 <u>U.969</u>
			19. 8.44 <u>U.967</u>
		13.12.43 <u>U.593</u>	19. 8.44 <u>U.466</u>
		16.12.43 <u>U.73</u>	21. 8.44 <u>U.230</u>
			19. 9.44 <u>U.407</u>
			24. 9.44 <u>U.565</u>
			24. 9.44 <u>U.596</u>

Total = 62

APPENDIX 24

SECRET

GERMAN U-BOAT ARRIVALS AND LOSSES IN THE MEDITERRANEAN
(From German records)

Date	Arrived	Lost	Date	Arrived	Lost
<u>1941</u>			<u>1943</u>		
September	(4) U.559 371 97 331		January	(1) 224	(2) 224 301
October	(2) 75 79		February	nil	(3) 205 562 443
November	(8) 81 205 565 433 431 95 557 562	(2) 433 95	March	nil	(2) 83 77
December	(12) 372 453 375 83 133 577 573 652 74 77 568 374	(3) 557 79 75	April	(2) 414 303	(1) 602
			May	(2) 616 410	(3) 303 755 414
			June	(1) 409	(1) 97
			July	nil	(3) 409 561 375
			August	nil	(1) 458
			September	(1) 223	(1) 617
			October	(1) 450	(1) 431
			November	(1) 642	
			December	(1) 230	(2) 593 73
			<u>1944</u>		
			January	(4) 343 952 455 967	(1) 81
<u>1942</u>			February	(2) 969 586	
January	(2) 73 561	(2) 577 374	March	(2) 466 421	(5) 450 343 380 410 223
February	nil	nil			
March	nil	(1) 133			
April	nil	nil			
May	nil	(3) 573 74 568	April	(1) 471	(2) 455 421
June	nil	(1) 652	May	(1) 960	(4) 371 616 960 453 nil
July	nil	(1) 372			
August	nil	(1) nil			
September	nil	(1) nil			
October	(4) 605 438 660 593	(1) 559	June	nil	(1) 586
November	(7) 595 617 596 407 259 755 380	(5) 595 605 660 331 259	July	nil	(7) 642
December	(3) 443 602 301	nil	August	nil	952 471 969 466 967 230 407 565 596
			September	nil	(3)
			Total arrived 62 lost 62		

TSD/FDS/X.342/50, Appendix I.

AIRCRAFT EMPLOYED IN MARITIME WAR IN THE MEDITERRANEAN 1943-1944

Aircraft	Endurance	Typical Armament
<u>Anti-submarine</u>		
Hudson	6 hours	4 x 250 lbs. D.C's (a few carry rockets).
Beaufort or Bisley	5 hours	4 x 250 lbs. D.C's
Wellington VIII & XI	8 hours	6 x 250 lbs. D.C's
Baltimore	4 $\frac{1}{2}$ hours	3 x 250 lbs. D.C's
Ventura	7 hours	8 x 250 lbs. D.C's
Beaufighter	5 hours	2 x 250 lbs. A/S B's
Halifax	10 hours	250 lbs. D.C's
Liberator	12 hours	14 x 250 lbs. D.C's
<u>Fighters</u>		
Hurricane Mark I	1 hr. 30 m.	
Hurricane Mark II	1 hr. 30 m.	
Hurricane L.R.	3 hrs. 30 m.	
P-40 Tomahawk	2 hrs.	
Beaufighter	4 hrs.	
Fulmar	2 hrs. 30 m.	
Seafire	1 hr. 30 m.	
F4F Martlet	2 hrs. 45 m.	
Spitfire Mark I	1 hr. 30 m.	
Spitfire Mark II	1 hr. 30 m.	
Spitfire Mark V	1 hr. 30 m.	
Spitfire Mark IX	1 hr. 45 m.	
Spitfire L.R.	3 hrs.	
P-40 Kittyhawk S.R.	1 hr. 45 m.	
P-40 Kittyhawk L.R.	2 hrs. 45 m.	
P-40 Warhawk	1 hr. 45 m.	
P-38 Lightning	4 hrs. 45 m.	
P-39 Aircobra	2 hrs.	

SECRET

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APPENDIX 27

ORDERS OF BATTLESQUADRONS OF R.A.F. MIDDLE EAST COMMANDOPERATING IN THE AEGEAN AREAA. ON 8 SEPTEMBER 1943

Squadron	Aircraft	Base	Function	Strength	Service-ability
No.7 S.A.A.F. Det.	Spitfire	Cyprus-destined for Kos.	S/E Fighter	12	12
No.13 Hellenic	Blenheim Baltimore	Gambut	G.R.	13	5
No.15 S.A.A.F.	Baltimore	Matruh West Det. Gambut	G.R.	14	12
No.38 R.A.F. Dets.	Wellington	Amriya South St. Jean	Torp. Bomber	17	9
No.46 R.A.F. Det.	Beaufighter	Nicosia	T/E Night Fighter	5	3
No.74 R.A.F.	Spitfire Hurricane	Edcu	S/E Fighter	21	15
No.89 R.A.F.	Beaufighter	Edcu Det. Lakatamia) (Cyprus))	T/E Night Fighter	21	17
No.213 R.A.F. Det.	Hurricane	Paphos (Cyprus)	S/E Fighter	13	13
No.227 R.A.F.	Beaufighter	Limassol (Cyprus)	T/E Day Fighter	18	14
No.237 Rhodesian	Hurricane	Edcu Det. Paphos	S/E Fighter	15	8
No.252 R.A.F.	Beaufighter	Limassol	T/E Day Fighter	14	5
No.274 R.A.F. Det.	Spitfire Hurricane	Paphos	S/E Fighter	15	7
No.454 R.A.A.F.	Baltimore	Amriya South St. Jean	G.R.	17	13
No.459 R.A.A.F.	Hudson	Gambut	G.R.	14	12
No.680 R.A.F.	Spitfire	Matariya	P.R.U.	5	5
			Totals.	214	150

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APPENDIX 27B. ON 4 OCTOBER 1943

Squadron	Aircraft	Base	Function	Strength	Service-ability
No.13 Hellenic	Baltimore	Gambut	G.R.	17	8
No.15 S.A.A.F.	Baltimore	Matruh West Det. Gambut	G.R.	13	11
No.38 R.A.F.	Wellington	Berka. Dets. Amriya S.) and St. Jean	Torp. Bomber	18	12
No.46 R.A.F. Dets.	Beaufighter	Nicosia Det. Edcu	T/E Night Fighter	10	5
No.74 R.A.F.	Spitfire	Nicosia	S/E Fighter	10	10
No.89 R.A.F.	Beaufighter	Edcu Det. St. Jean	T/E Night Fighter	16	3
No.178 R.A.F.	Liberator	Hosc Ruai	Heavy Bomber	12	3
No.203 R.A.F.	Baltimore	Berka Det. Edcu	G.R.	14	9
No.213 R.A.F.	Hurricane	Paphos Det. Edcu	S/E Fighter	17	5
No.227 R.A.F.	Beaufighter	Lakatamia (Cyprus)	T/E Day Fighter	10	6
No.237 Rhodesian	Hurricane	Edcu	S/E Fighter	16	10
No.252 R.A.F.	Beaufighter	Lakatamia	T/E Day- Fighter	13	4
No.274 R.A.F.	Spitfire	Paphos Det. Derna	S/E Fighter	16	8
No.454 R.A.A.F.	Baltimore	Amriya South Det. St. Jean	G.R.	12	11
No.459 R.A.A.F.	Hudson	Gambut Det. Matruh West	G.R.	15	15
No.462 R.A.A.F.	Halifax	Hosc Ruai	Heavy Bomber	8	7
No.600 R.A.F.	Spitfire	Matariya Dets. Toora and Cyprus	P.R.U.	12	12
Totals				229	139

C. ON 16 NOVEMBER 1943

Squadron	Aircraft	Base	Function	Strength	Service-ability
No.7 S.A.A.F.	Spitfire	Gamil (Port Said)	S/E Fighter	7	4
No.13 Hellenic	Baltimore	Gambut	G.R.	19	8
No.15 S.A.A.F.	Baltimore	Matruh West	G.R.	11	11
No.38 R.A.F.	Wellington	Berka Det. St. Jean	Torp. Bomber	12	7
No.46 R.A.F. Det.	Beaufighter	Nicosia (Cyprus) St. Jean	T/E Night Fighter	5	2
No.47 R.A.F.	Beaufighter	El Adem	T/E Day- Fighter	11	5
No.74 R.A.F.	Spitfire	Almazo Det. Nicosia	S/E Fighter	6	4
No.178 R.A.F.	Liberator	Terria	Heavy- Bomber	6	-
No.213 R.A.F.	Hurricane	Edcu	S/E Fighter	7	7
No.227 R.A.F.	Beaufighter	Lakatamia (Cyprus)	T/E Day- Fighter	12	7
No.237 Rhodesian	Hurricane	Paphos (Cyprus) Det. Edcu.	S/E Fighter	13	12
No.252 R.A.F.	Beaufighter	Amriya South Air echelon at Lakatamia	T/E Day Fighter	12	6
No.274 R.A.F.	Spitfire	Edcu	S/E Fighter	16	13
No.454 R.A.A.F.	Baltimore	Berka St. Jean	G.R.	22	18
No.459 R.A.A.F.	Hudson	Gambut	G.R.	4	4
No.462 R.A.A.F.	Halifax	Terria	Heavy Bomber	18	10
No.603 R.A.F.	Beaufighter	Gambut	T/E Day Fighter	16	11
No.680 R.A.F.	Spitfire	Matariya	P.R.U.	6	3
Totals				203	132

Source:- A.H.B. II.J.1/159/26 Appendices I, J and K.

Source: N.A.C.A.F. Administration O.R.B. Dec. 43 Appendix D

PART II - Detailed Summary of U.S.A.A.F. Units

PART I -- Detailed Summary of R.A.F. Units

CONTENTS

7TH DECEMBER 1943

LOCATION STATEMENT

NORTHWEST AFRICAN COASTAL AIR FORCE

PART IDETAILED SUMMARY OF R.A.F. UNITS IN N.A.C.A.F.

UNIT	LOCATION	CONTROL	
		ADMIN.	OPER.
COMMAND AND FORMATION HEADQUARTERS			
A.C.A.F.	Algiers	NAAF.	NAAF.
F. Command Post (G.R. Ops. Unit)	Naples	242 Grp.	NACAF.
MALTA	Valetta	NAAF	NACAF
R. Ops. Unit	Bastia	328 Wing	63rd Ftr. W. (U.S.A.A.F.)
GROUP HEADQUARTERS			
Group	Alma Marina	NACAF	NACAF
Group	Taranto	NACAF	NACAF
WING HEADQUARTERS			
Wing (F)	Grottaglie	242 Grp.	242 Grp.
Wing (Satellite) (sent number basis)		242 Grp.	242 Grp.
Wing (F) (shortly to mour)	Sidi Achmed	NACAF	NACAF
Wing (F) (Foggia Area)	Monte Corvino	242 Grp.	NACAF. CP.
Wing (G.R.)	Borizzo	Malta	Malta
Wing (G.R.)	Ghisonnacia	NACAF.	63rd Ftr. W. (U.S.A.A.F.)
Wing (F) (ly 2 S.O.R.,	Djidjelli (Taher)	NACAF.	NACAF.
Wing (F)	Catania (Biscari Palice)	Malta	Malta
Wing (Satellite) (reformed as M.A.R.U.)	Palermo	Malta	Malta
Wing (F) (ly Oran Sector -	Oran	NACAF.	NACAF.
Wing (F/G.R.) (ly 1 S.O.R.,M.E.)	Reghaia	NACAF.	NACAF.
STATIONS			
Station	Bone	NACAF.	NACAF.
Station	Blida	NACAF.	NACAF.
Station	Tafaraoui	NACAF.	NACAF.

