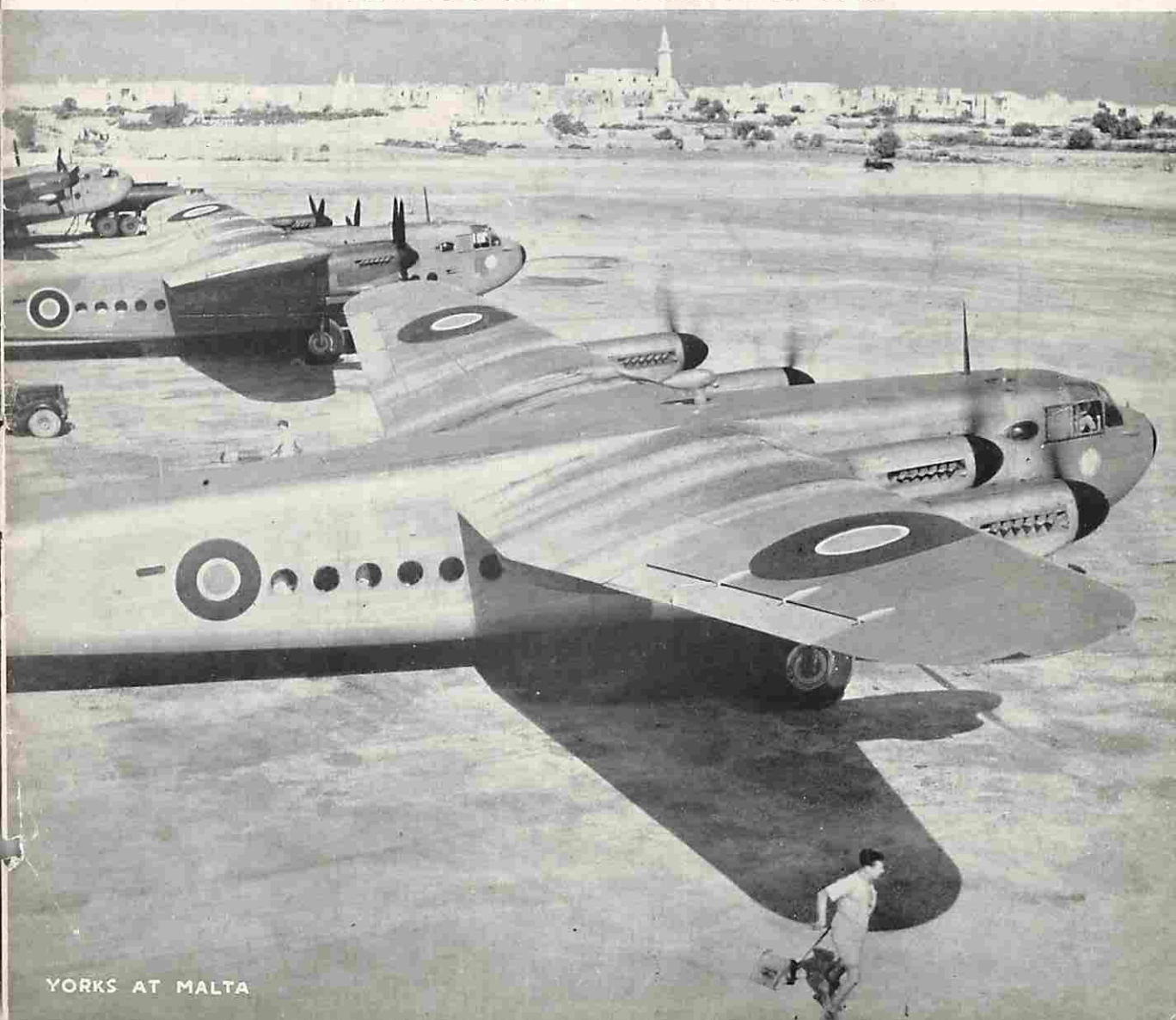
RAF TRANSPORT COMMAND REVIEW

NUMBER SIX FEBRUARY 1946



YORKS AT MALTA

DOWN UNDER : *Photo at Auckland, on one of the last of Transport Command's trans-Pacific schedules, San Diego to Australia, by No. 231 Squadron*

PHOTO BY STANLEY DEVON (EX-RAF), *Daily Sketch*

TRANSPORT COMMAND REVIEW

ISSUED BY H Q TRANSPORT COMMAND
ROYAL AIR FORCE

No. 6 FEBRUARY 1946

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PASSENGER SAFETY in Transport Command

WING COMMANDER A. M. LESTER, *Chief Statistical Officer, Transport Command*

RECENT statements in the press and elsewhere about accidents to Transport Command passenger-carrying aircraft have built up a quite erroneous impression in the public mind. It has been suggested that a civil airline could not tolerate accidents on the scale that occurred in Transport Command operations during the second half of 1945. But the facts are that the accident rate for our regular passenger-carrying flying during that period was lower than that for all civil airlines before the war, when airlines were rightly regarded as extremely efficient.

The reason for this adverse criticism is that insufficient publicity has been given to the quantity of passenger work we are doing. It is only in relation to the total job done that accident statistics can be properly assessed.

In terms of passenger-miles flown, which is the best way to measure passenger transport work, Transport Command's scheduled air services alone, in 1945, were over *ten times* the total size of all British airlines in the last year before the war. The figures were:

	Passenger-miles Flown.
Total for all British airlines in 1938	56,400,000
Transport Command's scheduled services in 1945	593,000,000

This figure for our scheduled services excludes the trooping services which, since October, have themselves totalled more passenger-miles *each month* than the 56,000,000 flown by British airlines in a whole year before the war. It also excludes all the special flights carrying VIPs and others, or dealing with special emergencies, and all the vast amount of flying done in

