FLYING ROUND THE WORLD

(*Ch topres*)

Ma or W. T. B ake ard 'Mike' the Mascot of the Expe lition.

Frontispiece.

FLYING ROUND THE WORLD

BY

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To

MY WIFE

(WHO HAD THE ROTTENEST TIME)

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FLYING ROUND THE WORLD

CHAPTER I

PREPARATIONS

It was after the death of Sir Ross Smith at Brooklands that I first thought seriously of attempting to fly round the world. I thought that this was a flight which should be at least seriously attempted by a British crew on British machines before foreigners stepped in, and as I heard that several countries abroad were preparing to make the attempt shortly I decided to make every effort to be ahead of them.

It must be borne in mind by those critics who have condemned our attempt that if the flight was to be carried through in 1922 a hurried departure was essential, and for the reasons given above the venture, in my opinion, had to be made in 1922. If the start was to be delayed until the following year, there would be several other machines of different nationalities making the attempt and the chances of success of a British crew and machine would therefore be diminished.

Naturally my earliest thoughts were with regard to the help which I might be able to obtain from various sources. With regard to the machine, I hoped to secure an amphibian, though since then and in the light of later experience I do not think that any one machine of present type has very much chance of accomplishing the entire journey. The conditions vary so greatly that they call for various types of machines over different parts of the route. With the idea of getting an amphibian I approached the only firm who had a machine of this type ready for use; but before they would sanction the sale of the aeroplane they required me to get the permission of the Air Ministry to release the machine, as it had been ordered for the Royal Air Force. Engines had been promised by a famous firm subject to certain conditions, but when their technical adviser stated that he did not consider the type of machine we proposed using suitable for the journey, their offer was naturally withdrawn.

The only alternative was to obtain several machines and have them sent out to await us at various places en route. This I now think to be the best method of completing a flight round the world. With this object in view I enlisted the help of the Aircraft Disposal Company who have thousands of machines in stock, and it was arranged that two D.H.9's with 240 h.p. Siddeley "Puma" engines should be converted into three-seaters, and used for two of the four stages into which I had

divided the route, and that a flying boat of the F.3 type should be used for the Atlantic crossing. As the Aircraft Disposal Company had neither seaplane nor flying boat suitable for the Pacific journey actually in stock, it was arranged that they should obtain a machine from the Fairey Aviation Company, our choice again being somewhat limited by the fact that we had to get a machine which was practically ready for service. These details being fixed I could settle down to the more detailed organisation of the flight itself.

In the first case perhaps I should say a word with regard to the financing of the enterprise. Originally it was determined to form a limited liability company to carry through the flight. For various reasons this idea was abandoned and a sufficient sum of money to carry out the attempt was placed at my disposal by a gentleman who, then and now, wishes to remain anonymous. The money was not put up by or on behalf of any newspaper as has commonly been reported. The *Daily News* bought the British news rights of the story of the flight, and helped me very considerably in many ways, but the scheme was not financed by this paper. I cannot thank the gentleman in question sufficiently for his ungrudging sportsmanship. In any event he did not stand to make money out of the flight himself as he wished to hand over any profits which might be made to the crew. He was content to provide the funds in order that

British machines with a British crew should be the first to attempt the world flight.

Next the crew. I had already arranged with Captain Norman Macmillan, who was well known as a test pilot to various firms in England, and with whom I had flown to Spain during the previous year, that if I had any big flights in mind he would come with me as pilot to the expedition. When the world flight was mooted, Macmillan was in Spain employed by the Spanish Government. I cabled to know if he would undertake to be pilot on this trip and he at once sent his acceptance, arranging to return to England a few days before our departure. For some time I was undecided whether to make the third member of the crew a mechanic or to carry him purely for kinematograph and record purposes. Though I favoured the idea of carrying a mechanic as the third member of the crew I realised that help would be forthcoming throughout the greater part of our route, whilst both Macmillan and myself had considerable experience both with engines and aeroplanes. Eventually circumstances into which I need not enter practically forced me in my decision to carry a photographer and not a mechanic and Lieutenant-Colonel L. E. Broome came in as the third member of the crew, his duties being to carry out the duties of kinematographer and also to make an ordinary photographic record of the journey, etc. whilst we expected that his knowledge of the Chinese coast and the Aleutian Islands would be extremely useful over