R.A.F. SQUADRONSCONTROL

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
No.13 Sqn. (Bisley) (Ventura) (Re-arming with Venturas)	Sidi Amour	287 Wing	287 Wing
No.14 Sqn. (Marauder) (1 Flt. at Grottaglie -	Ghisonaccia Maint. & Trg. Flt. at Blida)	328 Wing	328 Wing
No.23 Sqn. (Mosq. N/F) (Detachment at Naples)	Alghero	328 Wing	63rd F.W. (USAAF)
No.32 Sqn. (Spit.V)	Reghaia	338 Wing	338 Wing
No.36 Sqn. (Well)	Blida	Blida	Blida
No.39 Sqn. (Beau)	Reghaia	338 Wing	338 Wing
No.40 Sqn. (Spit)(SAAF) (Local Admin. control only - moving shortly)	Philippeville	NATAF	NATAF
No.52 Sqn. (Baltimore)	Borizzo	325 Wing	325 Wing
No.69 Sqn. (Baltimore)	Malta	Malta	Malta
No.73 Sqn. (Spit) (Moving Foggia shortly)	Monte Corvino	323 Wing	323 Wing
No.87 Sqn. (Hurri)	Borizzo	335 Wing	335 Wing
No.108 Sqn. (N/Beau)	Malta	Malta	Malta
No.126 Sqn. (Spit)	Grottaglie	286 Wing	286 Wing
No.153 Sqn. (Beau)	Reghaia	338 Wing	338 Wing
No.219 Sqn. (Beau)	Sidi Amour	287 Wing	287 Wing
No.221 Sqn. (Well)	Malta	Malta	Malta
No.229 Sqn. (Spit)	Malta	Malta	Malta
No.241 Sqn. (Hurr-Bomb) (Local Admin. control only - moving shortly)	Philippeville	NATAF	NATAF
No.249 Sqn. (Spit)	Grottaglie	286 Wing	286 Wing
No.253 Sqn. (Spit) (En route to Capodichino)	Monte Corvino	323 Wing	323 Wing
No.255 Sqn. (Beau) (Detachment at Borizzo)	Grottaglie	286 Wing	286 Wing
No.256 Sqn. (Mosq.)	Malta	Malta	Malta
No.272 Sqn. (Day Beau)	Catania	335 Wing	335 Wing
No.283 Sqn. (Walrus) (HQ. moving to Bastia shortly (Dets. at Ajaccio & Monte Corvino)	Palermo	328 Wing	63rd F.W. (U.S.A.A.F.)
No.284 Sqn. (Walrus)	Brindisi	242 Grp.	242 Grp.
No.293 Sqn. (Warwick)	Bone	Bone	Bone
No.458 Sqn. (Well.)	Bone	Bone	Bone
No.500 Sqn. (Hudson) (1 Flt. en route to Ghisonaccia - 5 a/c at Monte	Tafaraoui Corvino)	Tafaraoui	Tafaraoui
Det. 512 Sqn. (Dakota)	Blida	NACAF	MAC
No.608 Sqn. (Hudson)	Monte Corvino	286 Wing	286 Wing

SECRET

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APPENDIX 28

R.A.F. SQUADRONS (contd.)

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
No.614 Sqdn. (Bisley)	Borizzo	325 Wing	325 Wing
No.624 Sqdn. (Halifax) (S.D.)(Ventura)	Sidi Amour (Local Admin. control only - Det.	334 Wing	MAC at Blida)
No.727 Sqdn. (Defiant)(FAA) (Local Admin. control only	Blida N.A.C.A.F.)	F.A.A.	F.A.A.
No.728 Sqdn. (Albacore)(FAA) (Local Admin. control only	Malta Malta)	F.A.A.	F.A.A.
No.1435 Sqdn. (Spit)	Grottaglie	286 Wing	286 Wing
No.1578 Cal. Flt. (Beau)	Blida	Blida	N.A.C.A.F.
No.1 A.S.R. Flight (Hudson)	Blida	Blida	N.A.C.A.F.
Defence Flight (Spit)	Gibraltar	NACAF	Gib.
Mk.VIII Con. Flt. (Beau)	Reghaia	338 Wing	338 Wing

FRENCH AIR FORCE SQUADRONS

1/3 Sqdn. (Spit)	Ajaccio	FAF.	63rd Ftr. W. (USAAF)
1/4 Sqdn. (P.39)	Reghaia	FAF.	338 Wing
1/5 Sqdn. (P.39)	Tafaraoui	FAF.	337 Wing
1/7 Sqdn. (Spit)	Taher	FAF.	332 Wing
II/3 Sqdn. (Hurri)	Reghaia	FAF.	338 Wing
II/5 Sqdn. (P.40)	Bone	FAF.	Bone
II/7 Sqdn. (Spit)	Ajaccio	FAF.	63rd Ftr. W. (USAAF)
III/6 Sqdn. (P.39)	La Passet	FAF.	337 Wing
2S Naval Sqdn. (Latecoere)	Tafaraoui	FAF.	Tafaraoui
4S Naval Sqdn. (Walrus)	Ajaccio	FAF.	63rd Ftr. W. (USAAF)

BALLOON SQUADRONS AND DETACHMENTS

No.972 Sqdn. SHQ (Non operational)	Cerignola	242 Grp.	242 Grp.
No.975 Sqdn. SHQ	Bari	242 Grp.	242 Grp.
"A" Detachment	Bari	242 Grp.	242 Grp.
"B" Detachment	Barletta	975 Sq. Hq.	242 Grp.
"C" Detachment	Manfredonia	975 Sq. Hq.	242 Grp.
No.977 Sqdn. SHQ (Non operational)	Naples	242 Grp.	62nd Ftr. W. (USAAF)
"A" Detachment	Castellamare	977 Sqn. HQ	62nd Tr. W.
"B" Detachment	Annunziata	977 Sqn. HQ	62nd Ftr. W.
No.981 Sqdn. SHQ	Tindja (Ferryville)	287 Wing	287 Wing
"A" Detachment	Bone	981 Sqn. HQ	Bone
"B" Detachment	Bizerta	981 Sqn. HQ	287 Wing
"C" Detachment	Tindja (Ferryville)	287 Wing	287 Wing

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
No.982 Sqdn. SHQ	Algiers	338 Wing	338 Wing
"A" Detachment	Bastia	982 Sqn. HQ	62nd Ftr. W.
"B" Detachment	Oran	982 Sqn. HQ	337 Wing
"C" Detachment	Maddalena	982 Sqn. HQ	63rd Ftr. W.
"D" Detachment	Algiers	338 Wing	338 Wing
No.983 Sqdn. SHQ & Det.	Malta	Malta	Malta
No.985 Sqdn. SHQ	Taranto	242 Grp.	242 Grp.
"A" Detachment	Taranto	242 Grp.	242 Grp.
"B" Detachment	Brindisi	982 Sq.HQ	242 Grp.
"K" Balloon SHQ & Det.	Augusta	Malta	335 Wing
<u>REGIONAL FLYING CONTROL CENTRES</u>			
No.1 R.F.C.C. (Moving to Pomigliano)	Monte Corvino	323 Wing	NACAF
No.2 R.F.C.C.	Ghisonaccia	328 Wing	NACAF
No.3 R.F.C.C.	Grottaglie	286 Wing	NACAF
No.4 R.F.C.C.	Sidi Amour	287 Wing	NACAF
No.5 R.F.C.C.	Blida	Blida	NACAF
No.6 R.F.C.C.	Malta	Malta	Malta
<u>AIR STORES PARKS</u>			
No.33 A.S.P. (Moving to Sassari - Det. Moving to Alghero)	-	328 Wing	NACAF
No.136 A.S.P. (Moving to Foggia - Det. at Monte Corvino)	-	323 Wing	323 Wing
<u>REPAIR AND SALVAGE UNITS</u>			
No.110 R.S.U. (S.E. A/c) (Detachment at Foggia o/o 323 Wing)	Grottaglie	242 Grp.	242 Grp.
No.111 R.S.U. (T.E. Repairs) o/o No.1 B.P.D. (Detachment proceeding to Corsica. Detachment proceeding to Sardinia)		NACAF	NACAF
<u>REFUELLING AND RE-ARMING PARTIES</u>			
No.30 R. & R. Party	Crotone	335 Wing	335 Wing
<u>MOBILE SERVICING UNITS</u>			
No.4 M.S.U. (Torp.)	Blida	Blida	Blida
No.5 M.S.U. (Torp.)	Grottaglie	242 Grp.	242 Grp.

UNIT	LOCATION	CONTROL	
		ADMIN.	OPER.
<u>AIR SEA RESCUE MARINE CRAFT UNITS</u>			
No.204 A.S.R.M.C.U.	Malta	Malta	Malta
No.205 A.S.R.M.C.U.	Malta	Malta	Malta
No.223 A.S.R.M.C.U.	Bizerta	287 Wing	287 Wing
No.224 A.S.R.M.C.U.	Naples	NACAF	62nd Ftr. W. (USAAF)
No.225 A.S.R.M.C.U.	Bizerta	287 Wing	287 Wing
No.251 A.S.R.M.C.U.	Cagliari	NACAF	63rd Ftr. W. (USAAF)
No.252 A.S.R.M.C.U.	Bone	Bone	Bone
No.253 A.S.R.M.C.U.	Bari	242 Grp.	242 Grp.
No.254 A.S.R.M.C.U.	Ajaccio	NACAF	63rd Ftr. W. (USAAF)
<u>SUPPLY AND TRANSPORT COLUMNS</u>			
No.16 S. & T. (Detachment at Blida)	Taranto Area	242 Grp.	242 Grp.
<u>R.A.F. REGIMENT AND L.A.A. SQUADRON</u>			
No.2864 L.A.A.	Taranto	242 Grp.	242 Grp.
No.2865 L.A.A.	Taranto	286 Wing	286 Wing
No.2866 L.A.A. (En route Corsica)	Algiers	328 Wing	63rd Ftr. W. (USAAF)
No.2867 L.A.A.	Capodichino	323 Wing	323 Wing
No. 2868 L.A.A.	Palermo	335 Wing	335 Wing
No.2869 L.A.A.	N. Cagliari	328 Wing	63rd Ftr. W. (USAAF)
<u>MISCELLANEOUS W/T UNITS</u>			
No.7 "J" Section (En route to Corsica)	-	328 Wing	NAAF
No.87 W.O.U. (To be reduced to a number only basis)	Archirafi Riposto	Malta	Malta
No.14 H.M. W/T	Taranto	242 Grp.	MAC.

UNIT	LOCATION	CONTROL	
		ADMIN.	OPER.
AIR MINISTRY EXPERIMENTAL STATIONS			
No.214 A.M.E.S.	Lake Verano	242 Grp.	323 Wing
No.216 A.M.E.S.	Alma Marine	338 Wing	338 Wing
No.226 A.M.E.S.	Djidjelli	332 Wing	332 Wing
No.233 A.M.E.S.	Cap Rizzuto	335 Wing	335 Wing
No.252 A.M.E.S. (To be reduced to a number only basis)	No.1 B.P.D.	NACAF	-
No.256 A.M.E.S.	S. of Lake Patria	242 Grp.	62nd Ftr. W. (USAAF)
No.274 A.M.E.S.	San Cataldo	286 Wing	286 Wing
No.275 A.M.E.S.	Port Palmas (Alghero)	328 Wing	63rd Ftr. W. (USAAF)
No.283 A.M.E.S.	Syracuse	335 Wing	335 Wing
No.285 A.M.E.S.	Novi	338 Wing	338 Wing
No.286 A.M.E.S.	El Marsa	337 Wing	337 Wing
No.294 A.M.E.S. (Leaving shortly for Cap. St. Marco)	No.1 B.P.D. St. Marco)	328 Wing	63rd Ftr. W. (USAAF)
No.330 A.M.E.S.	Accia Rolli	242 Grp.	62nd Ftr. W. (USAAF)
No.331 A.M.E.S.	Cap. St. Vito	335 Wing	335 Wing
No.372 A.M.E.S.	Spano (Calvi)	328 Wing	63rd Ftr. W. (USAAF)
No.381 A.M.E.S.	El Marsa	337 Wing	337 Wing
No.387 A.M.E.S.	Port Gueydon	338 Wing	338 Wing
No.388 A.M.E.S.	Cap Blanc	287 Wing	287 Wing
No.389 A.M.E.S.	Philippeville	Bone	Bone
No.392 A.M.E.S.	Sagone (Ajaccio)	328 Wing	63rd Ftr. W. (USAAF)
No.295 A.M.E.S.	Aleria	328 Wing	63rd Ftr. W. (USAAF)
No.522 A.M.E.S. (Being disbanded forthwith)	No.2 Base Area	-	-
No.602 A.M.E.S.	Palermo	335 Wing	335 Wing

AIR MINISTRY EXPERIMENTAL STATIONS (contd.)

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
No.621 A.M.E.S. (Being reduced to number only basis)	No.1 B.P.D.	NACAF	-
No.622 A.M.E.S.	Decimomannu	328 Wing	63rd Ftr. W. (USAAF)
No.623 A.M.E.S.	Ischia Isle	323 Wing	62nd Ftr. W. (USAAF)
No.624 A.M.E.S.	Otranto	286 Wing	286 Wing
No.630 A.M.E.S. (Being reduced to number only basis)	No.1 B.P.D.	NACAF	-
No.631 A.M.E.S.	Pula	328 Wing	63rd Ftr. W. (USAAF)
No.675 A.M.E.S. (Being reduced to number only basis)	No.1 B.P.D.	NACAF	-
No.844 A.M.E.S. (Moving to Trapani)	-	335 Wing	335 Wing
No.880 A.M.E.S.	Isle of Maddalena	328 Wing	63rd Ftr. W. (USAAF)
No.881 A.M.E.S. (Moving shortly to Cap Mannu)	Villasor	328 Wing	63rd Ftr. W. (USAAF)
No.889 A.M.E.S.	Aleria	328 Wing	63rd Ftr. W. (USAAF)
No.890 A.M.E.S.	Ischia Isle	242 Grp.	62nd Ftr. W. (USAAF)
No.892 A.M.E.S.	Borgo	328 Wing	63rd Ftr. W. (USAAF)
No.893 A.M.E.S.	Surcouf	338 Wing	338 Wing
No.894 A.M.E.S.	Morris	Bone	Bone
No.895 A.M.E.S.	Cap Rosa	Bone	Bone
No.896 A.M.E.S.	Ustica Isle	335 Wing	335 Wing
No.897 A.M.E.S.	Cap Spartivento	335 Wing	335 Wing
No.898 A.M.E.S.	Alghero	328 Wing	63rd Ftr. W. (USAAF)
No.899 A.M.E.S.	Gulf of Manfredonia	286 Wing	286 Wing
No.6000 A.M.E.S.	o/o H.Q. N.A.C.A.F.	-	-
No.6001 A.M.E.S.	Cap Gallo	335 Wing	335 Wing

AIR MINISTRY EXPERIMENTAL STATIONS (contd.)