PASSENGER FATALITY RATES

in relation to total passenger miles flown

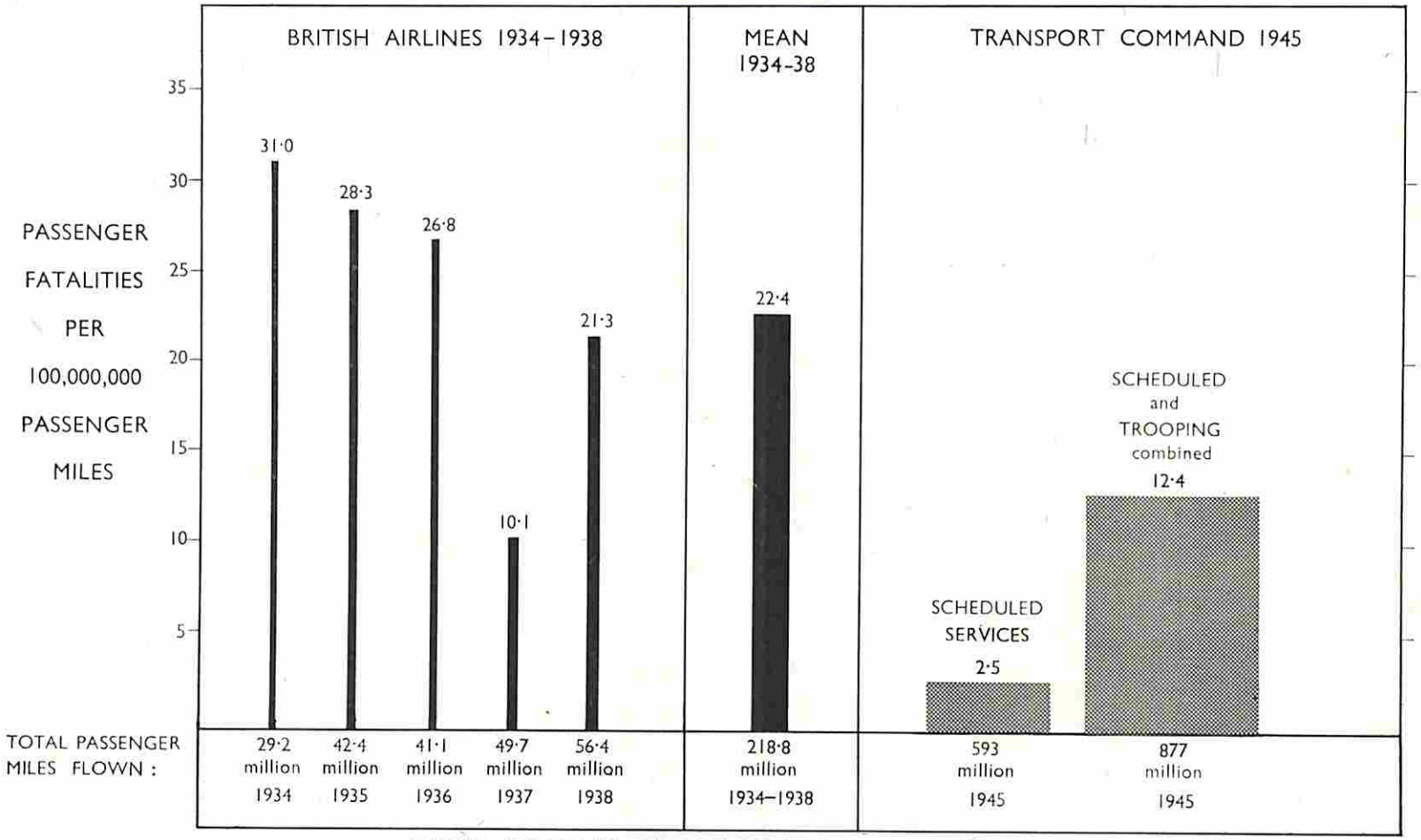


FIG. 1

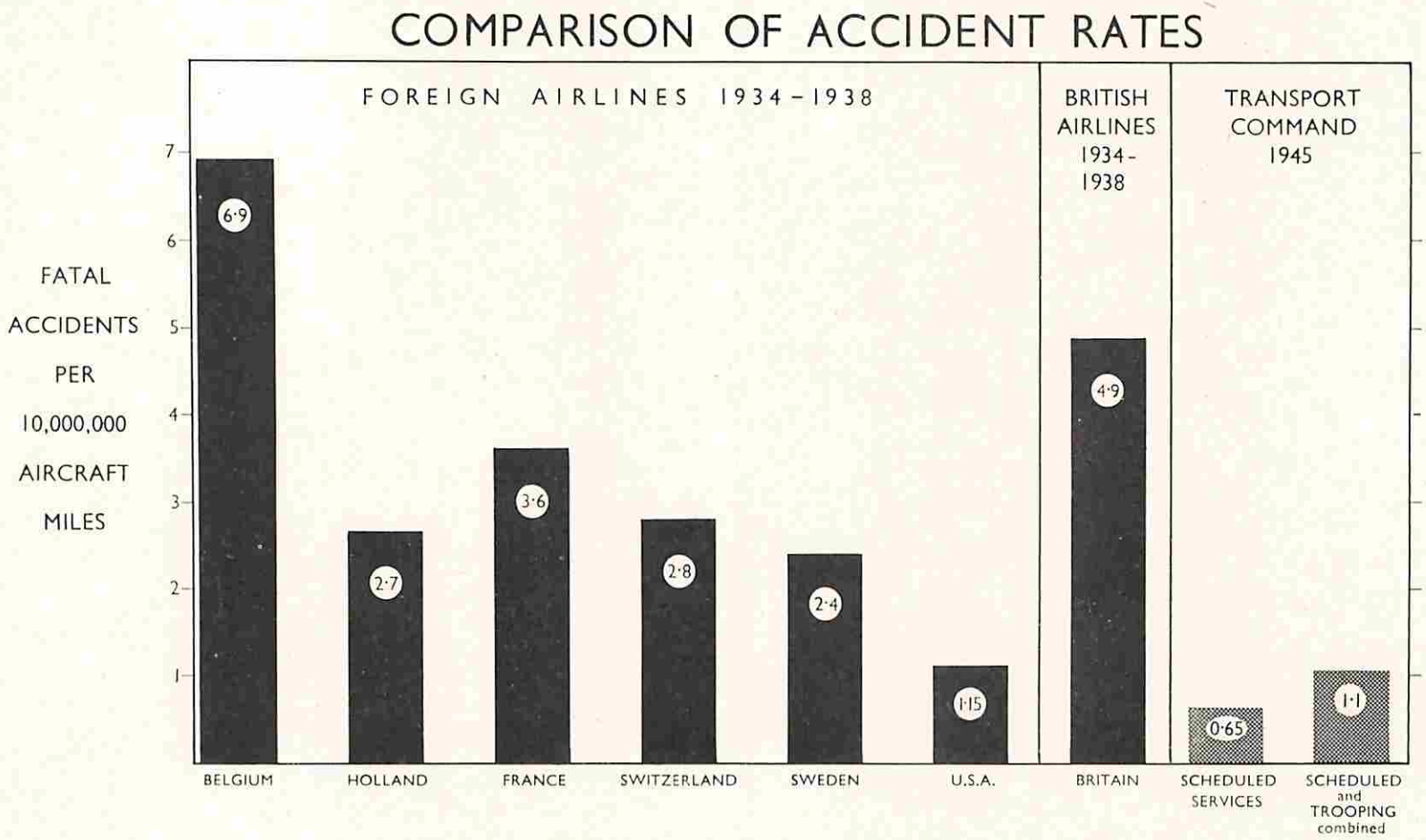

COMPARISON OF ACCIDENT RATES
FOREIGN AIRLINES 1934 – 1938
BRITISH AIRLINES 1934 - 1938
TRANSPORT COMMAND 1945
FATAL ACCIDENTS PER 10,000,000 AIRCRAFT MILES
7
6
5
4
3
2
1
6·9
2·7
3·6
2·8
2·4
1·15
4·9
0·65
1·1
BELGIUM
HOLLAND
FRANCE
SWITZERLAND
SWEDEN
U.S.A.
BRITAIN
SCHEDULED SERVICES
SCHEDULED and TROOPING combined

FIG. 2

transport support work in Europe and Burma. If we add up all our passenger-carrying activities our total passenger mileage for 1945 comes to over 1,100,000,000, or about twenty times the total pre-war British civil aviation figure.

In the course of time, as air transportation develops, these astronomical figures will become commonplace and will probably be surpassed by our own civil airlines. At present, however, they come as a complete surprise to a public who have been starved of news about civil aviation during six years of war.

One of the implications of large-scale air operations of any sort is that from time to time there are likely to be flying accidents and, broadly speaking, the larger the scale of operations, the more accidents there are likely to be.

The increase in the number of accidents should not normally be proportionate to the increase in flying, since development produces improvements in organisation, experience and equipment which help to reduce the accident rate. But if what the insurance experts call the "exposure to risk" increases very greatly, and particularly if it increases very fast (so that improvements in operational methods and technique cannot keep pace), the accident rate does not fall rapidly enough to offset the expansion, and the number of accidents will rise.

This is what happened in Transport Command during 1945. Between January and June our passenger-carrying work just doubled in size; between July and December it doubled again, making an increase of 400 per cent in twelve months.

In the pre-war years, British airlines were considered to be expanding rapidly, although the average figure was only about 15 per cent per year. Nothing like an expansion of 400 per cent in one year has ever occurred in the history of civil aviation. Indeed, no airline would attempt such a rate of expansion without a long period of preparation for training personnel and building up facilities and organisation.

This spectacular expansion would, of course, have been impossible if Transport Command had not been able to draw upon a large reservoir of personnel and aircraft from other RAF Commands, but neither the crews nor the aircraft were originally intended for airline work and the process of adaptation involved many difficulties.

It is, therefore, scarcely surprising that there should have been an increase in the total number of Transport Command accidents in the second half of 1945. What is surprising is that in spite of such a high rate of expansion, and in spite of many difficulties inherited from the war years (when little was done to develop airports and airline facilities), the accident *rate* for Transport Command's regular passenger-carrying flying was actually lower than for pre-war civil airlines.

The comparison is shown in the two diagrams. Figure 1 compares passenger risks on the basis of fatalities per 100,000,000 passenger-miles, showing the British airline figures for five pre-war years and the Transport Command 1945 figures for scheduled services, and for scheduled services plus trooping.

The width of these columns has been made proportionate to the passenger-miles flown, to give some conception of the size of Transport Command in 1945.

The public tends to judge the seriousness of accidents by the actual number of fatalities reported, and does not take into account the great increase in the amount of passenger flying. The diagram relates the two.

Figure 2 compares the Transport Command accident rate with the accident rates for a number of foreign airlines before the war. For this comparison we have had to take the number of serious accidents related to aircraft miles, since full passenger-mileage statistics are not available for some of the airlines shown. The results, however, are similar.

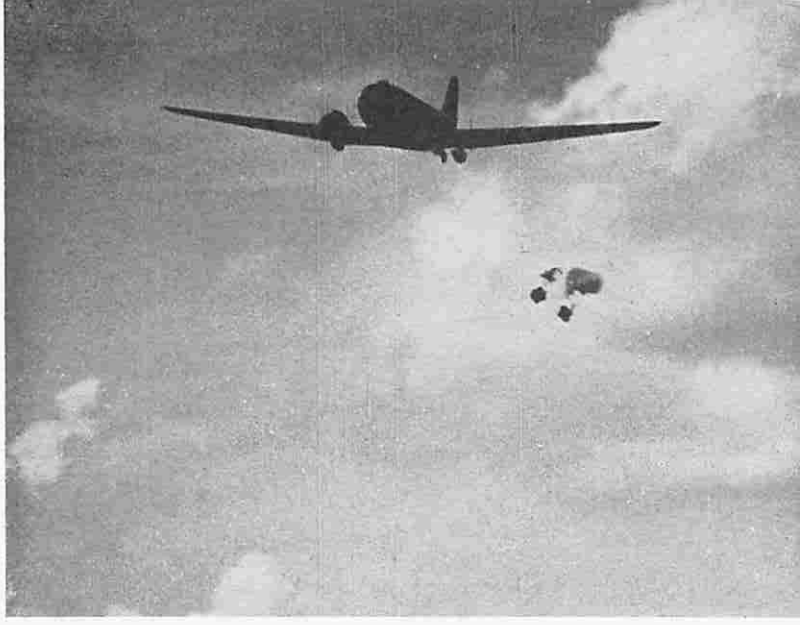
Even including trooping, our accident rate was as good as the United States pre-war civil airline record, and better than that of any other country. Our scheduled services had an accident rate nearly 50 per cent lower still.

There is, of course, no justification for complacency in these comparisons. Aviation has progressed greatly during the war and many improvements have been achieved in matters affecting safety. It should obviously be possible now to operate an airline with a lower accident rate than could be done before the war. American internal airlines, which have not been much affected by war difficulties, have reduced their accident rate to a very low figure, and BOAC flew nearly 300,000,000 passenger-miles in 1945 without a single passenger fatality.

We are steadily approaching the stage when the air will be as safe a method of travel as rail or sea and possibly safer than the road, but this will only be achieved by constant improvement in every direction. So long as any accidents occur in Transport Command there is plenty to be done.

It is satisfactory to be able to show, however, that Transport Command has in no way let down the peacetime tradition of British air transport, even during the difficult transitional stage before handing over to the civil companies. It is satisfactory, also, to note that at the present accident rates a passenger would have to fly about 40,000,000 miles on our scheduled services before he need worry seriously about his safety. It is doubtful whether a London pedestrian is so good an insurance risk.

The Battle of Burma and AIR SUPPLY TO 14th ARMY



GROUP CAPTAIN THOMAS F. U. LANG

THE epic story of the 14th Army has already been told. Less has been said of the part played by the air transport squadrons in support of General Slim's army, from the siege of Imphal to the end of the Japanese war.

In June, 1944, the Japanese had almost surrounded Imphal, Kohima was isolated and supplies could only be delivered by parachute. Imphal could be reinforced with troops and supplies as the airfields were in British hands but were occasionally under shell fire. During this siege 76,000 tons of supplies were delivered to the garrisons who numbered approximately 150,000 persons. In addition two and a half Divisions were flown in, as well as mules, bulldozers and steam rollers. Over 30,000 casualties and non-essential personnel were safely evacuated.

But the tide of war turned in favour of the 14th Army and the Japanese were flung out of the area. This success was followed up—the Japanese being slowly eliminated wherever they were found. Their forces were in a pitiable condition—many thousands died of starvation, as their supply lines had been interdicted by the RAF and USAAF. Japanese air supply was literally non-existent. On the other hand, the 14th Army were kept continually supplied—no matter their location or the weather.

The Burma war can be termed a logistical nightmare, particularly for the "Q" Branch. Every commodity to keep the Army alive had to reach them in the shortest possible time. The lines of communication on the ground were two—the Imphal-Tamu-Kalenso road and the Imphal-Tiddim-Kennedy Peak road, which made a junction at Kalenso. But these highways could never carry the traffic required to keep the Army fed and equipped.

The solution to the problem came from the air—the Wingate expeditions of 1943 and 1944 had already shown the possibilities of air supply operations, but now the 14th Army was on the move and many more transport aircraft were required to feed the Army.

In late September, Combat Cargo Task Force was formed. This formation was responsible for the air delivery of reinforcements and supplies of every description to the Army and the RAF Group working alongside it. CCTF was a British-American organization, commanded by Brigadier General Frederick Evans of the USAAF, with Air Commodore Hardman of the RAF acting as Deputy Commander. The two staffs were completely integrated.

The responsibility of arranging for the necessary supplies was given to an organization known as the Army Air Transport Organization—working in the same building as CCTF.

The Rear Airfield Maintenance Organization, an Army formation, worked on the same airfield as the transport aircraft. This organization was responsible for the packing and loading of supplies into the transport aircraft, the latter task being supervised by the American and RAF ground personnel.

The country over which all transport aircraft had to operate is perhaps the most dangerous country in South-east Asia—thick jungle everywhere, from the plains of East Bengal over the Naga Chin and Arakan Hills, which stretched for hundreds of miles to the south from Imphal-Kennedy Peak-Mount Victoria to the level country near Bassein. These ridges of mountains were all over 8,000 ft. high, and immediately east was the Kabaw valley where the Chindwin river flowed before diving into the Kalewa gorge. This country east of the Chindwin was also jungle covered as far as the open plains around Yeu and Shwebo.

The dropping zones in this area were sometimes no larger than football fields—usually situated at the bottom of valleys with huge towering mountains on either side—or else along the ridges. Quite frequently

the dropping zones had to be sited within small-arms range of the enemy. Extreme accuracy was essential in order that the supplies did not fall into Japanese hands.

Supply dropping missions were particularly arduous and sometimes very dangerous. Imagine a very hot day, the temperature in the cabin over 100° F. in the shade, the aircraft pitching and wallowing in the turbulent air. All the while the crew, covered in perspiration, are stacking some of the load at the open doorway. The aircraft runs up towards the dropping zone—the green light comes on and the bell rings—action—the despatching crew, both Army and RAF, heave out the heavy load, weighing half a ton—all the time swaying precariously in the doorway. Immediately the load has been despatched they begin to restack further loads at the doorway until the 3 tons of supplies have been dropped. Sometimes aircraft have to make as many as six circuits. All this time the pilot has been manoeuvring his aircraft around the hills and ridges, climbing, diving and turning. Very occasionally a parachute would fail to open and the contents would be strewn for yards around.