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The three original members of the Expedition
Left to right—Lt. Col. J. E. Broome, Major W. T. Blake, Capt. N. Macmillan

(Daily News)

those stages. Later Colonel Broome went to Japan to organise that part of the route and his place was taken by Mr Geoffrey Malins, well known as the official kinematographer in France during the war and the producer of the " Battle of the Somme " and other big war films. For my part I was to navigate the machine, act as relief pilot if necessary, and carry out the duties of leader of the expedition. I also had the task of writing despatches to the newspapers and the whole of the organising and business arrangements of the flight.

Subsequent experience showed me that I had not been wrong in my estimate of Captain Macmillan as a pilot. Throughout the trip, he displayed the greatest possible ability in this direction, and on several occasions it was only his skill and judgment in bringing the machine down under very awkward conditions that prevented serious crashes. His general supervision was extremely thorough and painstaking and showed that he possesses a knowledge of construction and mechanics far above that of the average pilot.

Malins, too, carried out his side of the show in a perfect manner, as the excellent films which he obtained prove quite conclusively. In addition, though he had previously had no experience with aircraft or aero engines, he turned out a most excellent mechanic, and his work on the engine in India especially was invaluable to our progress.

Several alternatives were put before me in the matter of routes to be taken. In this respect I was

very greatly helped by the Air Ministry, particularly by Captain Tymms of the Mapping and Navigating Department, who is undertaking a similar flight shortly. Climatic conditions had to be taken very seriously into consideration, but it was found that if a start could be made before the end of May, and if only reasonable progress could be made, it would be possible to get through before conditions made the flight impossible.

There were three places where the weather formed a serious factor. The first of these was in India where it was thought impossible to fly through the monsoon season. Our experience showed that this theory was wrong. It is unpleasant and sometimes difficult to fly through the monsoons; but as the rainstorms are usually local in extent they can frequently be flown round, and with care and good piloting it is generally possible to land on the aerodromes, though these are frequently reduced to seas of mud. The other two critical points were the Aleutian Islands and the Atlantic. In September storms begin to blow in the Northern Pacific, and by the end of October these have practically settled down permanently for the winter, making flying impossible. In the Atlantic fogs and storms also commence about the same time, whilst farther north the pack ice drifts south late in September or early in October.

The route as finally determined was through France, Italy, Greece, Egypt, Palestine, Iraq, to India; after which we proposed to follow the coasts

of Burma, Siam, Indo-China, and China to Japan, and thence via the Kurile Islands and Aleutian Islands across the Pacific to Vancouver. After crossing Canada, England would be reached via Labrador, Greenland, Iceland, and the Faröe Islands.

My reason for choosing this course over the Atlantic was the fact that the F. boat which was to be used, even with additional tanks, would not have sufficient range to cross the Atlantic via the Azores or direct to Ireland. The northerly route gave three sea passages of about six hundred miles each and one of rather shorter distance. Before the ice descends this is perfectly practicable and presents far less difficulty than the direct Atlantic crossing. I give our route in detail in an appendix.

It was only towards the end of April that the flight was definitely decided upon, and as we had to leave England before the end of May in order to have sufficient time to be reasonably sure of success, we decided that 24th May—Empire Day—would be an eminently suitable day upon which to start. The problem of getting matters ready in the short time at my disposal was a great one, and I worked practically continuously day and night throughout this period. Towards the end I had the assistance of Colonel Broome, whilst Macmillan arrived in England a few days before we started. Offers of help began to pour in from all quarters. Owing to a foolish advertisement which was inserted in the

papers under a misapprehension and without my knowledge, I had hundreds of letters from all over the country from people anxious to become members of the party. Several firms, too, supplied us with things which proved to be of the greatest use during our trip. These again are all mentioned in an appendix.