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
No.6005 A.M.E.S.	Nr. Bastia	328 Wing	63rd Ftr. W. (USAAF)
No.6006 A.M.E.S.	Novi	338 Wing	338 Wing
No.6007 A.M.E.S.	No.1 B.P.D.	NACAF	-
No.6009 A.M.E.S.	Cap Zaffarano	335 Wing	335 Wing
No.6010 A.M.E.S.	No.1 B.P.D.	NACAF	-
No.6062 A.M.E.S.	Cap Cefalu	335 Wing	335 Wing
No.6109 A.M.E.S. (D.A.F. Unit temporary control of N.A.C.A.F.)	Rossa Point	286 Wing	286 Wing
No.8000 A.M.E.S.	Cap Rizzurto	335 Wing	335 Wing
No.8001 A.M.E.S.	Ajaccio	328 Wing	63rd Ftr. W. (USAAF)
No.8002 A.M.E.S.	Cap Cavallo	332 Wing	332 Wing
No.8003 A.M.E.S.	Spano (Calvi)	328 Wing	63rd Ftr. W. (USAAF)
No.8004 A.M.E.S.	Cap Ivi	337 Wing	337 Wing
No.8005 A.M.E.S. (Going to S. Giovanni Region, 63rd Ftr. Wing (USAAF))	Cap Caxine	338 Wing	338 Wing
No.8006 A.M.E.S.	Cap Tedles	338 Wing	338 Wing
No.8009 A.M.E.S.	Pisciotta	242 Grp.	62nd Ftr. W. (USAAF)
No.8010 A.M.E.S.	Bari	286 Wing	286 Wing
No.8011 A.M.E.S.	Cap Serrat	287 Wing	287 Wing
No.8012 A.M.E.S.	Aspra	335 Wing	335 Wing
No.8016 A.M.E.S.	Peschisi	286 Wing	286 Wing
No.8020 A.M.E.S.	Maddeloni	242 Grp.	62nd Ftr. W. (USAAF)
No.8023 A.M.E.S.	Augusta	335 Wing	335 Wing
No.8031 A.M.E.S.	Cap Vaticano	335 Wing	335 Wing
No.8032 A.M.E.S.	Brindisi	286 Wing	286 Wing
No.8041 A.M.E.S.	Cap San Mari de Luca	286 Wing	286 Wing
No.8043 A.M.E.S.	Cap Murro di Porco	335 Wing	335 Wing
No.8044 A.M.E.S.	Lake Lesina	242 Grp.	323 Wing

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APPENDIX 28

AIR MINISTRY EXPERIMENTAL STATIONS (contd.)

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
No.11000 A.M.E.S. (To be assigned to N.A.C.A.F. - Maonaggio Area)	No.2 Base Area	-	-
No.11001 A.M.E.S. (Forming proposed to go to	No.1 B.P.D. Nr. Bastia)	-	-
No.14027 A.M.E.S.	Taranto	242 Group	-
No.14028 A.M.E.S.	Nr. Bari	286 Wing	286 Wing
No.16004 A.M.E.S. (Proposed for Lumio - E.T.A. late Jan. 1944)	Maddalena	No.2 B.A.	M.A.C.
<u>SIGNAL SERVICING UNITS AND SECTIONS</u>			
No.302 M.S.S.U. (To be reduced to number only basis)	Fochville (Megrine)	287 Wing	287 Wing
No.303 M.S.S.U.	Palermo	Malta	Malta
No.304 M.S.S.U. (To be reduced to number only basis)	Naples Area	D.A.F.	-
No.1 Radar S.S.	Djidjelli	332 Wing	332 Wing
No.2 Radar S.S.	Bari	286 Wing	286 Wing
No.3 Radar S.S.	Palermo	335 Wing	335 Wing
No.4 Radar S.S.	o/o 63rd Ftr. Wing	328 Wing	63rd Ftr. W. (USAAF)
No.5 Radar S.S.	Bone	Bone	Bone
No.6 Radar S.S. (En route)	Naples	242 Grp.	62nd Ftr. W. (USAAF)
<u>PERSONNEL TRANSIT CENTRES</u>			
No.52 P.T.C.	Catania	Malta	Malta
Aircrew Rest House	Taormina	Malta	Malta
<u>MISCELLANEOUS UNITS</u>			
No.1 Hydrogen Supply Unit	Taranto	242 Grp.	242 Grp.
Film Production Unit	Pari	975 Sqdn.	M.A.C.

PART IIDETAILED SUMMARY OF U.S.A.A.F. UNITS IN N.A.C.A.F.

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
	<u>COMMAND HEADQUARTERS</u>		
XIIth Fighter Command	Algiers	XII Air Force	NACAF
	<u>WING HEADQUARTERS</u>		
62nd Fighter Wing	Naples	XIIth F.C.	XIIth F.C.
63rd Fighter Wing	Bastia	XIIth F.C.	XIIth F.C.
	<u>GROUP HEADQUARTERS</u>		
52nd Fighter Group	Ajaccio	63rd Ftr. W.	63rd Ftr. W.
81st Fighter Group	Sidi Achmed	62nd Ftr. W.	62nd Ftr. W.
350th Fighter Group	Alghero	63rd Ftr. W.	63rd Ftr. W.
2688th HQ. & HQ. Sqdn.	Ajaccio	63rd Ftr. W.	63rd Ftr. W.
2689th HQ. & HQ. Sqdn.	Oran	XIIth F.C.	XIIth F.C.
310th Bombardment Group	Philippeville	XIIth F.C.	XIIth F.C.
	<u>FIGHTER SQUADRONS</u>		
2nd Ftr. Sqdn. (Spit) Air Echelon Ground Echelon	Borgo Bocca di Falco	52nd Ftr. Gp.	52nd Ftr. Gp.
4th Ftr. Sqdn. (Spit) Air Echelon Ground Echelon	Calvi Bocca di Falco	52nd Ftr. Gp.	52nd Ftr. Gp.
5th Ftr. Sqdn. (Spit) Air Echelon Ground Echelon	Borgo Bocca di Falco	52nd Ftr. Gp.	52nd Ftr. Gp.
91st Ftr. Sqdn. (P.39) Air Echelon Ground Echelon	Monte Corvino Sidi Achmed	81st Ftr. Gp.	81st Ftr. Gp.
92nd Ftr. Sqdn. (P.39) Air Echelon Ground Echelon	Castelvatrano Sidi Achmed	81st Ftr. Gp.	81st Ftr. Gp.
93rd Ftr. Sqdn. (P.39)	Sidi Achmed	81st Ftr. Gp.	287 Wing (R.A.F.)
345th Ftr. Sqdn. (P.39)	Alghero	350th Ftr. Gp.	350th Ftr. Gp.
346th Ftr. Sqn. (P.39) (Detachment at Reghaia)	Elmas, Cagliari	350th Ftr. Gp.	350th Ftr. Gp.
347th Ftr. Sqdn. (P.39)	Ajaccio	350th Ftr. Gp.	350th Ftr. Gp.

FIGHTER SQUADRONS (contd.)

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
414th N/Ftr. Sqdn. (Beau) (Rear Party at Reghaia)	Elmas	63rd Ftr. W.	63rd Ftr. W.
416th N/Ftr. Sqdn. (Beau)	Grottaglie	XIIth F.C.	286 Wing (R.A.F.)
417th N/Ftr. Sqdn. (Beau)	Tafaraoui	2689th HQ. & HQ. Sqdn.	2689th HQ. & HQ. Sqdn.
<u>BOMBER SQUADRONS</u>			
379th Bomb. Sqdn. (B.25)	Philippeville	310th B. Gp.	310th B. Gp.
380th Bomb. Sqdn. (B.25)	Philippeville	310th B. Gp.	310th B. Gp.
381st Bomb. Sqdn. (B.25)	Philippeville	310th B. Gp.	310th B. Gp.
428th Bomb. Sqdn. (B.25)	Philippeville	310th B. Gp.	310th B. Gp.
<u>AIR SEA RESCUE UNITS</u>			
Catalina A.S.R. Det.	Sidi Achmed	XIIth F.C.	287 Wing (RAF)
<u>FIGHTER CONTROL SQUADRONS</u>			
15th Ftr. Cont. Sqdn.	Naples	62nd Ftr. W.	62nd Ftr. W.
78th Ftr. Cont. Sqdn.	Alghero	63rd Ftr. W.	63rd Ftr. W.
311th Ftr. Cont. Sqdn. (Detachment at Ferme Caroline)	Oran	2689th HQ. & HQ. Sqdn.	2689th HQ. & HQ. Sqdn.
2685th Ftr. Cont. Sqdn.	Ajaccio	63rd Ftr. W.	63rd Ftr. W.
<u>QUARTERMASTER'S BOAT CREWS</u>			
1545th Q.M's Boat Crew	Algiers	63rd Ftr. W.	63rd Ftr. W.
1546th Q.M's Boat Crew	Algiers	63rd Ftr. W.	63rd Ftr. W.
1547th Q.M's Boat Crew	Philippeville	310th B. Gp.	310th B. Gp.
1548th Q.M's Boat Crew	Philippeville	310th B. Gp.	310th B. Gp.
1566th Q.M's Boat Crew (Not yet operational)	La Senia	XIIth F.C.	XIIth F.C.
1567th Q.M's Boat Crew (Not yet operational)	La Senia	XIIth F.C.	XIIth F.C.
<u>SIGNALS HEADQUARTERS</u>			
Sigs. HQ. Co. AWS.XIIth F.C.	Maison Carrée	XIIth F.C.	XIIth F.C.

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
<u>SIGNAL CONSTRUCTION BATTALIONS</u>			
437th Sig. Cont. Bn.	Naples	62nd Ftr. W.	62nd Ftr. W.
Company "A"	Ajaccio	63rd Ftr. W.	63rd Ftr. W.
Company "B"	Naples	62nd Ftr. W.	62nd Ftr. W.
<u>SIGNAL COMPANY WINGS</u>			
308th Sig. Co. Wing	Bastia	63rd Ftr. W.	63rd Ftr. W.
318th Sig. Co. Wing	Naples	62nd Ftr. W.	62nd Ftr. W.
<u>SIGNAL AIR WARNING BATTALIONS</u>			
560th Sig. A.W. Bn.		63rd Ftr. W.	63rd Ftr. W.
H.Q. & Plot. Co.	Reghaia	63rd Ftr. W.	63rd Ftr. W.
(Advanced Party at Reghaia)			
Company "A"	Reghaia	560th SAW Bn.	338 Wing
Company "B"	Sardinia	560th SAW Bn.	63rd F.W.
(Det. at Reghaia)		560th SAW Bn.	338 Wing (RAF)
561st Sig. A.W. Bn.		2689th HQ.	2689th HQ.
HQ. & Plot. Co.	Cape Falcon	561st SAW. Bn.	2689th HQ.
(Detachment at Casablanca)			
Company "C"	Cape Falcon	561st SAW. Bn.	2689th HQ.
Company "D"	Cape Falcon	561st SAW. Bn.	2689th HQ.
Company "E"	Cape Falcon	561st SAW. Bn.	2689th HQ.
562nd Sig. A.W. Bn.		62nd Ftr. W.	62nd Ftr. W.
H.Q. & Plot. Co.	Naples	562nd SAW. Bn.	62nd F.W.
Company "A"	Naples	562nd SAW. Bn.	562nd SAW. Bn.
(1 Plt. in Sicily)			
Company "B" (2 Plts. Sardinia)		562nd SAW. Bn.	562nd SAW. Bn.
(4 Plts. Corsica)		562nd SAW. Bn.	562nd SAW. Bn.
(2 Plts. Algiers for training)		562nd SAW. Bn.	-
<u>V.H.F. INSTALLATION CREWS</u>			
2nd V.H.F. Inst. Crew.	Naples	15th F.C. Sq.	15th F.C. Sq.
4th V.H.F. Inst. Crew.	Alghero	78th F.C. Sq.	78th F.C. Sq.
<u>RADAR STATIONS</u>			
US.3	XII AFSC Depot Algiers	XII AFSC.	
US.5	Ain Siernia Casablanca	561st Co.E	2689th HQ. & HQ. Sq.
US.6	Castro Volturno Naples	562nd Co.A	62nd Ftr.W.
US.202 (Non-operational)	XII AFSC Depot, Naples	XII AFSC	
US.203	Tarenarova, Naples	562nd Co.A	62nd Ftr. W.
US.530	Cap Bougaroun, Taher	560th Co.A	338 Wing (RAF)