For the first part of the 14th Army's advance, from August to the middle of November, the greater proportion of all supplies had to be dropped by parachute, as the Army was moving down the Kabaw valley where it was impossible to build airfields until the monsoon had finished. Along the Tiddim road, sited on the side of a mountain ridge, it was only possible to build small strips for light aircraft and gliders. These aircraft flew many hours, laden with urgent medical supplies, and returning with casualties. The gliders, flown by the Americans, were snatched off these strips by American C 47s.

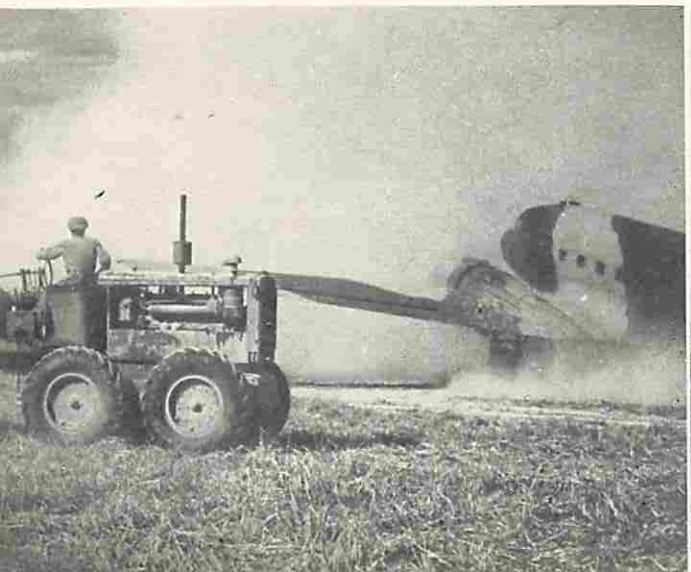
During this period 11,647 tons of supplies were delivered. In November, the American Commando Group arrived, consisting of about 100 C-46 aircraft, each capable of lifting a load of 5 tons.

When the monsoon had died away and the paddy fields in the Kabaw valley had dried out, the advance became more rapid, particularly as the roads could be used and airfields could be quickly made. In the Kalemyo area four huge airfields were built by the Army Airfield Engineers in three to four days. Thereafter aircraft were landed at the rate of one every minute, unloading and returning to their base for more supplies. This area became a huge supply dump capable of feeding the Army during its advance to the south and east. The roads by now were dry but dusty. Thick, red, choking dust filled the air.

In December, a sudden downpour of rain flooded the airfields in the Kabaw valley for several days, making them unusable. Immediately all aircraft were switched to supply dropping and all day long the air was full of coloured parachutes floating down. But from the beginning of January until the first week in April the weather remained fine, and supply operations were not seriously affected. Early in the year, however, the airstrip at Chittagong began to break up, owing to the continual traffic of Commando aircraft taking off and landing—sometimes as many as 600 aircraft movements were recorded in one day. Unless this airfield could be repaired, the pipe-line of supplies to Burma would be seriously reduced. The Army Airfield Engineers quickly constructed a temporary strip of metal planking. During the whole time this temporary strip was in use—and it was only 30 yards wide—not one single aircraft accident occurred.

The battle for Mandalay and the crossing of the Irrawaddy at Pagan, ancient capital of Burma, called for an even greater effort on the part of CCTF. In January 39,564 tons, and in February 24,327 tons, were flown into Burma in preparation for this momentous battle. The story of the crossing of the Irrawaddy is already history. Once across, the Force was supplied

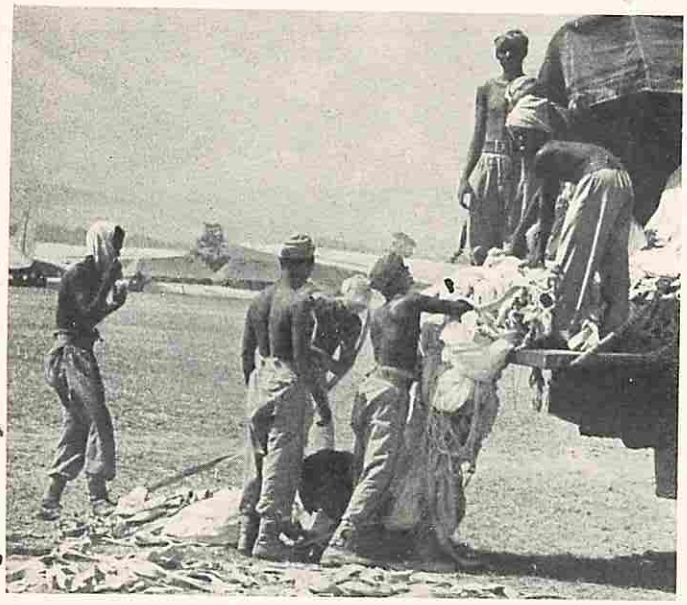
When the monsoon had passed, there was always the dust



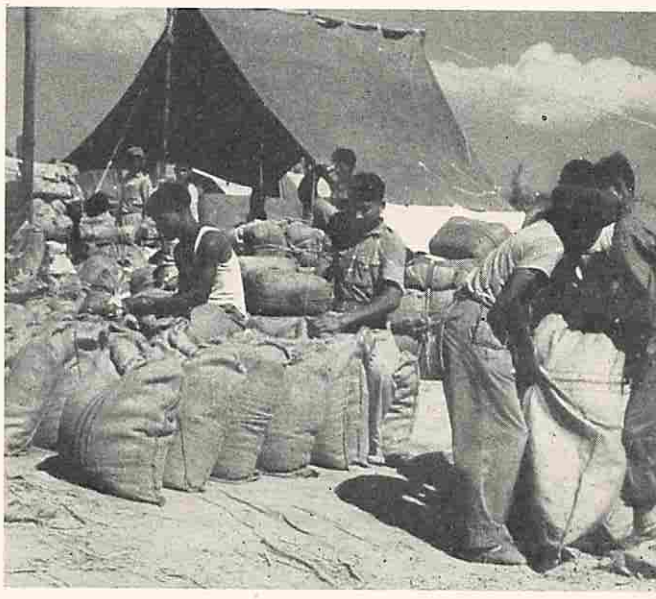
Glider pilot's view

Ammunition, equipment, food, even Christmas dinners came by air

Native workers packing loads for supply dropping



Collecting used parachutes for salvage and repacking



'Unbreakable' loads are packed in outer sacks for 'free-dropping'

by air throughout their rapid advance, particularly with petrol. Meiktila was captured after a fierce fight. As soon as the airfield was captured a further Brigade was flown in.

But an even bigger battle loomed up. The Japanese were cut off from their supply lines to the south, and almost surrounded by the full strength of the 14th Army. Thousands of troops and thousands of tons of supplies were flown in to Meiktila for several days; suddenly, the battle-ground changed to the vicinity of the transport airfield. By day, the Divisional troops threw the enemy back from the airfield, allowing transport aircraft to land and unload their cargoes. By night, the troops had to retire into their defensive perimeter. Each morning the area had to be cleared of Japanese before aircraft could land in safety.

For a few days the landing of supplies had to be abandoned until the artillery and mortar positions were destroyed. Supply dropping inside the Meiktila perimeter took its place. During this time, however, the light aircraft of the American Liaison Squadron were continuously in the air, evacuating casualties from the landing strip in the town and flying-in urgent

medical supplies. Eventually, the airfield was again opened for the landing of supplies.

The next phase of the advance took the 14th Army right down the railway corridor to Pegu, supported by air supply the whole way. In the meantime, 15 Corps, who had been advancing down the Arakan coast, also supplied by air, were preparing to carry out a seaborne landing at Rangoon, supported by paratroops who were to be dropped at Elephant Point. The race for Rangoon was on, and already the monsoon was swirling over the Arakan coast and into Burma.

Rangoon fell early in May, just before the monsoon finally broke.

Up to this time the threat from enemy aircraft had been literally non-existent, with the exception of an isolated attack near Shwebo, but the threat from the monsoon was an even more dangerous one. From April onwards heavy rain, severe electrical thunderstorms and turbulence, with clouds reaching up to 20,000 ft. or more, had to be combated by the transport aircraft. At the base airfields the ground crews worked by day and by night in the open and in the pouring rain. In spite of these conditions, as much as 3,500–4,000 hours per squadron were flown each month—almost twice the amount normally flown.

"We were climbing slowly in pouring rain," runs an extract from a pilot's report, "flying on instruments, visibility 200 yards, the air was smooth. Suddenly the control column was torn from my grasp. Immediately the altimeter showed we were climbing at the rate of 2,000 ft. a minute, even with the engines throttled back and the control column fully forward. We continued to be sucked up into a cloud until the altimeter recorded 15,000 ft. All this time the aircraft was completely out of control. Having reached this height I suddenly realized by the feel of my body belt that we were upside down. Somehow we brought the aircraft back on to level keel again, but immediately went into an uncontrolled dive with the altimeter unwinding itself at an alarming rate. Luckily, the aircraft held together and the load remained in position. We eventually emerged from this cumulo nimbus cloud and returned to base without further incident, where it was found that the aircraft was strained beyond repair."

Unfortunately, there were other occasions when aircraft were torn to pieces by the storms, and the entire crew killed. Several aircraft must lie deep in the jungle, never to be seen again.

With the fall of Rangoon air supply was considerably reduced and the American element of CCTF was disbanded. In its place the newly formed 232 Group took over the task of feeding the new 12th Army in Burma. There were still many thousands of Japanese massing in the Pegu Yomas, preparing to break out across the Sittang river. Fighting continued, and in June and July 47,839 tons of supplies were delivered, including over 2,400 tons of rice and other foodstuffs for the starving civilians in Northern Burma.

Throughout the battle for Burma, the Casualty Air Evacuation Units had cared for many thousands of wounded and sick.

By now it was obvious that the Japanese war was coming to a close. But for 232 Group and its Squadrons there was no holiday when VJ Day was announced. They were immediately required for a new and more urgent task, the rescue by air of many thousands of Allied prisoners of war and internees from Siam, Indo-China and Malaya. Several Squadrons were moved to the Rangoon area, and towards the end of August were ready to bring out the first prisoners and internees.

On August 28th the first aircraft of 232 Group flew to Bangkok with doctors, medical supplies and jeeps. On the return journey each aircraft carried a load of 25 released prisoners. It was a glorious moment when the first aircraft landed back at Mingladen, and out stepped the advance party of many thousands of Allied prisoners and internees who had been waiting patiently for so many years for this moment. At long last these very gallant men were free, the survivors of the notoriously evil Bangkok-Moulmein railway, where one British life was lost for every three sleepers laid, and three coolies died for every sleeper.

Doctors and urgent medical supplies were dropped by parachute on the prison camps, as there were many critically ill cases who needed immediate medical attention. The rescue of these men, women and children had only just come in time. Liberators and Dakotas were used to fly in the supplies. At Bangkok airfield a Casualty Air Evacuation Unit of the RAF looked after many thousands of liberated persons while they were waiting for the Dakotas to fly them to Rangoon.

By the end of September, 16,000 RAPWI had been safely flown out from Siam, Indo-China and Malaya, while over 2,500 tons of Red Cross stores and supplies were delivered by parachute to the prison camps.

A Personal Message to Transport Command Aircrews

All aircrew have no doubt been giving serious thought to their future, and whether or not they want to go on flying either within the Royal Air Force or in civil aviation. This is a matter upon which each individual must decide for himself, but the following notes may help to indicate what is the present position.