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RADAR STATIONS (contd.)APPENDIX 28

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
US.531	Cap Caxine, Algiers	560th Co.A	338 Wing (RAF)
US.532	Fleurus, Oran	561st Co.D.	2689th HQ. & HQ. Sqn.
US.534	Cap Carbon, Oran	560th Co.D.	2689th HQ. & HQ. Sqn.
US.535	Cap Tennes, Oran	560th Co.D.	2689th HQ. & HQ. Sqn.
US.536	Cap Sigli, Oran	560th Co.A.	2689th HQ. & HQ. Sqn.
US.537	Kelipia, Tunis	560th Co.A.	287 Wing (RAF)
US.538	Cap Takouch, Bone	560th Co.A.	Bone
US.542	Fedhala, Casablanca	561st Co.D.	2689th HQ. & HQ. Sqn.
US.547	El Azib, Tunis	560th Co.A.	287 Wing (RAF)
US.576 (Non-operational)	Cap Caxine, Algiers	561st Co.C.	338 Wing (RAF)
US.578 (Under construction)	Rouiba, Algiers	560th Co.A.	338 Wing (RAF)
US.1009	XIIIth AAFC Depot		
US.1010 (Non-operational)	Tertenia, Alghero	562nd Co.B.	63rd Ftr. W. 2688 HQ. & HQ. Sqn.
US.1013 (Non-operational)	Solenzara, Ajaccio	562nd Co.B.	
US.1014 (To move to Cap Amis)	Cap Ivi, Oran	561st Co.E.	2689th HQ. & HQ. Sqn.
US.1015	Cap Figalo, Oran	561st Co.E.	2689th HQ. & HQ. Sqn.
US.1026	Ain Siernia, Casablanca	561st Co.C.	2689th HQ. & HQ. Sqn.
US.1028	Cap Falcon, Oran	561st Co.C.	2689th HQ. & HQ. Sqn.
US.1029	Argentiera, Alghero	560th Co.B.	63rd Ftr.W.
US.1030	Anticoo, Cagliari	562nd Co.B.	63rd Ftr.W. 2688th HQ. & HQ. Sqn.
US.1031	San Lucia, Alghero	560th Co.B.	63rd Ftr. W.

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RADAR STATIONS (contd.)

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
US.1037	Ruvo di Puglia, Foggia	562nd Co.A.	62nd Ftr. W. 286 Wing (RAF)
US.1038	Qualiano, Naples	562nd Co.A.	62nd Ftr. W.
US.1121	Dellys, Algiers	560th Co.B.	338 Wing (RAF)
US.1122	Cherchell, Algiers	560th Co.B.	338 Wing (RAF)
US.1124	Calvi, Borgo	562nd Co.B.	63rd Ftr. W. 2688 HQ. & HQ. Sqn.
US.1168	Sisterno, Taranto	562nd Co.A.	62nd Ftr. W. 286 Wing (RAF)
US.1169	Cap San Vito, Borizzo	562nd Co.A.	62nd Ftr. W. 335 Wing (RAF)
US.1171	Ruvo di Puglia, Foggia	562nd Co.A.	62nd Ftr. W. 286 Wing (RAF)
US.1174 (Non-operational)	Amalfi, Naples	560th Co.A.	62nd Ftr. W.
US.6600	Bouzarea, Algiers	560th Co.A.	338 Wing (RAF)
US.6601 (Non-operational)	Longa	562nd Co.B.	63rd Ftr. W. 2688th HQ. & HQ. Sqn.
US.6602	Cap Blanc, Tunis	560th Co.A.	287 Wing (RAF)
US.6603 (Non-operational)	Cap Rera, Alghero	560th Co.B.	63rd Ftr. W.
US.6604 (Non-operational)	Cap Tennes, Oran	561st Co.	2689th HQ. & HQ. Sqn.
US.6605 (En route from Cagliari)	Ajaccio Sector	560th Co.	63rd Ftr. W.
US.6606 (En route Bastia from Cagliari)	Borgo Sector	562nd Co.B.	63rd Ftr.W. 2688th HQ. & HQ. Sqn.
US.6607	Oran	561st Co.	2689th HQ. & HQ. Sqn.
US.6608	Termini Imerese, Borizzo	Navy Ops. Palermo APO. Navy 157	335 Wing (RAF)
US.6609	Cap San Vito, Borizzo	Navy Oper. Palermo APO. Navy 157	335 Wing (RAF)

RADAR STATIONS (contd.)

<u>UNIT</u>	<u>LOCATION</u>	<u>CONTROL</u>	
		<u>ADMIN.</u>	<u>OPER.</u>
US.6610 (En route Bastia from Algiers)	Cap Corse, Borgo	562nd Co.	63rd Ftr. Wing 2688th HQ. & HQ. Sqn.
US.6611	Cap Zaffarano, Borizzo	Navy Ops. Palermo APO. Navy 157	335 Wing (RAF)
US.6612	Cap Gallo, Borizzo	Navy Ops. Palermo APO. Navy 157	335 Wing (RAF)
US.6613	Casablanca	561st Co.	2689th HQ. & HQ. Sqn.
<u>MISCELLANEOUS UNITS</u>			
Co. "A" 734th M.P. Bn.	Ajaccio	63rd Ftr. W.	63rd Ftr. W.
6728th Admin. Plt. AF. Rest Camp.	Naples	XIIth F.C.	XIIth F.C.

NO. 201 (NAVAL CO-OPERATION) GROUP (ALEXANDRIA)ORDER OF BATTLEAT 23 NOVEMBER 1943

UNIT	BASE	ADVANCED	AIRCRAFT	I.E.	FUNCTION	REMARKS
Comm. Flight	Mariut		Beechcraft/Wellington/ Blenheim V/Various	7	Communication (No. 201 Gp.)	
<u>NO. 235 WING</u>	<u>GAMBUT 3</u>	<u>Dets. Matruh</u> <u>West &</u> <u>El Adem</u>			<u>NAVAL CO-OPERATION</u> <u>TOBRUK AREA</u>	
No. 13 (Hellenic) Sqdn	Gambut 3		Blenheim V/Baltimore IIIA/ IV	16	G.R. (Short Range)	
No. 15 S.A.A.F. Sqdn	Matruh West		Baltimore III/IV	16	G.R. (Short Range)	Originally Light Bombers Ex N.W. Africa. On strength M.E. Command w.e.f. 29.10.43
No. 47 Sqdn	Gambut 3		Beaufighter IX	16	T.E. Fighter	
No. 459 R.A.A.F. Sqdn	Gambut 3		Hudson IIIA/V/VI	16	G.R. (Short Range)	
No. 603 Sqdn	Gambut 3		Beaufighter X/X T.F.	16	T.E. Fighter	To re-arm Venturas 2 Flights of L.E. R.P. 8 each.
<u>No. 245 WING</u>	<u>ST. JEAN</u>	<u>Det.</u> <u>Amriyah S.</u>			<u>NAVAL CO-OPERATION</u>	<u>Control of Reconnaissance</u> <u>and Striking Force Units (Under No. 201 Gp.)</u> <u>from Turkish border to Delta</u>
No. 1 G.R.U.		Ismailia	Wellington D.W. 1A/1C	3	G.R.	Fitted with Sulenoid Ring.
No. 17 S.A. Sqdn.	St. Jean		Ventura V	16	G.R./S.R.	
No. 38 Sqdn. Det.	St. Jean		Wellington VIII/IX		G.R./L.R.	
No. 168 Sqdn		L.G. 91	Wellington IC/Walrus/	12	Signals	See H.Q., M.E.
No. 294 Sqdn		L.G. 91	Blenheim V.		Air Sea Rescue	Dets. Berka 3 and Lakatamia
No. 252 Sqdn	Air Party Lakatamia	Ground Party Amriya South	Beaufighter I/II/XI	16	T.E. Day Fighter	Move to India in abeyance

UNIT	BASE	ADVANCED	AIRCRAFT	I.E.	FUNCTION	REMARKS
<u>No. 247 WING</u> No. 16 S.A. Sqdn.	<u>BERKA 3</u> Berka 3		Beaufort I/II/Beaufighter I	20	<u>NAVAL CO-OPERATION</u> G.R. Short Range	<u>(BENGHAZI AREA)</u> To re-arm Beaufighter X and change over to T.E. Fighter Shipping Strike. Temporary I.E. 20.
No. 38 Sqdn.	Berka 3	Det. St. Jean	Wellington XI/XIII	16	G.R./Long Range Torpedo Bombers	
No. 294 Air Sea Rescue Sqn. Det.	Berka 3		Wellington/Walrus	-	Air Sea Rescue	
No. 454 R.A.A.F. Sqdn	Berka 3		Baltimore IIIA/IV/V	16	G.R. (Short Range)	Originally light bombers.

(Source: A.H.B. II J.1/31/1)

BRITISH, ALLIED AND NEUTRAL MERCHANT SHIPPING LOSSES
IN THE MEDITERRANEAN AND INDIAN OCEAN
DUE TO ENEMY ACTION

ANALYSIS BY AREAS

Year and Month	Mediterranean	Indian Ocean
<u>1943</u>		
January	47,506 (14)	-
February	52,718 (14)	15,787 (3)
March	91,452 (17)	62,303 (10)
April	13,972 (6)	43,007 (6)
May	32,300 (6)	28,058 (6)
June	24,533 (7)	67,929 (12)
July	80,309 (14)	97,214 (17)
August	43,351 (11)	46,401 (7)
September	52,426 (11)	39,471 (6)
October	45,767 (9)	25,833 (6)
November	67,846 (10)	29,148 (4)
December	83,480 (18)	31,173 (5)
Total	635,658 (137)	486,324 (82)
<u>1944</u>		
January	31,413 (5)	56,213 (8)
February	36,059 (8)	64,169 (10)
March	40,900 (5)	75,498 (12)
April	34,141 (5)	-
May	10,020 (2)	-
June	2,037 (1)	19,319 (3)
July	-	30,176 (5)
August	53 (1)	57,732 (9)
September	1,437 (1)	5,670 (1)
October	2,770 (1)	-
November	-	14,025 (2)
December	716 (1)	-
Total	159,545 (30)	322,802 (50)
<u>1945</u>		
January	-	-
February	-	7,176 (1)
March	-	-
April	-	-
May	-	-
June	7,176 (1)	-
July	7,198 (1)	-
August	-	-
?	-	1,806 (2)
Total	14,374 (2)	8,982 (3)

ANNUAL LOSSES

Year	Mediterranean	Indian Ocean
1939	-	706 (1)
1940	64,183 (13)	173,416 (24)
1941	501,363 (158)	73,155 (20)
1942	365,127 (73)	72,485 (205)
1943	635,658 (137)	486,324 (82)
1944	159,545 (30)	322,802 (50)
1945	14,374 (2)	8,982 (3)
Total	1,746,250 (413)	1,789,870 (385)
Per Mensem (72 months)	24,170 (5.7)	24,859 (5.3)
Per cent of Total Loss in all waters	8.1 (8.0)	8.3 (7.5)

Notes. Indian Ocean includes the Red Sea and extends to the East India Station boundary line.

Mediterranean includes Suez and the Gulf of Suez.

These figures are provisional.

Source: Merchant Ship Losses Analysis by Causes and Areas (Restricted) (Admiralty Historical Section July 1956 and amendments dated 2.11.56 and 23.1.57). (A.H.B.(1)/2/4/3 B/F).