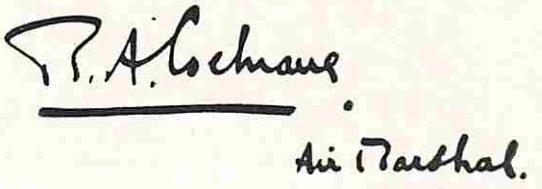
As regards the Royal Air Force, it is well-known that no final allocation of permanent commissions can be given until the peacetime strength of the Service has been decided; nevertheless, it is clear that a considerable transport element will be included in the future Service, and that aircrew experienced in transport flying will be required to fill its ranks.

For those who wish to make civil aviation a career, a period spent in Transport Command will be of value. It is Air Ministry policy that Transport Command shall form the main channel for the supply of Royal Air Force aircrew to Civil Air Transport. As a corollary, it has also been decided that acceptance of an extended service commission will not debar individuals from transferring to Civil Aviation when vacancies occur, and as they can be spared. I recommend that all aircrew interested in civil aviation should read without delay a pamphlet which has recently been circulated by BOAC under the title Post-War Employment—Civil Aviation. *It will be noted that the senior posts specify transport experience,* e.g. *Senior Captain First Class should have* 3,000 *hours in command of transport aircraft in circumstances deemed comparable to BOAC service.*

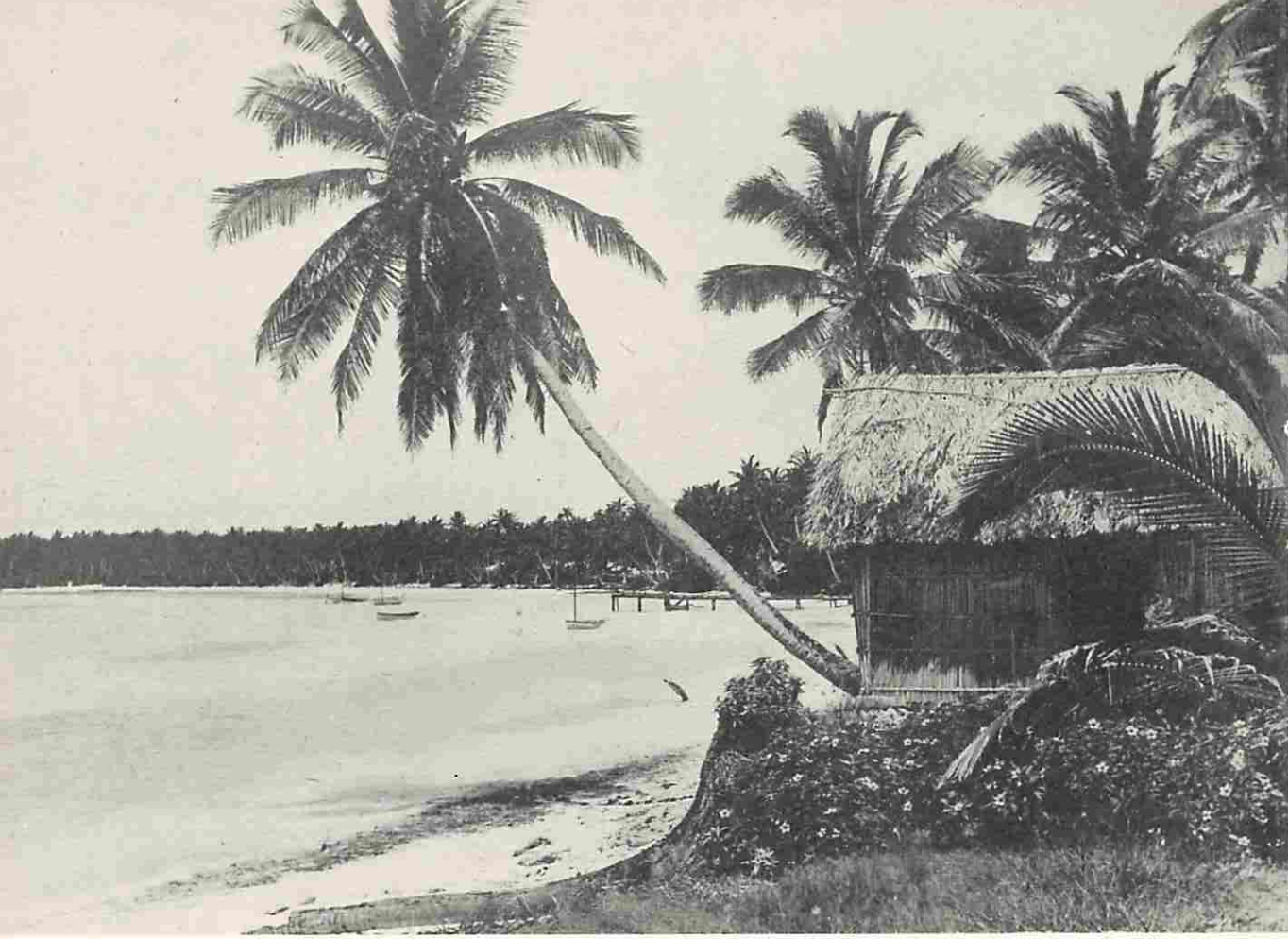
No indication has yet been given of the numbers of aircrew who will be absorbed into British civil aviation over the next few years, but it is the declared policy of the Government that Britain is to hold her own in the field of air transport; and if she is to do so, there are bound to be considerable demands in Civil Aviation for experienced personnel of all sorts.

It must not be expected that guarantees will be forthcoming in the present circumstances, nor will promises of service always appear attractive at first sight, for the world will take time to reach normal after six years of exhausting war. Nevertheless, looking back at the history of the country, we can see how much we owe to the pioneering spirit of our ancestors who shaped their careers on their own estimation of risks and gains, and guessed right when they put their faith in the future of sea transport. We are now subduing a new element, and no one is in a better position to judge the possibilities of the future than aircrew in Transport Command. To what they see in their daily work must be added the growing rate at which developments are taking place in all branches of aeronautics.

Experience in transport flying is an asset which can only be gained after years of training and hard work. To those who like flying, and who have faith in the future, I suggest they consider carefully before throwing away this asset in order to start again in some other walk of life.



AIR OFFICER COMMANDING-IN-CHIEF, TRANSPORT COMMAND.



OCEAN OUTPOST

FLIGHT LIEUTENANT E. A. ELDERS, *229 Group*

WHEN Darwin described the Cocos, or Keeling Islands, as a perfect atoll, he was referring to their character and structure in a geological sense. But many who have served at this remote outpost of 229 Group would apply the word ''perfect'' more broadly.

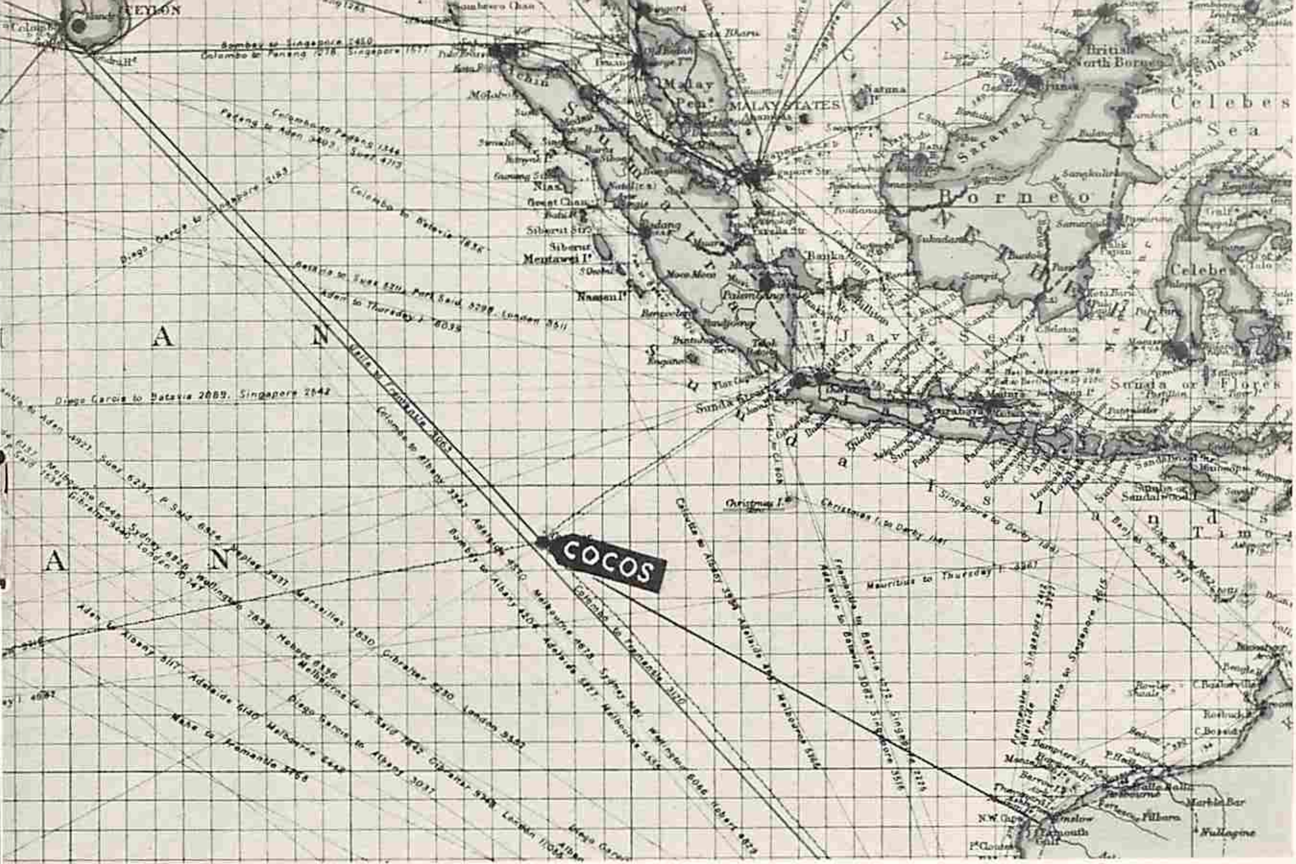
The islets (twenty-three in number) form a ring within an outer reef, and enclose a lagoon in their centre. Nowhere is the diameter greater than 9½ miles and, were it not for the perpetual ring of white surf round the encompassing coral reef, such tiny specks of land would be almost invisible from the air.

To be about halfway between Ceylon and Australia is to be in the middle of the Indian Ocean and a long way from any mainland. The nearest land of any sort is Christmas Island, 600 miles to the ENE; Batavia is 793 miles to the NE; it is 1,366 miles to Australia, and 1,770 miles to Colombo.

Transport Command Liberators from Ceylon and Australia drop out of the tropical skies to land on a runway fitted into the 6-mile long crescent-shaped West Island.

West Island, densely covered with coconut palms, is the biggest of the islets, but until British forces landed there in the spring of 1945 it had remained uninhabited. From the neighbouring Direction Island, Cable and Wireless Ltd. have been secretly operating a vital link in the ''Imperial'' network throughout the Japanese War. Across the lagoon lies Home Island, peopled by some 1,600 natives of mixed ancestry, and for the story of how they got there we must go back to the early nineteenth century.

The islands were originally discovered in 1609. But their history really began in 1823, when a bizarre character named Hare, a British Commissioner in Borneo, came to settle on one of the southernmost isles. Hare had collected a harem of carefully assorted wives whom he brought there, together with a retinue of slaves, and he set up a small court with eastern splendour.