British, Allied and Neutral Merchant Ship Losses: Mediterranean 1943.Analysis of Causes

1943		Submarine	Aircraft	Mine	Other	Total
<u>Jan.</u>	B.	-	23,979 (4)	-	-	23,979 (4)
	A.	11,969 (3)	1,524 (1)	2,926 (1)	6,943 (2)	23,362 (7)
	N.	165 (3)	-	-	-	165 (3)
	T.	12,134 (6)	25,503 (5)	2,926 (1)	6,943 (2)	47,506 (14)
<u>Feb.</u>	B.	15,831 (3)	-	-	-	15,831 (3)
	A.	11,790 (3)	-	20,022 (3)	4,648 (1)	36,560 (7)
	N.	352 (3)	75 (1)	-	-	427 (4)
	T.	27,973 (9)	75 (1)	20,022 (3)	4,648 (1)	52,718 (14)
<u>Mar.</u>	B.	35,671 (7)	42,907 (4)	-	-	78,578 (11)
	A.	9,551 (1)	2,878 (2)	-	-	12,429 (3)
	N.	445 (3)	-	-	-	445 (3)
	T.	45,667 (11)	45,785 (6)	-	-	91,452 (17)
<u>Apr.</u>	B.	1,858 (1)	-	-	-	1,858 (1)
	A.	12,076 (4)	-	-	-	12,076 (4)
	N.	-	38 (1)	-	-	38 (1)
	T.	13,934 (5)	38 (1)	-	-	13,972 (6)
<u>May.</u>	B.	5,979 (1)	14,255 (3)	-	*4,875 (1)	25,109 (5)
	A.	-	-	-	*7,191 (1)	7,191 (1)
	N.	-	-	-	-	-
	T.	5,979 (1)	14,255 (3)	-	12,066 (2)	32,300 (6)
<u>Jun.</u>	B.	18,724 (3)	813 (1)	-	-	19,537 (4)
	A.	4,921 (2)	-	-	-	4,921 (2)
	N.	75 (1)	-	-	-	75 (1)
	T.	23,720 (6)	813 (1)	-	-	24,533 (7)
<u>Jul.</u>	B.	25,904 (4)	34,328 (5)	-	-	60,232 (9)
	A.	-	19,978 (3)	-	-	19,978 (3)
	N.	97 (2)	-	-	-	97 (2)
	T.	26,001 (6)	54,306 (8)	-	-	80,307 (14)
<u>Aug.</u>	B.	6,075 (3)	5,397 (2)	-	-	11,472 (5)
	A.	14,436 (2)	-	-	*17,120 (2)	31,556 (4)
	N.	183 (1)	140 (1)	-	-	323 (2)
	T.	20,694 (6)	5,537 (3)	-	17,120 (2)	43,351 (11)
<u>Sep.</u>	B.	10,855 (2)	6,791 (1)	4,178 (2)	-	21,824 (5)
	A.	21,543 (3)	7,191 (1)	-	-	28,734 (4)
	N.	80 (1)	1,788 (1)	-	-	1,868 (2)
	T.	32,478 (6)	15,770 (3)	4,178 (2)	-	52,426 (11)
<u>Oct.</u>	B.	4,970 (1)	10,908 (2)	7,174 (1)	-	23,052 (4)
	A.	12,718 (2)	4,596 (1)	4,736 (1)	-	22,050 (5)
	N.	-	-	665 (1)	-	665 (1)
	T.	17,688 (3)	15,504 (3)	12,575 (3)	-	45,767 (9)
<u>Nov.</u>	B.	2,887 (1)	22,340 (3)	-	-	25,227 (4)
	A.	4,531 (1)	35,707 (3)	2,318 (1)	-	42,556 (5)
	N.	63 (1)	-	-	-	63 (1)
	T.	7,481 (3)	58,047 (6)	2,318 (1)	-	67,846 (10)
<u>Dec.</u>	B.	8,009 (1)	14,668 (4)	-	-	22,677 (5)
	A.	-	60,803 (13)	-	-	60,803 (13)
	N.	-	-	-	-	-
	T.	8,009 (1)	75,471 (17)	-	-	83,480 (18)

* Italian Assault Craft.

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British, Allied and Neutral Merchant Ship Losses: Mediterranean 1943.Analysis of Causes (Contd.)

1943	Submarine	Aircraft	Mine	Other	Total
G.T. B.	136,763 (27)	176,386 (29)	11,352 (3)	4,875 (1)	329,376 (60)
A.	103,535 (21)	132,677 (24)	30,002 (6)	35,902 (6)	302,116 (57)
N.	1,460 (15)	2,041 (4)	665 (1)	-	4,166 (20)
T.	241,758 (63)	311,104 (57)	42,019 (10)	40,777 (7)	635,658 (137)

There were no losses due to Surface Raiders or E-boats.

BRITISH, ALLIED & NEUTRAL MERCHANT SHIP LOSSES: MEDITERRANEAN 1944.ANALYSIS OF CAUSES

1944	Submarine	Aircraft	Mine	Total
<u>Jan.</u>	B. -- A. -- N. --	9,880 {2} 14,357 {2}	-- 7,176 (1)	9,880 {2} 21,533 {3}
	T.	24,237 (4)	7,176 (1)	31,413 (5)
<u>Feb.</u>	B. 7,154 {1} A. 14,352 {2} N. 200 {3}	-- 14,352 (2) --	-- -- --	7,154 {1} 28,704 {4} 200 {3}
	T. 21,706 (6)	14,352 (2)	--	36,058 (8)
<u>Mar.</u>	B. -- A. 30,365 {3} N. 3,359 {1}	-- -- --	-- 7,176 (1) --	-- 37,541 {4} 3,358 {1}
	T. 33,724 (4)	--	7,176 (1)	40,900 (5)
<u>Apr.</u>	B. -- A. 14,386 (2) N. --	7,900 {1} 11,855 (2) --	-- -- --	7,900 {1} 26,241 {4}
	T. 14,386 (2)	19,755 (3)	--	34,141 (5)
<u>May</u>	B. 7,147 (1) A. -- N. --	2,873 (1) -- --	-- -- --	10,020 (2)
	T. 7,147 (1)	2,873 (1)	--	10,020 (2)
<u>Jun.</u>	B. -- A. -- N. --	-- -- --	-- 2,037 (1) --	-- 2,037 (1)
	T. --	--	2,037 (1)	2,037 (1)
<u>Jul.</u>	B. -- A. -- N. --	-- -- --	-- -- --	-- -- --
	T. --	--	--	--
<u>Aug.</u>	B. -- A. -- N. 53 (1)	-- -- --	-- -- --	-- -- 53 (1)
	T. 53 (1)	--	--	53 (1)
<u>Sep.</u>	B. -- A. -- N. --	-- -- --	-- 1,437 (1) --	-- 1,437 (1)
	T. --	--	1,437 (1)	1,437 (1)
<u>Oct.</u>	B. -- A. -- N. --	-- -- --	-- 2,770 (1) --	-- 2,770 (1)
	T. --	--	2,770 (1)	2,770 (1)
<u>Nov.</u>	B. -- A. -- N. --	-- -- --	-- -- --	-- -- --
	T. --	--	--	--
<u>Dec.</u>	B. -- A. -- N. --	-- -- --	716 (1) -- --	716 (1) -- --
	T. --	--	716 (1)	716 (1)

BRITISH, ALLIED & NEUTRAL MERCHANT SHIP LOSSES: MEDITERRANEAN 1944
ANALYSIS OF CAUSES (Contd.)

1944	Submarine	Aircraft	Mine	Total
G.T. B.	14,301 (2)	20,653 (3)	716 (1)	35,670 (7)
A.	59,103 (7)	40,564 (6)	17,122 (3)	116,789 (16)
N.	3,612 (5)	-	3,472 (2)	7,086 (7)
T.	77,016 (14)	61,217 (10)	21,312 (6)	159,545 (30)

There were no losses due to Surface Raiders, E-boats or Other.

B - British
A - Allied (i.e. other than British)
N - Neutral.

Figures in brackets indicate the number of ships.

Source: Admiralty Historical Section 23 Jan. 57.

THE ISLAND OF VIS (LISSA)
GERMAN REACTIONS TO THE ALLIED OCCUPATION
AND PLANS FOR ITS CAPTURE
(SEPTEMBER 1943 TO APRIL 1944)

(A study by the Foreign Documents Section,
Admiralty, prepared from captured German
naval records - Ref. N.I.D.24/X/197)

The dominating factor in the German attitude to the Dalmatian Islands situation was the overwhelming Allied air superiority which, coupled with the already scanty German naval and air forces in that area, robbed them of all prospect of securing these islands which were regarded, by the Navy in particular, as a bridgehead for a possible Allied invasion of the Eastern Adriatic coast.

Consequently there were frequent misunderstandings between the three branches of the Wehrmacht, particularly between the Naval Group South and the C-in-C for the South East, where the Naval Liaison Officer failed entirely to achieve co-operation and was recalled by the Naval War Staff. No reference was found in the files to the fact that the High Command of the Wehrmacht sent an officer to investigate the situation in this area as it affected all branches of the Wehrmacht.

The following is a more detailed summary of the German reactions to Allied activities in the Adriatic from September 1943 until April 1944, when the idea of capturing Vis was abandoned by the Germans.

1. September-November 1943: Necessity for a German occupation of the islands becomes obvious.

As early as September 1943, when the war in the Adriatic was growing in intensity, Vice-Admiral Lietzmann, the Admiral in Command in the Adriatic, realised the importance of a German occupation of the Dalmatian Islands, especially Vis, Lagosta and Cazza. It was also realised that, while the naval forces available were unable to carry out this task, the Army was likewise unable to undertake it without the Navy's help.

The Navy was asked to state how many landing craft, motor coasters and fishing vessels could be made available. Attacks by Allied batteries on the German shipping along the Dalmatian coast were becoming so serious that in October 1943 the Army requested the co-operation of the Luftwaffe in destroying these batteries. The Navy also called for air support for its transport activities, which were being seriously hampered by Allied air and submarine attacks, but the Luftwaffe was unable to provide air cover for more than four hours a day owing to its own operations in the Aegean Sea.

The native partisans were causing the Germans considerable embarrassment and the NOIC Split said in his October report: "Railway communications are cut and land transport, already complicated by a shortage of vehicles, is further hampered by the continuous activities of partisans, who completely surround Split to landward and whose artillery occupies commanding positions on the islands. There is constant British air reconnaissance in co-operation with the island garrisons."

The occupation of the islands off the Dalmatian coast was stressed again on 11 October by FOIC South but, although between 21 and 23 October a number of small islands off Zibenik were occupied by the Germans with little or no resistance, the lack of escort vessels and adequate air support prevented the occupation of these islands by the Germans from making it any easier for them to carry on their shipping and coastal convoys.

A German agent reported on 1 November that the island of Hvar was being supplied from a submarine which also took depth soundings for the approach of larger ships. Another report on 11 November spoke of a British ship which every other night put into Korzula with supplies and ammunition. British and Russian agents were also said to be having discussions here with Marshal Tito.

There had obviously been serious disturbance of the German organisation, for on several occasions German batteries had engaged their own ships and aircraft.

The Germans continued to take every opportunity of occupying the other islands and took many prisoners including partisans and British and American Commandos; but, as invariably they failed to remain on the islands after clearing out the hostile elements, partisans and Allied troops re-occupied them within a short time. The German Admiral Adriatic commented in his diary on the futility of these methods and the unnecessary strain imposed on the scanty resources in naval vessels.

Further "reliable" reports came in about the Allies' intentions to land on the Albanian or Dalmatian coast, but it was realised that no regular watch could be kept in that area. However, the Germans decided to attempt the clearance of the southern Dalmatian islands by the end of 1943 in the hope of freeing their shipping for other emergencies.

An agent reported on 20 November that Allied ships were about to transport material from Vis to Sali (S.W. of Zara) and the Naval War Staff asked the opinion of Admiral Adriatic on the occupation of the islands. His reply advocated the occupation of all the larger islands on the east coast of the Adriatic, because the enemy might at any time infiltrate and use them not only as bases for small naval craft and submarines, but also as jumping off points for Commando operations. As naval forces were inadequate for garrisoning any of the islands, the proposal was made to use Croats for that purpose, in spite of their doubtful reliability.

The Germans were well aware that the Allies were carrying on a very active inter-island traffic in November, but before Zara was occupied they could do nothing to stop this. It was stated that the South Dalmatian Brigade was almost exclusively supplied by the British. This regular supply of the partisans made it all the more urgent for the Germans to occupy the islands before these could be used by the enemy for operations against the German-held coast.

A small German force consisting of the Flak cruiser "Cattaro", an ex-Italian torpedo boat and two auxiliaries, watching for movements of partisans between the islands, managed to sink a few small craft on 23 November and, on 27 November, an E-boat attempted a surprise attack on the harbour of Vis, but failed owing to engine trouble and the appearance of MGB's. The German measures did not succeed in preventing the partisans from re-appearing at various points on the islands and shooting up German shipping. A further serious handicap was the complete air superiority of the Allies, who made low level attacks at will and inflicted such heavy losses on German shipping that it became impossible to escort the transport shipping as well as carry out operations against the islands.

II. Operation "Freischutz" (Capture of Vis (Lissa)): planning begins

Admiral Adriatic, convinced of the strategic necessity of occupying the Dalmatian Islands, made another suggestion early in December 1943 that all available naval forces, co-operating with strong forces of fighter aircraft, should attempt the operation. On 11 December, the importance of such an undertaking was recognised by the German War Staff and the naval authorities accordingly began concentrating their shipping for the capture of Korzula, Hvar, and Brac, to be followed by Lagosta and Vis. This naturally involved the Germans in further damage to their shipping, as the Allies immediately intensified their air attacks.

On 21 December, there were reports of Allied forces on Vis (Lissa) and Lagosta and the Germans believed that landings on Korzula and Bar were imminent. They therefore occupied Korzula on 23 December, losing some valuable shipping in the process.

German plans for the occupation of Vis (Lissa) began on 1 January 1944; within a fortnight, the hopelessness of the task was impressed on them yet again. An E-boat, with the prize vessel which it was towing to Korzula, were both sunk by Allied fighter planes and Admiral Adriatic pointed out in his diary that this was due to the lack of fighter and A.A. defence, about which he had been complaining for months.

On 18 January, the partisans evacuated the island of Hvar and on the next day the Germans took it over. According to Army opinion, the Navy's needs were now satisfied, for the sea route from Dubrovnik to Cattaro was clear. In order to stamp out the supply of the partisans, the Army was prepared to clear the island of Vis (Lissa) and use it as a base as well as for the defence of the coast; but the Navy was required to provide a garrison of at least 1 battalion and 3 coastal batteries. This was impossible and FOIC South pointed out that a continuous occupation of the island was in the interest of all the forces in the whole coastal area and not of the Navy alone.

After much discussion on the garrisoning question, a date was fixed for the attack, viz. between 20 February and 1 March 1944. Admiral Adriatic managed to gather together the following vessels: 2 large and 2 small torpedo boats, 1 escort ship, 2 corvettes, 6 E-boats, 3 R-boats, 4-6 Siebel ferries, 14 I-boats (landing craft) and 25 other landing craft.

III. Operation "Freischutz" postponed until 17 March: then 4 April.
Summary of situation in Vis by Admiral Adriatic

At a conference of all three branches of the Wehrmacht on 22/23 February, operation "Freischutz" was postponed until 17 March and then, at the Army's request, until 4 April. Subsequently, a naval representative of Admiral Adriatic attended a conference at the headquarters of the Second Panzer Army and Admiral Adriatic summarised the results as follows:

"Since the enemy has converted this island into a naval base, he will probably use correspondingly stronger forces for its defence. (Naval and Air forces, Yugoslav Brigades, and possibly English and American units). The island is also a supply centre for the Tito partisans and there are probably D/F and Radar stations there. It is possible that the capture of Vis may prove as difficult as that of Leros, because there are air bases very near and conditions for enemy naval forces are more favourable in the Adriatic than in the Aegean Islands.

"Enemy forces, which will probably be commanded by General Miles, are estimated at three partisan brigades (3-5,000 men) and one American or English battalion (800 - 1,000 men). According to prisoner-of-war statements, there may be a further 3-5,200 English and 200-300 Americans.

"Naval forces probably consist of 2 Yugoslav destroyers (type Ljubljana), a maximum of 4 "Argus" class destroyers, and 4-6 English MTB's based on Bisevo Island (SW. of Vis).

"It is almost certain that any number of bombers and fighters would be available to the enemy within a very short time."

"The partisans are determined to defend the island stubbornly if they are adequately supported by Allied air and naval forces."

"Our attacking forces would approach between 0000 and 0200, steering to the north of Korzula so as to evade observation from Lagosta. Landings would be made on the SE. of Vis. The chief difficulty is the length of the passage in relation to the speed of our ships and it is therefore advisable to take as much material as possible over with the first wave of the attack."

The shortage of naval craft was revealed in the request for the transfer of the 12th R-boat Flotilla from the Adriatic to the Aegean owing to the postponement of operation "Freischutz". Admiral Adriatic commented on 5 March that FOIC Group South would have to be asked to return the flotilla, as it would be needed for minesweeping operations between the Greater Dalmatian Islands.

On 5 March, Admiral Adriatic referred to the enemy's systematic attacks on German shipping in the ports and bays along the coast, saying that under the present programme of construction it was impossible to make good the losses; the lack of A.A. posts was making itself felt very severely. These attacks, coupled with the increasing number of agents' reports, led to speculation about the hope of a German occupation of Vis having been discovered by the enemy, who would do all in his power to maintain his hold on the island. According to reports, there were on the island about 4,000 partisans belonging to an international partisan organisation.

The steamer "Kapitan Diedrichsen" had been lost on 29 February and this was attributed to the failure of the Luftwaffe to sight Allied destroyers south of Istria; the superiority of the Allied air force was demonstrated on 7 March, when three R-boats on passage south from Pola were bombed during the night.

Admiral Adriatic reported on 7 March that there was a radar station ("Dubrovnik") ready for operations, but he thought it would soon fall a prey to the enemy as, although there was a dummy station, there was no A.A. defence at all. Appeals made to FOIC Group South on this subject had had no success.

On 8 March, the S.O. of the 12th R-boat Flotilla asked for the minesweeping operation to be postponed for 8 days till the full moon period was over, as the task would be hopeless then in view of enemy air strength. Commenting on the preliminaries for the German attack on Vis, FOIC Group South considered the use of a minimum of 6-8 E-boats essential just before the operation was launched. As these ships were the only weapon against enemy destroyers, it was necessary to suspend E-boat operations until that time to avoid losses which would necessitate further postponement of the main operation.

IV. Differences between C-in-C South East and the Navy

On 29 March, FOIC Group South set out his views on Operation "Freischutz" and referred to the three-forces conference of 22/23 February. He said the situation had altered and that fewer transport ships were now available, although it was hoped to have 20 more motor coasters by 15 April. He pointed out that naval forces were intended to be used solely for the navigational guidance of the main force of landing boats and for protection against partisan ships and that the Army and the Luftwaffe respectively were to be responsible for supplying transport vessels and escorting them during crossing. He did not know if it would be possible for the Engineer Assault Battalion to bring up further landing craft, but was very sceptical of the possibility of transporting all the troops in one wave. The Navy could provide a landing company of 120 men and small assault boats for their transport. (At the beginning of April there had been further heavy losses in naval vessels involving an A/S vessel and 3 R-boats). The state of escort vessels on 29 March was 1 T-boat, 4 armed escort vessels and 3 E-boats; from 15 April there would be 1 new and 3 old T-boats, possibly one A/S vessel, 4 E-boats, 6 R-boats and 4 armed ferries. He considered this just sufficient for the task, provided there was adequate protection by the

Luftwaffe. He therefore expressed the opinion that this operation depended upon the Army and the Luftwaffe, the latter particularly being indispensable for securing the supply of the island after it had been occupied.

To this the C-in-C South East retorted that the statement did not accord with the facts. The minimum shipping space agreed on at the conference had never been made available; otherwise the Army would have fulfilled its obligations. Since the Navy's preparations took longer, it was obvious that these must be completed before the other branches of the Wehrmacht assembled their forces. The additional 20 motor coasters offered by FOIC Group South were rejected as being too slow for the 50-mile passage. He did not agree that the Navy's responsibility stopped at navigation and protection against small craft. As the operation would be launched in darkness the Luftwaffe could not give adequate cover, as the pilots were inadequately trained for night operations. The Army and the Luftwaffe could not undertake tasks appropriate to the Navy. It was impossible to reduce the amount of shipping space agreed upon in February as the enemy's defences had been strengthened in the meantime. Hence the decision did not rest with the Army and the Luftwaffe but depended on the measures taken by the Navy.

The German Naval Staff, commenting on these remarks, considered that the dominating problem, namely that of Allied air superiority, had been ignored, in spite of the fact that it was this which explained the Navy's inability to provide the requisite amount of shipping on which the other branches of the Wehrmacht insisted before fulfilling their own obligations. They repeated their convictions: regarding the importance of the Dalmatian Islands, stressing that the evacuation of Vis and Lagosta amounted virtually to supplying the enemy with a bridgehead. With the serious losses in naval forces, it would be impossible to recapture any islands which were evacuated. To leave Korzula and Mljet was tantamount to surrendering the port of Dubrovnik.

Even if it proved impossible to occupy Vis, the Naval War Staff insisted on the retention of those islands already held by Germany, if the Wehrmacht south of Split was to receive supplies and if the transport of bauxite was to be maintained. They pointed out that the effects of such evacuation would be felt most by the Army, which would gradually, in their opinion, have to give up bases, which was a snowball process.

It was all the more difficult to understand such an attitude, since FOIC Group South had pressed for the operation to be carried out in spite of depleted naval forces. Events had provided full confirmation for the Naval War Staff's view that Vis and Lagosta should be captured as soon as possible, owing to the increasing air superiority of the Allies. It was this opinion which had led them to oppose the postponement of the date agreed on at the conference, and not simply the fact that the new date fell in the full moon period - a condition required by the Army for the parachute troops.

A footnote to this comment by the Naval War Staff recommended the immediate recall of the Naval Liaison Officer with C-in-C South East. It was considered that he was not equal to the task of obtaining better co-operation between C-in-C South East and FOIC Group South, although it was admitted that the utterances of the latter did little to help, while the former showed a marked inability to understand the Navy's requirements.

V. Allied reinforcements cause further postponement until 10 April

On 31 March, the Headquarters of the Second Panzer Army sent a signal to Admiral Adriatic informing him that, owing to Allied reinforcements on Vis (about 10,000 men including 2,500 Anglo-Americans) and improvements to the defences, it would be necessary for the German landing troops to be strengthened by a further battalion, when he thought the German troops would

be able to repulse the enemy which, although superior in numbers, was not expected to show particularly high fighting qualities. A primary condition for success was co-operation from the Luftwaffe, in order to provide at least sufficient hindrance to enemy fighter aircraft to allow the German landing craft to be assembled. Additional forces would be required from both the Luftwaffe and the Navy to permit the operation to be carried out in one wave. The opinion of the other forces were asked on his proposal for 10 April as the new date for the operation.

Admiral Adriatic replied, on 2 April, that the necessity for an occupation of Vis and Lagosta was thoroughly appreciated. It was not, however, possible to place the entire responsibility on one branch of the Wehrmacht. In theory, the following naval vessels would be available for 7 April: 1 new and 2 old T-boats, 3 E-boats, 1 Siebel ferry, 4 armed ferries, 5 I-boats and 7 R-boats. These could not be guaranteed and would possibly have been still further reduced unless the Luftwaffe transferred its centre of activity to the Adriatic at once. It was obviously quite impossible to increase the amount of shipping for transport, still less so to provide extra escort vessels. Unfortunately, the idea of having German fighter protection for the assembly of the ships did not accord with recent experience. He concluded that, although in the past he had been glad to accept responsibility, he could not advocate launching the operation at present unless adequate air cover could be guaranteed.

On 5 April, the OKW expressed their opinion that operation "Freischutz" was impracticable at the moment. The General of the 5th SS-Mountain Company had said it might be better to evacuate all islands except those essential for the protection of German shipping. Forces of a battalion to a company strong, concentrated in safe places, could then defend these islands and could also send out raiding parties to keep the others under control.

On 6 April, the Naval War Staff thought it might just be possible to transport the 1,500 troops involved by concentrating on that operation, but, owing to inability to deal with enemy surface forces if these should be directed against this operation, it was absolutely essential to surprise the enemy. It was also realised that the subsequent supply of the island must be assured and that this involved keeping enemy air force in check. An alternative to the operation, in the form of a raid, was put forward for consideration.

FOIC Group South, replying, pointed out that a raid would involve the same forces for all three branches of the Wehrmacht and would also expose these forces to the same risks. This could only be justified if it resulted in the permanent occupation of the island and it was stressed again that the subsequent holding of the island was a weightier matter than its actual capture.

VI. Rumours of Allied landings on the East Adriatic Coast

Admiral Adriatic commented on 2 April on "reliable" reports of Allied intention to land at Fiume and advance towards the Slovene-Hungarian frontier. At the same time, 5,000 parachutists were to land in the Sarajevo area. It was expected that the Cetniks would remain neutral during the fighting, but, as soon as a landing had been effected, they would turn against the German troops. He remarked that according to Allied political agreements, the Balkans was in the Soviet sphere of interest and that, as this was one of many similar "reliable" reports it could not be certain whether such a large scale landing was to be expected.

Further agents' reports were mentioned on 15 April. On a report from the Headquarters of the Second Panzer Army concerning talk of imminent enemy operations against Metjet and Solta, orders were given for all shipping in the Dalmatian area to be assembled near Dubrovnik in readiness for any possible attacks and the South Eastern Command of the Luftwaffe was asked to attack shipping and other enemy preparations on the island of Vis.

According to the Senior Naval Officer of Albania, these were only rumours and it might be that the British promises and instructions to the partisans were likewise only ruses to tie down German forces. He did not consider a large scale landing likely and his view that there was probably no serious intention on the part of the enemy to open up the Balkans and leave it to the Russians was shared by Admiral Adriatic.

Reports about enemy landing intentions increased in number, two focal points being recognisable. The first was Corfu and the coastal area behind it and the second was the sea area of the central Dalmatian islands and the coastal area around Split. Reports varied considerably as to the strength of the landing forces. The personnel was thought to consist chiefly of Yugoslav refugees, Tito supporters from Italy, and English and Americans for specialised jobs only. It was expected that arms, equipment and training would be of a high standard; and that good support would be given by Allied air and sea forces. Special force was given to these reports by the fact that the RAF was concentrating on German supply routes and traffic junctions and that air supplies to the partisans were being increased. The increased activity of enemy surface forces was obvious and the objective was presumed to be the German supply routes, although there was the alternative object of opening up supply routes for the Tito-partisans, who were said to be badly situated in this respect; and the Army was able to block the supply channels after they had been created by the partisans.

The conclusion was therefore that the landing rumours were probably not only true but about to be put into effect.

On 17 April, the Senior Naval Officer of Dalmatia reported that the Luftwaffe had attacked Vis and started fires. The island of Murter was occupied by partisans, but the swing bridge between the island and the mainland remained in German hands.

An agent's report on 21 April said that the partisans were keeping a watch on German vessels and reporting their position and course to enemy surface patrols and to Vis. SNO Dalmatia attributed to this activity the sinking of coastal motor vessels near Sibenik.

VII. Allied landings on Korzula and Mljet

Enemy landings in force having been made on Korzula and Mljet, further orders had to be given for all available shipping to be rushed to Dubrovnik, as the order of 15 April had apparently not been carried out. The fact that during these operations the enemy's shipping movements took place during the day was attributed to the fact that he held a greater respect for the E-boats than for the Luftwaffe.