At about the same time another remarkable man, John Clunies Ross, installed himself and his wife on another island, and a condominium of the two households was attempted. No two men could have been more dissimilar. The idle despotism of Hare was in sharp contrast to the industry and wisdom of Ross and, after years of faction, and the desertion of most of Hare's colony to join his rival's community, Ross was left in undisputed control.

Ross developed an economy which has survived in essentials to this day. Each islander, a descendant of Hare's "wives," or of the ships' crews that brought them, works at his trade and has a task for the week. At the week-end he draws his allowance of rice and other staple foods, and the remainder of his wages is credited to him at the store, where he can buy (with bone tallies) what he wishes in the shape of extra food, clothing or minor luxuries. Each man is given a house of his own when he marries; it is repaired at the estate's expense. When he is too old to work, there is a pension for him. Divorce is unknown and family life seems happy. All appear clean, dignified and in no way subservient.

It is difficult to know whether this economic system can survive since it is not self-supporting and depends on the income from the coconut exports, and also on the guano exported from Christmas Island.

The Ross family still own the islands, under lease from the British Crown. Their "palace" is a gaunt pile of partly glazed bricks, brought all the way from Dundee. There are small, strangely shaped rooms with a watchtower on top, probably built thus to resemble the accommodation on board the old sailing ships. By contrast, it stands in a lovely garden stocked with fruit trees strange to the islands.

Cocos did not escape a taste of the war. In the rainy dusk of March 3, 1942, a Japanese ship slipped in close to the barrier reef and opened fire. Shells, shrapnel and coconuts rained on the roofs. Fires blazed up. The Cable staff cabled the news to London, and at 4 a.m. next day, after consultation with the Admiralty, a plain language message was radioed from London to the Company's Batavia Cable station advising them of the "Destruction of Cocos Station"; the Japanese at once broadcast that Cocos Cable Station had been eliminated.

After this, the Cocos were blotted out of Allied recognition by strict censorship. The Japanese never doubted their success. True, there was frequent air reconnaissance, and a bomb or two, but the cable station was all the time quietly maintaining operations.

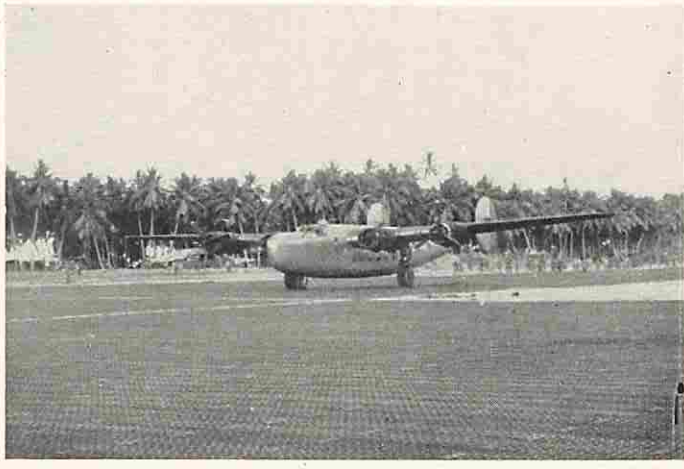
When the RAF arrived in the spring of 1945 it was obvious that only West Island was big enough to provide even a single runway. That runway had to be hacked through the coconut plantations. The prevailing wind is across the runway but, except for a gap about three quarters of the way down, the coconut palms provide sufficient shelter. The runway is only

3 ft. 6 in. above sea level and the sea can be seen through the trees on both sides.

During last year a fighter squadron, Liberators, Mosquitos and Army Units shared the island with the Staging Post. Now the fighting Units are being withdrawn and West Island is mainly a freight, mail and passenger call.

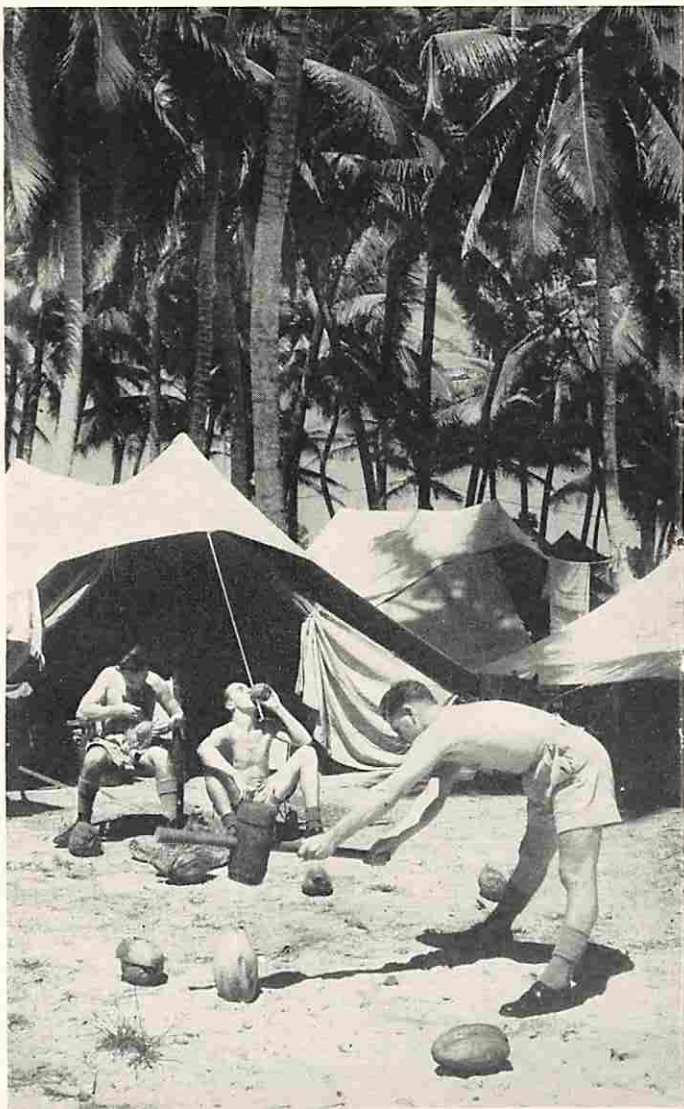
Just as Ross, a century and a quarter earlier, had surrounded himself with the stern atmosphere of a Scottish manse, so the RAF quickly established their own familiar landmarks at their island home. There is a village green, a village hall (the NAAFI), a library, and, of course, the Getsum Inn, with two pints of English beer per man each Saturday night. There is a cinema in the open air, with a screen slung between two palms, and it doesn't much matter which side of the screen you sit, unless you are unable to read backwards.

Sundays are holidays. Many go fishing with the natives in their hand-made boats, called *dungongs*, collecting fishing stories that will last them a lifetime; others sail over to Direction Island where the Cable and Wireless staff always provide such a cordial welcome; and some sail to Home Island, to impress the natives with their golf. Stretched on the shores of the Blue Lagoon are the indolent "escapists," dreaming, no doubt, of the missing element.



The runway on Cocos is hacked out of the coconut plantations, and only 3 ft. 6 in. above sea level.

Nutting time on Cocos



BEHIND THE BLIPS

(*Concluded from page 16*)

experts in mountaincraft to act as technical advisers on all matters relating to high altitude living and survival. Courses were given on ski-ing and mountaincraft, and eventually the crew ascended the road for the last time. The post was established.

A tough job. For six months of the year the men would be completely cut off from the world below, and in danger (if they should go out-of-doors) of being blown clear of the peak. In case you think the story exaggerated, a photograph of the Unit's year-round abode is published on page 16.

The Stations in this Gee Chain are as much as a hundred miles from the Master—twice the usual distance, but an arrangement necessitated by the terrain.

And so the work goes on, Singapore, Shaiba and Southern England, it's all the same to 60 Group. But their job has quietened considerably. No longer has the Siting Officer to go forward in a jeep with armoured car escort to capture his site, as he did on the Western Front; no longer do the photographs of blitzed targets bear testimony to the accuracy of the operators on the sites, but at least we in Transport Command can testify to the invaluable service rendered by the hundred and forty odd crews of 60 Group who, night and day, week in, week out, fill the air with the little green demons who help to guide us on our way.

BEHIND THE BLIPS

A brief account of the intricate organisation that lies behind the radar aids to navigation

FLIGHT LIEUTENANT D. B. PRITCHARD, Editor, *Navigation Bulletin*

THE switches are on; a little green demon, leaping from nowhere, dances across the indicator.

A quick adjustment of a couple of knobs; a cross on the lattice chart, and another aircraft is safely set for base.

A prosaic occurrence for many. Yet, behind it, lies a story; a story of experiment and research, of hard work and constant vigilance—the story of 60 Group.

The Headquarters of the organisation is situated in the Home Counties, and is now engaged almost entirely on the location, assembly and operation of radar sites for Transport Command.

During the war years, when radar was employed almost exclusively by Bomber Command, the radar technicians and co-workers would hear on the wireless, or read in their morning papers, the result of the latest raid, and could derive considerable satisfaction from the report that such-and-such a city's marshalling yards had been virtually obliterated, a success due in no small measure to their accurate workmanship.

The news, in fact, acted as a tonic and spurred them to greater efforts.

No such tonic exists to-day. The routine flights of transport aircraft offer little tangible evidence of the benefit derived from the use of the radar waves. But to understand and appreciate the work of these unseen guides is of interest to all in the Command.

In the first place, Transport Command decides that a Gee Chain covering a particular area would be a desirable addition to those at present in operation. Notification is then sent to 60 Group, and the planners get busy.

Gee operates on radio frequencies which obey semi-optical laws, so that when a Gee Chain is being sited, great care has to be exercised to ensure that the transmitters are not screened by hills or mountain masses.

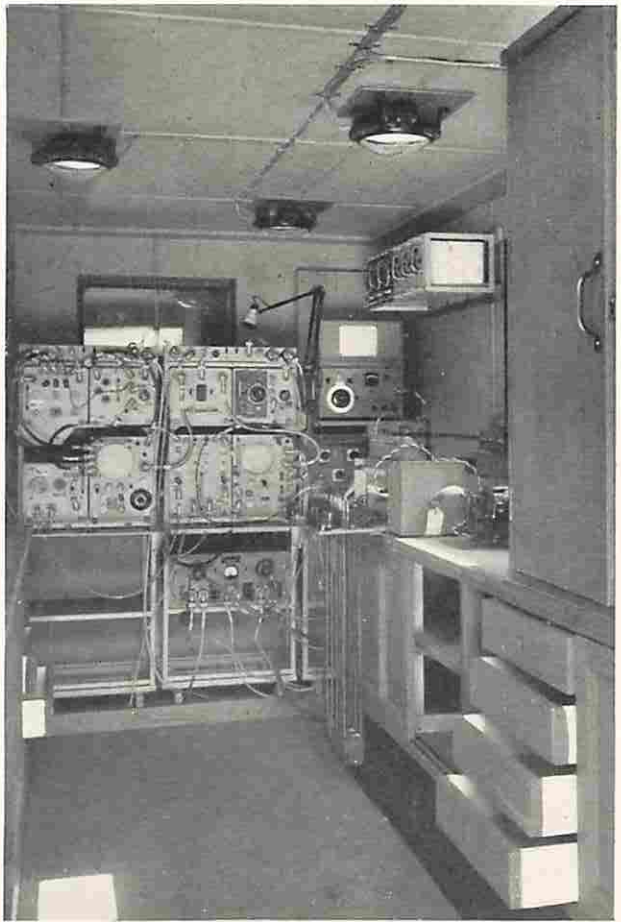
In flat countries, such as Southern England and Northern France, this presents few difficulties, but where mountainous areas are involved, as in Southern France, considerable obstacles have to be overcome, since it is essential that the Gee Station be located on the highest accessible peak.