By 1150 on 26 April, it was reported in Admiral Adriatic's diary that, after five days of stubborn and often fluctuating fighting, the situation on the islands had been restored. Acknowledgement was made of SNO South Dalmatia's services in transporting troops with the very limited shipping at his disposal. Admiral Adriatic said that the reason for such a large scale commando operation could not be seen at first. He thought the enemy may have had two objects, the first being to test the German's capacity for resistance and counter-attack and the second being to wear down the Germans' small forces by a series of such attacks. He went on: "As usual, the English took part in this type of warfare from the background without shedding their own blood. In this case, too, the forces consisted of a mixture of nationalities trained in South Italy for guerilla warfare, then sent into the front line by the English. There is no doubt that the island of Vis is the jumping-off point in this extensive commando operation and that a repetition can be expected. The lesson for the Army is that the islands must always be occupied strongly enough to repel a landing. In the end this saves bloodshed more than the continual moving of troops

back and forth at critical moments. It must be emphasised again that the Luftwaffe must bomb Vis day and night and weaken it, since Operation "Freischutz" cannot be counted on for some considerable time".

VIII. Final abandonment of Operation "Freischutz"

In fact, on 25 April, the OKW had issued the Fuhrer's proclamation announcing that, owing to lack of forces, the capture of Vis was to be postponed, although the Luftwaffe was to continue to bomb the island to the limit of its power. Before the number of occupation troops was reduced, or individual islands given up, the entire civil population was to be evacuated and an efficient communications and agent's information service established.

As regards the disposition of forces in the Dalmatian coastal area, the main line of defence was to be the mainland coast. Forces and coastal batteries were to be disposed so as to repulse the enemy before he could land.

The islands nearest the coast took on the role of advance posts. They were to be garrisoned only sufficiently to prevent light enemy forces obtaining a hold and also to ensure that reconnaissance could be carried out along the main line of defence.

C-in-C South East was to notify his intention as regards strength and disposition of forces and was not to carry out any re-organisation until authority had been obtained.

THE LOAN OF THE 1ST AND 14TH LIGHTNING GROUPS
TO THE MIDDLE EAST AIR COMMAND
(4 TO 13 OCTOBER 1943)

Two Groups of Lightnings (P-38s) of U.S. Bomber Command of the Twelfth Air Force were detailed for loan to the Middle East for Aegean operations in early October 1943.

These two groups were the 1st and 14th U.S. Fighter Groups of the 2686th U.S. Fighter Wing and were a part of the Northwest African Strategic Air Force as well as of the U.S. Twelfth Air Force. Their composition was as follows:-

1st Group: 27th, 71st and 94th Squadrons.

14th Group: 37th, 48th and 49th Squadrons.

The total of aircraft that transferred to Gambut was 128.

The two groups arrived at Gambut airfield in Cyrenaica on 4 Oct. 43 and operated from 6 to 10 October inclusive under a controlling unit especially created for the occasion, known as the '1202nd Provisional Fighter Wing, Gambut 2' and attached to No. 201 (Naval Co-operation) Group.

They carried out the following operations:-

6 - 8 Oct. 43.	36 on sweeps over Crete and Leros.
7 Oct. 43.	65 escort to naval units
8 Oct. 43.	40 escort to naval units
9 Oct. 43.	60 escort to naval units
10 Oct. 43	18 attacked Antimachia (Kos) landing ground
	<u>219 - total sorties</u>

On 10 Oct. 43, they were ordered to return to their Tunisian bases on 12 Oct. 43.

On 13 Oct. 43, they returned to their Tunisian bases.

On 20 Oct. 43, they returned to their normal duties and escorted bombers attacking targets in the Rome area.

Sources: File S.E.S.O., H.Q. R.A.F. M.E. No.164/3 (A.H.B.II.J.1/246/44):
 N.A.A.F. AIR 1. O.R.B's October 1943:
 R.A.F. Narrative on Operations in the Dodecanese Islands (A.H.B.):
 File H.Q. M.E. (ORG)/S.53613 Pt.15. (A.H.B.II.J.1/150/51(P)).

THE ADMIRALTY'S CALL FOR THE WITHDRAWAL OF SHORE-BASED
FLEET AIR ARM SQUADRONS (19 MAY 1943)

From ADMIRALTY.

To C-in-C. MED., C-in-C. LEVANT, C-in-C., S.A., C-in-C. E.F.

Repeated:- C-in-C. H.F., F.O.C. WEST AFRICA, S.B.N.O. W.A.

Date 19 May, 1943.

MOST SECRET

By longstanding Cabinet decision the provision, and maintenance of operational shore-based aircraft for work over the sea rests with the Air Ministry, and R.A.F. The Fleet Air Arm being limited to operations from ships, with facilities ashore for training and auxiliary services, and for alternative armament squadrons for our carriers.

2. Owing to the acute shortage of R.A.F. aircraft in 1941, an exception to this rule was made in the Mediterranean on the withdrawal of the Aircraft carriers for repairs by local arrangement between C-in-C., and A.O.C. in C. Certain Naval Air Squadrons were disembarked and used for shore-based operations in the Mediterranean Theatre, which were an R.A.F. commitment.

3. In view of the Cabinet's decision, the Admiralty in assessing equipment cannot include aircraft or personnel for shore-based operations and if Naval aircraft are used in this way it inevitably reacts on their supply to carriers to which the Naval provision is closely restricted as above.

4. We are in the throes of a large Naval Air expansion programme to meet the needs of carriers now building, including those for the battle of the Atlantic. We expect that before the end of 1943 we shall have to withdraw all the Naval aircraft and air personnel from services which are not a specific Admiralty commitment.

5. The R.A.F. supply position is now improving, and Commander's in Chief should discuss requirements for shore-based Maritime aircraft with their local A.O.C. in C. with a view to agreed requirements being formulated for provision by the Air Ministry.

6. Messages to Admiralty on such requirements should always state whether they are sent.

(A) with the agreement of the local A.O.C. in C.

(B) After disagreement with the local A.O.C. in C.

Every effort should be made to obtain agreement locally and in the event of disagreement, the cause and the Naval case should be stated fully.

T.O.O. 19 1853B May 1943.

GERMAN ADRIATIC SITUATION REPORTS
(OCTOBER 1943 TO JUNE 1944)

Translation by Admiralty Foreign Documents Section
of captured documents

Ref. F.D.S. 123/57

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Monthly Situation Report (Appendix 5)War Diary of Admiral Adriatic, October 1943. (PG/46511)Sea Transport

In order to carry out those transport tasks devolving on the navy, a Sea Transport organization was set up in Admiral Adriatic's command, as in all other areas under Naval Group South. The tasks will be carried out at present from the following offices:-

- (1) Admiral Adriatic, Sea Transport (Senior Officer also on staff of Admiral Adriatic).
- (2) A. Sea Transport H.Q., North Adriatic, Trieste
 1. Sea Transport Office, Fiume
 2. Sea Transport Office, Pola
 3. Sea Transport Office, Zara
- B. Sea Transport H.Q. Dalmatia, Split. (Owing to enemy situation now moved to Dubrovnik)
 1. Sea Transport Office, Sibenik
 2. Sea Transport Office, Metkovic
 3. Sea Transport Office, Dubrovnik (not operating, see H.Q. Split)
- C. Sea Transport H.Q., South Adriatic, Kotor
 1. Sea Transport Office, Durazzo
 2. Sea Transport Office, Bar
 3. Sea Transport Office, Valona

The officers in charge of Sea Transport H.Q.'s are appointed to the staffs of the relevant N.O.I.C's, while those in charge of Sea Transport Offices come under the port captains.

To avoid infringement of the Ministry of Shipping's authority, the tasks of Sea Transport were limited to the administration of shipping and movements within the areas, preparation of statistical surveys and the maintenance of radio communications between shore and ship.

All basic orders concerning the execution of these tasks have been issued from Admiral Adriatic H.Q.

Owing to the inadequacy of communications equipment, contact with the subordinate stations and with the senior commands in Germany (Ministry of Shipping, Heimatstab-Uebersee) is still far from satisfactory. This presents considerable difficulty in the administration as well as in planning and instructing the various offices.

On the basis of reliable reports, the shipping at present engaged on sea transport tasks in the eastern Adriatic is assessed at:

23 steamers and motor vessels with a total of 47,887 GRT and

24 coasters and motor sailing vessels with a total of 3,000 GRT.

Shipping is continually being commandeered and put into service. The intention is to build up Sea Transport in the Adriatic in the same way as in other areas.

In order to simplify communications, it is suggested that Sea Transport be given a separate communications wavelength.

Report on Air Escort for ConvoysWar Diary of Admiral Adriatic, 1.11.1943 (part of page 2)

Luftwaffe H.Q. S.E. Command reports the following action concerning air escort for convoys in the Adriatic.

- (1) Luftwaffe H.Q., S.E. Command will move a Staffel (9-12 a/c) of Arado 196 (from 4./126) to Pola. Special detailed orders will be issued for the execution of this movement. Dependent on this, the X.Fliegerkorps will immediately move to Pola a Staffel captain and advance party from 4./126.
- (2) Luftwaffe H.Q. S.E. Command will transfer to Pola an advance party of ground staff for sea-planes.
- (3) Luftflotte 2 will be requested to move to Pola the 2./196 Ship-borne Staffel (Bordfliegerstaffel) provided technical facilities can be guaranteed. 2./196 will be operationally controlled by 4./126.
- (4) 4./126 and 2./196 (land-based) Ship-borne Staffeln will come under the operational control of Fliegerfuhrer Croatia as soon as they arrive in Pola. With these forces Fliegerfuhrer Croatia will carry out convoy escort tasks in the Adriatic in close co-operation with Admiral Adriatic. The Staffel captain of 4./126 will take over the tactical leadership of both Staffeln.

These measures provide the first essentials for convoy escort, at least against submarines. Only practice will show how long this will be allowed to continue without additional fighter protection. It can be expected that soon even the North Adriatic will be systematically patrolled by enemy fighter forces, in which case we shall not be able to forego our claims for adequate fighter cover.

War Diary, Admiral Adriatic - 16/30.11.43Situation Reports - Extracts - Pages 1-3

(PG/46511)

(1) MiscellaneousEnemy situation

Since the occupation of southern Italy, the enemy exercises absolute naval control of the open waters of the Adriatic and air control over the sea as well as the eastern Adriatic coastal area.

Some Dalmatian islands and a few sectors of the coast are still in enemy hands, but current operations are making good progress in clearing the islands. It is expected that these operations will be completed in a few weeks.

Enemy destroyers by night and air patrols by day have practically sealed the Strait of Otranto. Our coastal traffic between Valona and Dubrovnik is at present also paralysed.

Attempts to carry out transport tasks with larger ships failed and losses were sustained. (Out of 7 ships intended for use in the Aegean, 5 were lost in the area between Southern Adriatic and Corfu).

Enemy aircraft fly at will over, and generally control, the whole of our coastal area. As a result of this we are constantly suffering losses and damage to shipping and military installations.

Own Situation:

Our naval resources continue to be completely insufficient to deal with all the tasks required of them. The defence of the 650 miles coastline (excluding *the islands) rests on a total of 2½ Naval Artillery Units. Harbours and important military installations as well as ships at sea are exposed to enemy air attack without fighter cover and with not nearly enough anti-aircraft protection.

Footnote by Admiralty Foreign Documents Section

* M.A.A. (Marine Artillerie Abteilung) = Naval Artillery Unit has a basic strength of 4 Companies. One company = one battery. Personnel strength was as follows:-

	<u>Battery</u>	<u>Naval Artillery Unit</u>
for 30.5 cm. guns -	168	800
38 cm. " -	151	720
24 cm. " -	131	630
17 cm. " -	104	520
15 cm. " -	104	510

1 Flak battery = 125.

The Naval Artillery Units formed by the Germans in the Adriatic in Oct./Nov. 1943 were M.A.A. 612, M.A.A. 621, M.A.A. 623. These were made up of batteries of various calibres (mainly captured guns) ranging from about 7.6 cm. to 15.2 cm. and in Nov. 1943 at least one of these M.A.A.'s was below strength. In October, the state of M.A.A. 621 was as follows:-

Battery Pola (Porto Christo)	4 - 9 cm.
" Pola (Verusella)	2 - 15.2 cm.
" Pola (Misile)	4 - 15 cm.
" Fiume	4 - 9.35 cm.
" Trieste Mole	4 - 7.6 cm.

A number of batteries not yet manned because personnel not yet available. The strength of the Unit was 14 officers and 390 men.

Also in October 1943, the personnel strength of M.A.A. 623 was 13 officers and 830 men.

Details of M.A.A. 612 are not known.

Source: PG/46500

The army has not sufficient forces with which to maintain garrisons on the islands. (According to 2nd Panzer Army, two divisions are needed).

The Naval War Staff turned down a request from Admiral Adriatic for one naval artillery unit in order to provide skeleton crews for the Dalmatian coastal batteries.

In these circumstances, there is little hope of obtaining crews for the key batteries on the islands.

We cannot expect to get trained Croatian battery crews for some considerable time.

For the defence of coastal waters and the provision of satisfactory protection for sea transport, we shall have to carry on indefinitely with insufficient numbers of escort vessels. And even these are of little value in action and generally in very poor condition.

No effective improvement can be expected until our new MTB's are commissioned and in service.

Our air forces are completely inadequate. We need fighter aircraft as well as reconnaissance aircraft and bombers. We are still waiting for A/A guns for almost all harbours and coastal battery sites. The enemy therefore does as he pleases. The number of aircraft recently arrived at Pola for convoy escort is only six.

In conclusion, it must be confirmed that we cannot fight a successful war, even of a purely defensive nature, or cope with sea transport without equipment, personnel and shipping. Above all, we need fighter cover and A/A guns as well as naval artillery units.

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(10)

For the purpose of clearing the enemy from the islands, every serviceable vessel was used. Details are as follows:-

- 14.10.43 Torpedo-boat 'Missori' operated in the Morlacca Canal
- 21-23.10.43 Siebel ferries and harbour defence craft for the occupation of the group of islands off Sibenik.
- 7-9.11.43 Siebel ferries and coastal craft for the islands of Drvenik and Deli, and Trogir; and on
- 8.11.43 for the occupation of the islands Asinello, Sansego and Unie.
- 10.11.43 6 harbour defence vessels landed troops near Zaton; on the same day harbour defence vessel 'M.12' captured two partisan vessels and prisoners off Zara.
- 13.11.43 The following took part in the occupation of the islands Krk, Cherso and Lussino:

- Cruiser - 'Cattaro'
- 1 Torpedo-boat
- 1 Aux. cruiser
- 1 escort vessel
- 3 Siebel ferries and 12 other craft
- 43 army assault craft.

- 25.11.43 The following took part in the occupation of the islands off Zara:

- Cruiser - 'Cattaro'
- 1 Torpedo-boat
- 1 escort vessel
- 2 Siebel ferries and a number of small craft.

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- (5) It is planned to increase the strength of the 11th Defence Flotilla and form a Defence Division with a future strength of:

1 Torpedo-boat Flot.

1 Escort Flot.

1 M/S. Flot. and

1 Motor M/S. Flot.

1 A/S Flot.

In addition - also within the framework of the 11th Defence Flot. - there are provisional plans for 10 harbour defence groups with a total of 60 harbour defence vessels.

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- (8) We do not possess sufficient shipping either in large or in small ships. Repeated demands were put forward for additional tonnage. It is considered of the utmost importance that every possible effort be made to transport the promised MTB's, motor minesweepers and even small cargo vessels, with all speed by the overland route to the Adriatic.

Dockyard capacity must also be properly assessed with a view to the mass production of small craft.

War Diary of Admiral Adriatic, December 1943Appendix 4Mining intentions and mine warfare

Those minefields for which plans were complete could not be laid, because the minelayers are not yet available. The first minelayer - 'RAMB III' - will probably be ready about mid-January and the next - 'Fasana' - about mid-February. Bearing in mind the intended transfer of Admiral Adriatic's staff to Abbazia, it is at the moment intended to work up 'RAMB III' and her crew in inshore waters by assigning her to the strengthening of the Quarnero minefield. In view of the prevailing air situation it would be out of the question to operate this most valuable ship without a strong escort. This can not be provided until the new torpedo-boats - nearing completion - are in service.

Appendix 16Sea Transport

The outstanding features of sea transport during December were:-

- (1) The provision of the shipping necessary for the islands operations.
- (2) The steady increase in enemy activity and the consequent difficulties in loading and unloading in the harbours as well as losses in shipping.

It was possible to provide the shipping for the first phase of the islands operations. As regards the provision of ships for the further phases, constant difficulties are being encountered, and for this reason our transport commitments have had to be postponed in order to reserve every possible small ship for the special operations. Furthermore, Admiral Commanding, Italy, was requested to give up some of the small coastal vessels in his area, to make good the acute scarcity on the east Adriatic coast.

As the result of constant enemy activity, particularly the ever increasing air attacks, numerous ships were damaged in the harbours, and the handling of cargoes was made extremely difficult. In the harbours of the central sector of the command, practically all work has to be done at night, and during the daylight hours ships are compelled to lay up in hastily camouflaged small inlets. This procedure resulted in serious delays in dealing with cargoes. These delays were further increased through the withdrawal, for urgent defence purposes, of personnel provided by the Army for the handling of cargoes. Naval Group, South was requested as a matter of urgency to provide harbour parties, so as to facilitate the maintenance of some sort of transport turn round even in defiance of enemy action. Those civilian workers who were available have deserted because of enemy bombing.

More and more small ships are continually being brought into service to deal with those tasks not yet fulfilled.

Special attention was given to the delivery of the fuel oil necessary for the operations, and all available tanker space was reserved for that purpose. Control was partly in the hands of S.O. 11th Defence Flotilla. The difficulties which constantly arise in communications, together with the restrictions imposed on non-operational W/T traffic, preclude any accurate survey of sea transport movements and greatly interfere with the communication of current instructions.

The strongest possible pressure has been maintained on the completion of repairs to numerous small coastal craft.

The outlook for the coming month is not very favourable, because with the ever increasing enemy activity it is extremely unlikely that we shall be able to use large ships to the same extent as before, since this would expose them to serious risk of damage and probable loss. It is therefore clear that with the small ships available and those due to come into service, Sea Transport will not be able to fulfill all the transport tasks demanded of it. During the coming month, the principle tasks, in addition to the current operational undertakings, will be to find more small ships and to proceed with sea transport tasks as the enemy situation permits.

Shipping Losses in the Adriatic

Communication from Naval War Staff to OKW/WFSt. and Luftwaffe - 31 Mar. 44
PG/33051A - 1/Skl. - Mittelmeer Kriegsführung - Pages 189 - 190

- (1) In the week from 24-31.3.44 losses in the Adriatic through enemy aircraft attacks were as follows:-

From a total of 2 operational A/S vessels	-	1 lost
From a total of 4 operational R-boats	-	1 lost
From a total of 11 operational Siebel ferries	-	5 lost
From a total of 18 operational I-boats	-	7 lost

in addition to 1 small tanker, 2 coasters and 4 small coastal auxiliaries. 1 A/S vessel (new construction), 2 R-boats, 3 coastal vessels, 3 tank lighters, 3 pioneer landing craft and 1 assault craft were damaged.

- (2) Therefore, in one week in the Adriatic over 50% of the small warships were lost and almost all through air attack.
- (3) The situation has become catastrophic. If the enemy continues to exercise absolute air superiority, we can expect very soon to lose our entire naval forces.
- (4) The few escort vessels that are available must be set aside for important military tasks such as landing operations, and at present are unable to provide escort for convoys. Sea Transport is seriously threatened not only from the air but also by the numerous enemy surface ships, and is therefore practically at a standstill.
- (5) Immediate relief is essential and this can only be effective if our A/A defences are considerably strengthened. The Naval War Staff again stresses the vital need for increased fighter cover and points out that should sea transport be brought to a standstill and support for the landing operations even reduced, the fighting potential of our troops would be seriously weakened.

Naval Situation Report for June 1944 for the area of Naval Group South
PG/33051A. Page 320, paras. 4, 5, 7

(4) Activity of enemy surface forces in the area of Naval Group, South

Aegean:

In the Aegean, the enemy continued his corsair warfare with small craft. According to agents' reports it can be accepted that these craft are using a number of bases within Turkish territorial waters.

In the Adriatic, the situation remains unchanged. During June, enemy surface forces, with surprising accuracy as regards time and position, carried out a number of attacks on our ships. The circumstances give rise to suspicions that the enemy is obtaining fore-knowledge of our plans either through treachery or de-cryption. Enemy commando operations with small craft followed the same pattern as for May 1944. Towards the end of June, it was observed that Lissa harbour contained more special landing craft than usual. Radio intelligence indicates that enemy patrols in the Strait of Otranto are reinforced considerably when their convoys are passing through.

- (5) In the last monthly report, it was assumed that the scarcity of worthwhile targets would bring a corresponding reduction in enemy submarine activity. But this did not materialise. In fact, June showed a marked increase in submarine activity in all parts of the Aegean. They attacked even the smallest targets.

Enemy Air Situation

(7) There is no apparent change in the enemy situation, apart from the constant increase in the concentration of forces. This also applies to the Italian bases used for operations against the Balkans. Here the enemy increased his activity towards the end of June, obviously in preparation for the imminent Russian summer offensive, also in the southern part of the front.

At the beginning of June, Anglo-American bombers for the first time carried on to Russian airfields after attacks against the Balkans.

The enemy is making full use of this for propaganda purposes, but actually the operational effects were of little importance. A further extension of Russian bases for Anglo-American use appears to be most undesirable for the Russians. Ground organisations in Russia are inferior. Fighter protection forces are inadequate.

Enemy air reconnaissance covers the whole of the Aegean and includes even our small convoys, which play a vital part in our supply traffic now that practically all the larger ships have been lost. It is probable that increasing numbers of secret radio posts are being used in connection with enemy air attacks. There are clear indications that this organisation is spreading into the Aegean Islands, where infiltration is going on in preparation for the attack mentioned above.

Enemy preparations for increased night-fighter activity in the Aegean, indicate that we can expect the enemy to exert pressure on our own air transports.

Page 323. Own Situation

II. Naval Forces

Movements of our naval forces in the Aegean were determined by the convoy requirements. Patrols and anti-submarine duties had to be abandoned entirely

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in favour of this. Even the 4 MTB's temporarily allocated to the Aegean were assigned to convoy duties as outside escorts. In view of the severe losses in June, the situation as far as naval craft are concerned has become extremely serious.

Because of the activity of enemy surface ships and aircraft in the Adriatic, the *TA-boats could be used only in the northern part of the islands and even then only on night patrols. In addition to carrying out convoy tasks, small craft took part in the army operations against the islands, including the recapture of Brac. For these operations all available MTB's screened the open seaward flank and succeeded in capturing a number of fully-manned partisan vessels. Constant patrols by enemy destroyers and radar equipped aircraft restricted a number of other operations by MTB's in coastal waters. Even here operations were greatly hindered by excellent enemy radar location, and therefore achieved no success. Their activity, however, enabled a few of our small convoys to pass through particularly dangerous areas.

Coastal defence vessels and minesweeping aircraft carried out sweeping in the Aegean and cleared a number of mines. In the Adriatic, no minesweeping took place, nor was there any offensive mine-laying.

II.

3(b) Adriatic Shipping

Convoy traffic in the Adriatic was seriously hindered by the large-scale operations which had to be carried out in order to clear the enemy from various islands on the Dalmatian coast. Almost all available escort vessels and I-boats had to be used for transporting the troops. Furthermore, enemy surface forces maintained patrols on the convoy route near Cape Ploca, so that this channel could be used only with an outer screen of MTB's or torpedo-boats. The volume of supplies transported from Trieste to the south consequently amounted to only 9,343 tons, whereas the amount transported from southern harbours to the north was 27,651 tons.

In the Northern Adriatic, two valuable ships - 'Rapido' and 'Palermo' with a total of 8,500 GRT - were sunk by mine.

The hospital ships 'Gradisna' and 'Freiburg' made several trips to transport wounded from the Italian front on the Adriatic coast. The hospital ship 'Tubingen' in one voyage called at various Albanian and Dalmatian ports and embarked wounded for transport to the North.

4(c) Adriatic Air

Our own air activity was severely restricted by the enemy's air superiority. Constant patrols were maintained over the coast of eastern Italy as well as the Dalmatian islands. Because of the scarcity of aircraft, reconnaissance tasks had to receive priority over attacks on enemy coastal shipping among the islands.

* TA-boat = ex-Italian torpedo-boat taken over by the Germans.

SWAMP COMBINED ANTI-SUBMARINE OPERATIONS(1943-1944)CHRONOLOGICAL LIST

No.	Date	Area	Result
	<u>1943</u>		
1	15 October	Off Cape de Fer	Abandoned
2	19 October	Off Cherchell	Abandoned
3	2-3 November	Off Cherchell	Abandoned
4	12-13 December	Off Djidjelli	<u>U.593</u> sunk
5	16 December	Oran area	<u>U.73</u> sunk
	<u>1944</u>		
6	7-12 January	Cape de Gata to Iviza	Abandoned
7	20-22 February	Off Ischia	Abandoned
8	22-24 February	Off Bone	Abandoned
9	17-19 March	Off Bougie	Abandoned
10	29-30 March	N. of Sicily	<u>U.223</u> sunk
11	1-2 April	Off Cape Tenez	Abandoned
12	3-4 May	Off Bougie	<u>U.371</u> sunk
13	5-7 May	Alboran	Abandoned
14	9-10 May	N. Sicilian coast	Abandoned
15	12 May	Off Cape Bon	Abandoned
16	14-17 May	Off Cape Tenez	<u>U.616</u> sunk
17	17-19 May	Off Cape Tenez	<u>U.960</u> sunk
18	19-21 May	Off Cape Stilo	<u>U.453</u> sunk
19	26-28 May	Off Cape San Vito	Abandoned