The site is plotted on a map in the first instance, after the topography of the surrounding country has been carefully studied on a large-scale Ordnance Survey sheet. Considerable juggling is necessary in order to get the best approach beams aligned.

If the provisional siting is approved by Command, a Siting Officer is despatched to study the actual country in detail, and to make a full report covering any suggestions or improvements.

This is clearly not an easy job. A road to the proposed site is necessary, since all equipment and supplies will have to be brought in from outside; and in a large number of cases roads, or even tracks, just do not exist. The Siting Officer then turns road-builder and directs the construction of a rough route from the nearest local line of communication to the site. "At Mount G——," reports a Siting Officer in Palestine, "a zigzag road . . . is kept in moderate repair by the police, using penal labour, in order that, during the Samaritan feast in May, their armoured cars can ascend the hill to keep order."

Interior of Mobile Gee Truck, showing receiver equipment



The site chosen, the occupying crew arrives. It consists of one officer and twenty-three other ranks who bring with them two heavy trucks fitted with identical equipment, small refrigeration plants, aerials, and stores for the party.

This is, of course, a mobile party, as distinct from those in the Carcassonne–Rhône chain, which are static.

The duplicate equipment is available in case of breakdown, and in any case the two sets are usually run alternately. The operators keep a twenty-four watch at most sites, their job being to ensure the correct phase relationship of the pulse between slave and master.

Let us study the Carcassonne–Rhône chain, already mentioned, as a good example of the Group's work.

This chain was the first planned, sited and installed for Transport Command, and it was the first in which special consideration was given to the problem of aligning the Gee lattice lines along the route to be flown. The chain covers one of the most dangerous areas of the great England–India air route, and is, therefore, of special value to aircraft flying over the South of France.

The mountainous nature of the locality provided not a few headaches for the Siting Officers, whose first efforts to inspect a proposed site by jeep proved abortive. However, another was soon found on a more accessible ridge near by. The assault on the second site, the B slave, was then begun.

Map inspection had shown a French Observatory on the summit of the 6,000 ft. Mont Ventoux, but to reach it, a twenty-mile ascent round hairpin bends had to be accomplished.

Viewed from the top, the panorama embraced the entire Rhône valley, the Mediterranean, and the whole massif of the French Alps—obviously an ideal spot.

True, there were drawbacks. Snow made the road impassable for six months of the year, and a wind velocity of 170 m.p.h. had been recorded in winter. Lightning and ice were additional pleasantries, but the Group decided to continue with the project, and work began immediately.

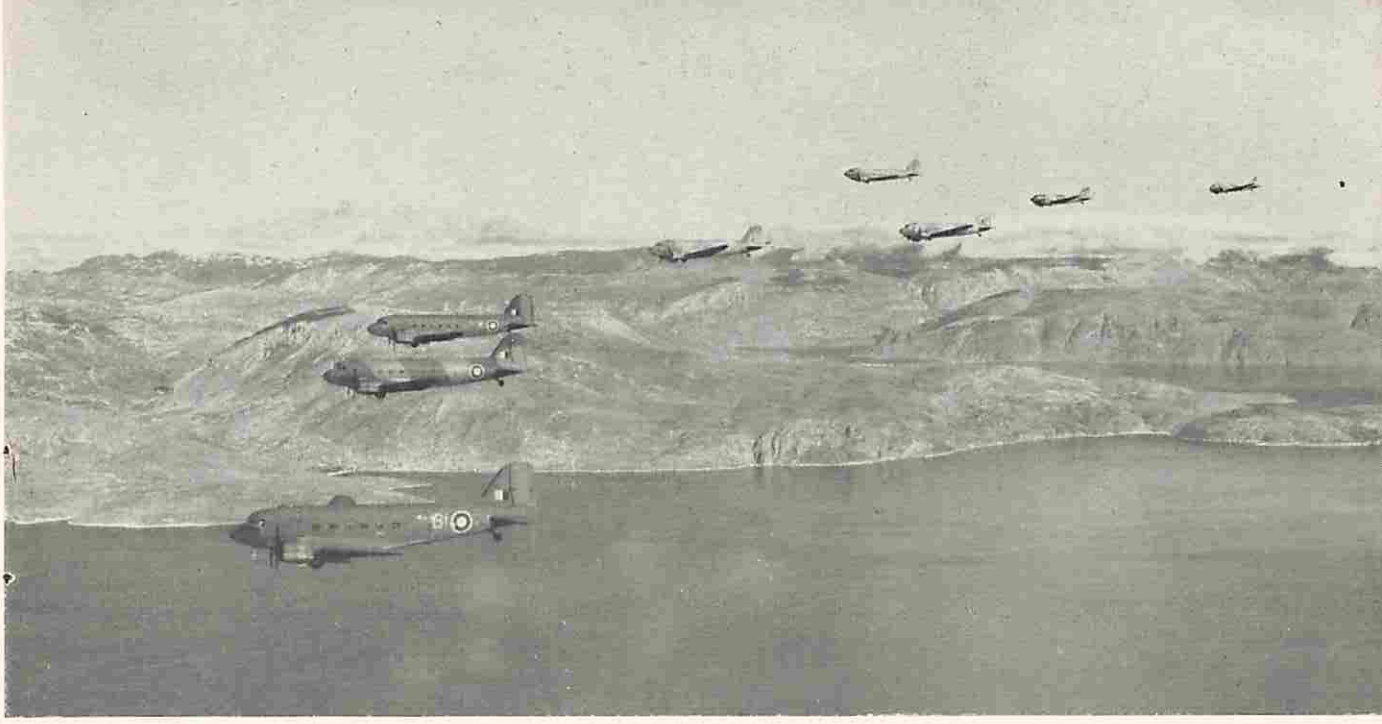
Mont Ventoux had to be made self-supporting for six months of the year, on the assumption that if the worst came to the worst the crew would remain on the summit, self-sufficient for that period.

Special snow vehicles, known as Weasels, were obtained, and the food supplies and necessary vitamins were put into store. An aerial had to be designed capable of melting the worst ice formations, and withstanding direct lightning strokes of up to 200,000 amps current.

The crew was carefully selected from volunteers; the Air Sea Rescue Branch of the Air Ministry provided

(*Concluded on page 14*)

Winter scene at Mont Ventoux Observatory



Brief Visit to the Aegeans

WING COMMANDER C. R. A. FORSYTH, D.S.O.

Wing Commander Forsyth, of the School of Air Transport, commanded No. 216 Squadron Detachment during these operations

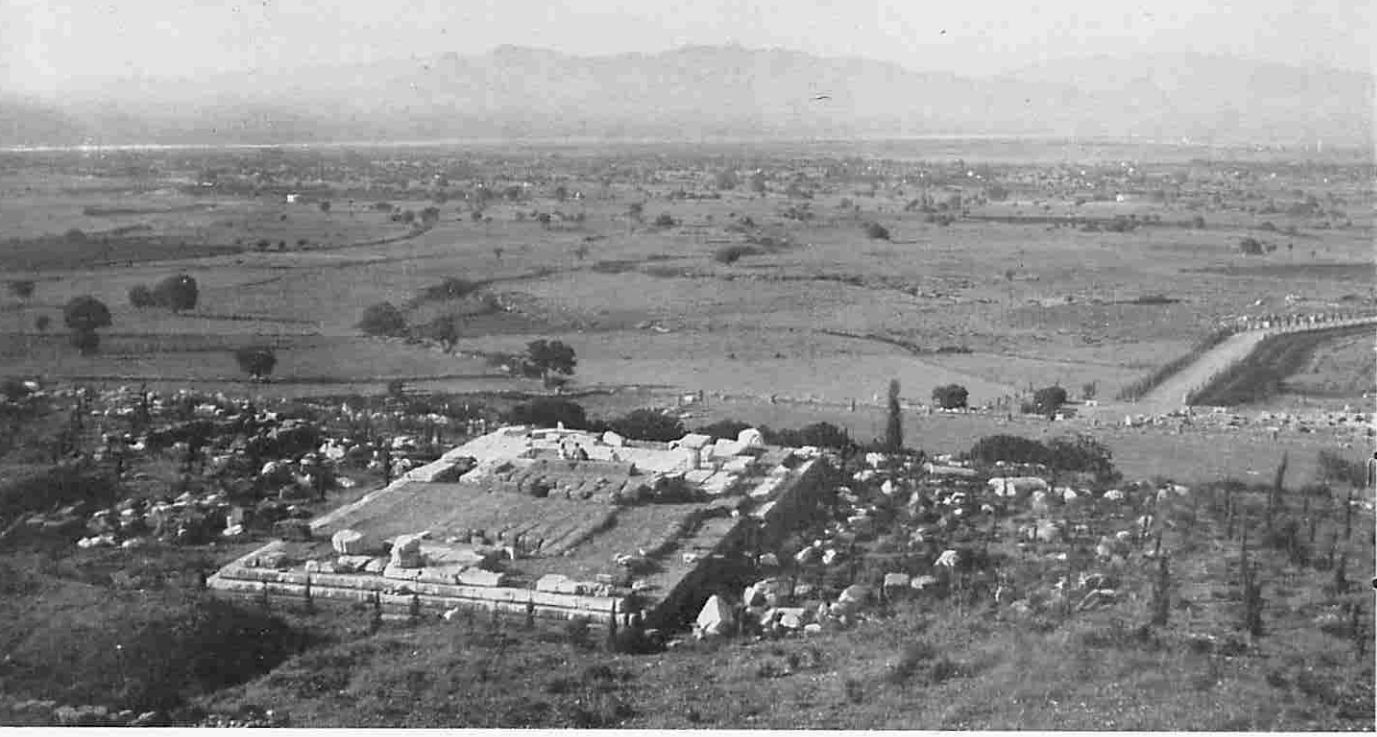
THE operations against Cos and Leros in September and October, 1943, are not well known. Yet, although admittedly small, these operations brought out lessons in the use of air transport in face of the enemy.

In order to take advantage of the capitulation of the Italian Government late in 1943, it was decided to invade, from the Middle East, the Italian and German-held Aegean Islands. It was hoped that the Italian garrisons would give us assistance against the Germans. This was a reasonable assumption as the respective garrisons on the Island of Rhodes, for instance, were 30,000 Italians and 8,000 Germans. A plan to invade Rhodes was in being, but was shelved when the Italian garrison became completely subservient to the Germans on September 12, 1943. A new plan was hastily made, and the operations were switched to the Islands of Cos and Leros. Cos had a small airfield suitable for fighter operations; Leros had no airfield, but a good anchorage and large oil storage tanks. Speed was essential in launching this operation to prevent all the Italian garrisons going over to the Germans. Cos was out of range of our nearest fighter force, which was located on Cyprus. Therefore, it was necessary to fly in fighter aircraft and their supplies before bringing in reinforcement troops by air.

A small parachute operation was carried out on the Island of Cos to raise the Italian morale and to show the flag. The operation, although only employing a parachute company, was of some historical interest as it was the first time that the whole parachute force concerned was dropped in the right place, at the right time and in the right order. It is also of interest to note that the airborne troops were withdrawn in a few days, after normal ground troops had taken over from them. So, as an airborne operation, it was 100 per cent orthodox.

As soon as the fighters had flown into Cos to give protection over the Island, as many transport sorties as possible were flown during the day. The route used from Cyprus to Cos involved flying considerable distances over neutral Turkish territory to avoid German observation and radar detection from the Island of Rhodes.

The Germans did not react to our invasion of their Aegean inner ring until five days had passed. During this time, considerable quantities of troops, stores and equipment had been transported by air to Cos and by sea to Leros. On the fifth day the Germans reacted strongly, and a very nice little plan was made and executed. A diversionary raid with some Ju.88s was



The Island of Cos, with the Temple of Aesculapius in the foreground and Asia Minor in the distance

made on the south end of the Island. As soon as our fighter cover was occupied with this, the main attack —bombing and ground strafing—was made on the airfield where several Dakotas were unloading. During the first day's attack, five Dakotas were destroyed, and at first light next morning a sixth was burnt out. Bombing and strafing attacks on the airfield continued by day, resulting in the reduction of our fighter defence effort and making it impossible to fly in the Dakotas by day. The airfield was not suitable for night operations, so it was decided to build a night landing strip as soon as possible. Until landings could be made on this strip supplies would be dropped at night. The new strip was opened for landings three days later, and night landings went on successfully from the night of 21st September till 29th September.

But on the 29th September the strip was rendered unserviceable by enemy bombing. The last landings took place on the night of 2nd/3rd October. On the 3rd October the Germans launched an operation involving parachute troops and a seaborne landing. All communication with the Island ceased on the 3rd October, and the air supply effort was transferred to Leros and later to Samos. There were no landing grounds on Leros or Samos, and there was no suitable place to improvise a strip quickly. For this reason all supplies by air had to be dropped. All these sorties had to be flown under cover of darkness owing to German air superiority in the area. The Germans also brought down a squadron or two of Ju.88 night fighters, but luckily no contacts were made with the transport aircraft which were flying at heights below 1,000 ft. for the final legs.

The troops defending Leros had a very thin time, as the Germans had been able to concentrate quite a large force of Ju.87 dive bombers. These aircraft could not be usefully employed in any other theatre owing to the Allied air superiority, but in this area, where the Germans had local superiority, they could use the 87s with very great effect.

Just before the end, an Allied parachute operation was carried out over the Island of Samos. This operation had to be flown during the night owing to the air situation. A very successful drop of troops of the Greek Sacred Squadron was made. It was obvious that the days were numbered before we must pull out of the Aegeans, and the final blow was the German daylight invasion of Leros involving parachute troops and a seaborne force. That was the finish of our excursion into the Aegeans for that year, except for a few cloak and dagger expeditions.

The lessons learned in these operations were of the greatest value to us when we went over to the attack in Northern Europe.

No mention has been made of the difficulties of control of this operation, which were considerable. Also, local air superiority was lost in the operation, and was never regained. This enabled the Germans to use an obsolete type of dive bomber—our old desert friend the Ju.87—very effectively. This loss of air superiority prevented air transport from being used intensively to build up the Army and Air Force in the forward area. Air superiority must exist or be won in the area of operations before large-scale air transport movements can be undertaken in the forward area.

OXYGEN

When and Why

WING COMMANDER C. C. BARKER, A.F.C., M.B., Ch.B.

This article is written for crews and passenger briefing officers of Transport Command. For crews it is intended to brush up their knowledge of oxygen and its use, and to emphasise its necessity as a safety measure at altitude; passenger briefing officers will find it of general interest and of material assistance in promoting the comfort and well-being of passengers on long flights when heights above 10,000 *or* 12,000 *ft. may be reached.*

WITH increasing altitude and speed of modern aircraft, numerous new problems have had to be solved for the safety of pilots and their crews, and, in transport flying, the safety and comfort of passengers as well. Chief among these problems has been the provision of oxygen in aircraft flying at altitudes of over 10,000 ft.

To-day it is essential that not only crews, but all those who have to do with briefing of passengers, should have a thorough understanding of why oxygen should be used and when it should be used.

The earliest records pointing to peculiar occurrences at altitude occur in the writings of mountaineers. These records show that mountaineers above the 15,000 ft. mark have stripped naked in sub-zero weather, stuck their country's flag in the ground and danced around it like dervishes, committed suicide and even murdered each other for no apparent reason.

The first high-altitude flight was made by the famous meteorologist, Glaisher, with an assistant named Coxwell. In 1862 they ascended to approximately 29,000 ft. in a balloon. Glaisher passed out, and Coxwell found that both his arms and legs were paralysed. He managed, however, to grab the valve release cord with his teeth and start the balloon on its downward course. Another balloon ascent, made in 1875 by three Frenchmen, Tissandier, Croce, and Sivel, ended in disaster. It was the first catastrophe in aviation history due to lack of oxygen. The balloon ascended to 28,000 ft. and then descended of its own accord. Tissandier recovered—his companions were dead. To the world Tissandier left his classic description of the effects of oxygen-lack. " . . . There is no suffering. On the contrary, one feels an inward joy. There is no thought of the dangerous position. . . . I soon felt myself so weak that I could not even turn my head . . . my tongue was paralysed. All at once I shut my eyes and fell down powerless and lost all further memory."

In those remarks lies the whole danger of oxygen-lack. Over-confident aircrew, or non-believers, may neglect their oxygen instruction. A spurious self-confidence is one of the first symptoms of oxygen-lack, and that is one of its greatest dangers.

During the last war oxygen-lack gradually became a very real combat problem. After the Armistice in 1918 interest in aviation medicine again flagged. Wiley Post did a lot to advance our knowledge of altitude flying. That he was purely a stunt aviator is not true—he, in fact, devised a pressure suit in an endeavour to establish the transatlantic speed record. Professor Picard did a great deal in the exploration of the stratosphere, ascending to phenomenal heights in sealed gondolas. The world altitude record was established by two Americans, Stevens and Anderson, in the "Explorer II" expedition, when they ascended in a pressurised gondola to the colossal height of over 72,000 ft.—two and a half times the height of Mount Everest. Only a few years ago, Flight Lieutenant Adam of the RAF, wearing a pressure suit, went up in an aeroplane to 53,000 ft.

So much for the historical background. Now for the physics of the problem.

Air is a mixture of a number of gases. The two principal ones are Nitrogen, which represents roughly four-fifths, and Oxygen, representing one-fifth, of the atmosphere. The other gases are in such small proportions that we do not need to consider them now.

At sea level, the atmosphere will support a column of mercury 760 mm. in height under standard conditions—equivalent to a pressure of 14 lb. per square inch. The partial pressure of oxygen at ground level under normal temperature and pressure conditions is equivalent to one-fifth of 760 mm., *i.e.* 152 mm. of mercury. And that is the pressure at which oxygen in the air enters the mouth.

But deep down in the lungs there are other factors and pressures to be considered. These are water vapour, and waste carbon dioxide, which exert their own partial pressure, which is a constant. As the total pressure cannot be more than 760 mm. of mercury at sea level, the partial pressure of the oxygen in the lungs is reduced to approximately 105 mm. of mercury. From the air sacs of the lungs the oxygen passes through their thin walls into the blood stream, where it combines with a substance called haemoglobin to form oxy-haemoglobin—an orange-red pigment, and that is why, when your blood is normally saturated with oxygen, your lips, ears, cheeks and finger-nails are pink in colour. After combustion the haemoglobin loses its oxygen, and that is why, when we suffer oxygen-lack, a bluish colour predominates.

That is what goes on at ground level. Now let us go to altitude and see what happens to the pressure of oxygen in your lungs:

	Barometer	*Oxygen Lung Pressure*	
Ground level . .	760 mm.	105	Breathing the Atmosphere
15,000 ft. . . .	429 mm.	54	
20,000 ft. . . .	340 mm.	41	
25,000 ft. . . .	230 mm.	30	
33,000 ft. . . .	190 mm.	105	Breathing 100 per cent Oxygen from a mask
40,000 ft. . . .	140 mm.	53	
50,000 ft. . . .	86 mm.	0	

From this table you can see that, as we ascend, the partial pressure of oxygen in the lungs gradually falls off and so the percentage of oxygen blood saturation likewise falls. (This means that there is less oxygen for the haemoglobin in the blood to take up, so symptoms of oxygen-lack develop.)

If, however, you breathe oxygen from a mask you will notice that at 33,000 ft. the partial pressure of oxygen is again 105 mm. of mercury in the air sac. In other words, when breathing 100 per cent oxygen from a mask at 33,000 ft. you are just as well off as you are at sea level. Now continue to breathe from the mask and ascend further. Even though you are breathing 100 per cent oxygen, the oxygen partial pressure in the lungs falls off once more, till at 40,000 ft. you are in the same condition as if you were at 15,000 ft. with no mask. If you want to go higher there is only one way you can do it, and that is in a pressure cabin or pressure suit. At about 50,000 ft. there is no oxygen pressure in your lungs at all. You may well ask what happens to the 86 mm. of barometric pressure. This is taken up entirely by the pressure of water vapour and carbon dioxide in the lungs, which is equivalent to 86 mm. of mercury.

The first effects of anoxia, or oxygen-lack, are noticed on the brain. The brain cells are the most highly developed cells in the body, and are the most sensitive to the change of oxygen tension in the blood. These effects are not noticed by the person concerned, but become increasingly obvious to an observer in full possession of his mental faculties.

If we were all to go out and get thoroughly drunk, no two individuals would behave the same. The same sort of thing happens to a man suffering from anoxia. From the psychological standpoint, he may develop one or more of the following abnormalities—*sluggish inertia; hilarity; pugnacity; depression; amorousness; hysterical outbursts; loquacity; euphoria*—euphoria is a mental state characterised by an unfounded feeling of well-being, optimism and bodily health or strength; this is one of the most characteristic mental effects of oxygen-lack and, as such, one of the most dangerous. This condition is closely allied to *over-confidence* which oxygen-lack instils in the majority of men. This spurious self-confidence is equally dangerous for aircrew, as the very best pilot, navigator or radio operator under these circumstances has no idea of his limitations.

At the same time the *mental function* falls off the more anoxic a man becomes. There is complete inability to work out simple mathematical problems, and a very marked lag in the reaction time.

Amnesia, or forgetfulness, always occurs in the anoxic state, and, again, is extremely dangerous. For a man may behave in a grossly abnormal manner when anoxic, yet on being revived insist that he was perfectly all right the whole time.

Prolonged exposure to oxygen-lack at high altitude, probably about 20,000 ft., eventually leads to coma, and from coma to death.

At night your *night vision* is reduced anything from one to 500 times with only relatively slight degrees of anoxia. Although this effect is not so important in day time, it can and does interfere with the accuracy of a navigator's work, and with instrument flying.

Hearing is the last of the special senses to be lost. But a slight degree of oxygen-lack is sufficient to miss some slight alteration in the rhythm of the motors, and, as you all know, the fine adjustment is governed almost entirely by your ears. With radio operators, diminished hearing is obviously dangerous.

Muscular effects, too, are similar to those of intoxication—a reeling gait, and a leaden, heavy feeling in the limbs, usually accompanied by a cold sensation and sometimes pins and needles. Muscular weakness also occurs. Many people subjected to a fairly severe degree of anoxia develop tremors and twitchings. The twitching nearly always commences in the hand with which you are writing, because those muscles are braced round the pencil and are thus burning up more oxygen than those elsewhere. Tremors and twitchings may spread to the arms, legs and face, and eventually the anoxic person may have what to all intents and purposes is an epileptiform fit.

From what this article has told you, you should have a picture of what oxygen-lack means, with its accompanying dangers. *Air Staff Instruction* (Vol. I, No. 7) contains the following:

> Para. 5.—Aircrews are to be advised to use oxygen at heights between 8,000 and 10,000 ft., if they expect to be at that height for a period of four hours or more. Although crews may not feel the need for oxygen at such heights, its use is important since it helps greatly to prevent fatigue and therefore aids judgment.
>
> Para. 6.—Aircrews are to be ordered to use oxygen whenever they fly above 10,000 ft.

What is important for aircrews is almost as important for passengers, to whom we in Transport Command have special obligations. Remember that some passengers may wish to work during flight, and lack of oxygen handicaps them greatly. Whether they wish to

work or not, they will all want to arrive in a condition fit for their duties. The writer has flown at 13,000 ft. for some six hours without oxygen, and, although by no means incapable, he suffered a severe headache for twenty-four hours after coming down.

Passenger briefing officers and aircrew should be familiar with Air Ministry pamphlet 165 (*Oxygen Sense*) and with details of oxygen equipment fitted to various transport aircraft. They must instruct passengers in the basic principles of the use of oxygen and the oxygen mask, and during flight passengers must be advised (and awakened if necessary) before a height of 12,000 ft. is reached. Finally, one of the crew must satisfy himself that each passenger is comfortably fitted with his mask, that he understands the few instructions necessary for its use, and must ensure that no passenger falls asleep whilst he is wearing his mask.

SPORT

IN TRANSPORT COMMAND

SQUADRON LEADER J. S. LANCASTER,
Command Physical Fitness Officer

FOR the past seven months Transport Command has figured prominently in the RAF Sports and Games Scheme sponsored by the Air Ministry. Since the scheme commenced the Command has grown in size and power to our advantage, as is evident from our performances in the closing stages of the various competitions.

The scheme covered ten major sports and games, organised on the knock-out principle. We in Transport Command entered every competition at the Inter-Group and Inter-Command levels, and now that the scheme is nearing its end we can feel quite proud of our achievements.

BOXING: Our team won the Final of the RAF Inter-Command Team Boxing Championship, beating Maintenance Command by 5 bouts to 3 at Uxbridge on 8th January, 1946. The following is a brief account of our team and their individual performances:

Flyweight—LAC NICHOLLS, of RAF Station Oakington in No. 48 Group, defeated LAC Hall by a knock-out. Nicholls won the Canadian Flyweight Championship in 1943.

Bantamweight—LAC RAISIN, of RAF Station Tempsford in No. 48 Group, lost on points to LAC Thomas. Raisin is a clever boxer, but was up against a really good man. He has every reason to be proud of his performance.

Featherweight—LAC BAYLEY, of RAF Station Netheravon in No. 38 Group, beaten on points by LAC Carter. An outstanding contest between two very good men, both internationals. Bayley is National ABA representative and winner of the Inter-Services International at Wembley in December, 1945.

Lightweight—Flying Officer CALLARD, of Headquarters No. 4 Group, Captain of Transport Command Team, beaten on points by AC Clarke. This result was unexpected, for Callard is one of the best in Great Britain in his weight at the present time. He is the Imperial Services and RAF Representative Lightweight.

Welterweight—Corporal SMITH, of RAF Station Great Dunmow in No. 38 Group, won on points against AC Burniston. An excellent fight. Smith is another of our RAF representatives.

Middleweight—Sergeant RICHARDSON, of RAF Station Ringway in No. 38 Group, beat LAC Chatterton by a technical knock-out, the referee stopping the fight in the second round. Richardson had already beaten his opponent once before this season.

Light heavyweight—Sergeant RIDLEY, of RAF Station Ringway in No. 38 Group, beat LAC Robinson by a technical knock-out, the referee stopping the fight near the end of the first round. Ridley was winner of the Inter-Services International at Wembley in December, 1945, and has won all his last twenty-six contests.

Heavyweight—Warrant Officer ROY, of RAF Station Ringway in No. 38 Group, beat LAC Morris by a technical knock-out, the referee stopping the fight in the second round. Roy is another of our RAF representatives, but has now reached the veteran stage of the art of boxing.

Reserve Lightweight—Sergeant KENT, of RAF Station Ringway in No. 38 Group, beat Sergeant Humphries on points. This contest did not count to the result of the match.

Four of our team, *e.g.* Flying Officer Callard, Sergeant Ridley, Corporal Smith and LAC Bayley have been selected by the RAF Boxing Association for the RAF team which is to tour Denmark in February.

The next big boxing event is the Individual Championships of the Royal Air Force to be staged in March. The preliminary stages are to be decided on a Command basis, which means that Transport Command will be holding its own individual championships very early in the month of March. The winner at each weight will then compete in the championship proper. Entries for these championships are to be sent to Command Headquarters through the usual channels on or before 28th February, 1946.

RUGBY: On the rugby field our expectations of winning the Inter-Command Rugby Final received a nasty blow when we were defeated by Flying Training Command to the tune of 16 points to 7 at Uxbridge on 19th December, 1945. After beating Bomber Command, and then Technical Training Command, and with six Welsh and two English internationals to call upon, our prospects looked rosy. Unfortunately, we had to make eight changes (two positional) in the team, mainly through international calls.

Reports of our all-round performances in the various other sports covered by this scheme will be given in the next issue of TRANSPORT COMMAND REVIEW.

The Terminal Building at Lydda

LYDDA

According to the Book of Ezra, trooping through this locality began as far back as the sixth century BC *when the Children of Lod (Lud, Lydda) returned from captivity in Babylon. To-day, RAF Station* LYDDA *finds itself again actively engaged with west-bound trooping, but at a rate vastly surpassing all earlier movements. Within another 12 hours' flight the returning troops will be within sight of England. It is natural that their spirits are high.*

There is another association between LYDDA *and England, for this was the home of St. George, our Patron Saint, and he must be regarding our victorious men with especial approval.*

In 1939 there was already an airfield at LYDDA *under the control of the Palestine Government. There were four small runways 800 metres long by 100 metres wide. The staff was small and the buildings were few. In May, 1941, the Royal Air Force came to* LYDDA *and Air Headquarters, Levant, took over the operational control.*

On the 1st of December, 1944, Transport Command established here No. 14 Staging Post (some 3 Officers and 50 Other Ranks), transferred from Ramat David. The cannibalization by 14 Staging Post developed to such an extent that on 1st March, 1945, 216 Group took over the commitments of the Station. Development since that time has been extraordinarily rapid.

Large-scale trooping began on the 1st of October, 1945. During November, 14,434 trooping personnel were handled in addition to 2,805 passengers on ordinary routine schedules. 402 four-engine aircraft (Liberators and Stirlings) and 190 Dakotas were involved in this trooping programme. During the month of November, Flying Control dealt with 3,232 aircraft movements, the peak day involving 140. In the same month, 168,357 pounds of freight were handled and 55,066 pounds of mail, this being irrespective of the "through" freight and mail not handled by the Station staff.

Midst the vicissitudes of the Palestinian political problems, the job still goes on. Visits to the ancient historical and religious shrines of the Holy Land are usually arranged for the personnel spending their 48 hours of acclimatization. Jerusalem, some 38 miles distant, and Tel Aviv, with all the modern amenities of a coastal resort, some 14 miles away, are extremely popular excursions.

The climate of LYDDA *is attractive; sub-tropical-Mediterranean in character with summer droughts and winter rains. The orange and olive groves, the eucalyptus, pepper and cypress trees are very welcome sights to the passengers who have seen long service in the East and flown over hundreds of miles of desert.*

On arrival at LYDDA *Airport one is first attracted by the magnificent Terminal Building. In the Buffet and Passenger Sections, milling streams of passengers with rugs and silks from India jostle with those bearing the fruit baskets of Palestine, whilst the constant shepherding by the Passenger and Freight Section proceeds.*

The incoming trooping personnel, however, are quickly despatched to the new trooping camp at Tel-Litwinsky some 5 miles from the airport, whilst those who have enjoyed a rest period in the locality go to the air-marshalling points at the spacious dispersals.

British Overseas Airways Corporation, MISR Airlines and the Palestinian Aviation Company also operate their services through this airport, and are symbolic of the shape of things to come when the large-scale trooping scheme has been completed.

The future of LYDDA *as one of the world's major Terminal Airports is assured.*

SQUADRONS, STAGING POSTS, TRAINING UNITS. *All should send an account of their activities to* TRANSPORT COMMAND REVIEW. *Let others know what you are doing!*

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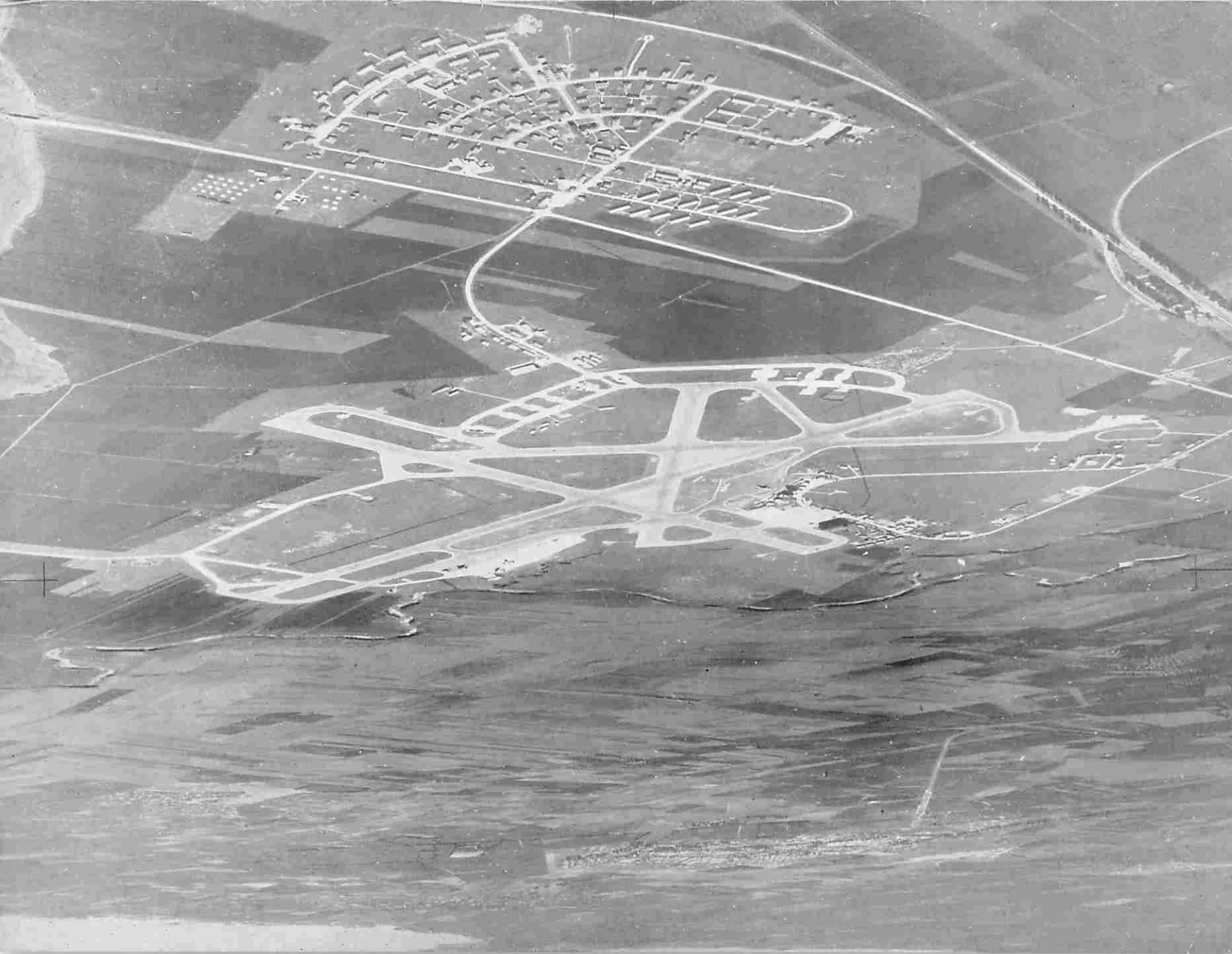

Transport—ancient and modern.
A scene in Bengal