Major Grant, Captain Walker, and Mr Olney of the Aircraft Disposal Company had an extremely heavy time in getting our first machine ready. It is well known that it was only tested on the day of our departure; and the final dab of paint was put on as she taxied over the aerodrome to take off. The mechanics at Croydon had been working in continuous shifts day and night for some time in order to get her ready by the time promised. Their enthusiasm alone made a punctual start possible.

Maps, permits to carry fire-arms and cameras over foreign countries, equipment, etc., took up to the last possible moment. Conferences at the Air Ministry had to be attended; visits made to foreign embassies; whilst at intervals I was busied with the distribution of petrol, spares, and business arrangements. The Air Ministry took a tremendous lot off my shoulders by promising the help of the Air Force from Egypt to India wherever units were stationed. This meant that I had not to trouble about arranging petrol supplies, etc., for some seven thousand miles of our route. In the interests of the taxpayer it may be as well to add that the Air

Ministry insisted on a sufficient sum being deposited at the bank to cover all the help that we should be likely to require over this stage.

Everything was ready by the 24th May—the day on which we proposed to start.

CHAPTER II

LONDON—PARIS

MAY 24th—Empire Day—was one of the hottest days of 1922. We had determined to leave Croydon about midday, and in order to get everything ready I left my home in Limpsfield fairly early and arrived at the aerodrome in good time.

Many mascots had been sent us from all over the world. The chief of these, the real mascot of the trip, was a large black cat presented to us at a lunch given by the *Daily News* two days prior to our departure. Originally it had been my intention to take my own black cat "Mike" on the trip, but many protests were made and on second thoughts it did seem rather rough luck on the animal; so I decided to carry instead the imitation article which was supplied. Macmillan also had a small model of a cat which was fastened on his machine and did about five hundred hours flying over the lines during the war. This was tied to the outermost strut of the machine and eventually met with an untimely fate, as did most of our mascots, sinking with our second machine in the Bay of Bengal. We also had a large horseshoe, forged for me by some of the men of my village; a doll sent me by my old school,

and numerous medalions, coins, pieces of white heather, four-leafed clover, etc., from friends known and unknown all over the world. We were certainly well supplied with mascots and it can hardly be due to lack of these or lack of good wishes that our flight was not a success. Mike (as I, of course, christened the imitation black cat) rather luckily escaped disaster in the Bay of Bengal, for owing to a mistake it was taken with my few personal belongings to the hospital in Calcutta where I was operated upon and was not carried on the Fairey seaplane. Possibly its absence explains the disaster that immediately overtook the ill-fated machine!

The early morning at Croydon was a busy time. I was engaged in seeing to the final touches to the machine, fitting our navigational instruments and weighing up the spares and essential kit which we were carrying, in order that the machine might not be so heavily loaded that she would fail to rise. As it was she carried a load of more than six hundred pounds above full war load, and under these conditions for a D.H.9 to travel as far as India under terribly difficult climatic conditions was little short of marvellous.

It was not until some time after I had arrived that the machine was taken out for her final test. Captain Stocken brought her down and reported that all was in order. Then Lieutenant-Colonel L. E. Broome arrived with numerous friends, and things began to look as though we might start that day, although everybody was of opinion that we could

not possibly get off. Major-General Sir Sefton Brancker, the newly appointed Director of Civil Aviation, Major Villiers, and other officers of the Air Force and officials of the Air Ministry came down to see us off, and whilst I was on the aerodrome I received a telegram from His Majesty the King wishing us success on the flight. Telegrams and telephone messages arrived continually, whilst crowds began to assemble and the heat got more intense.

Midday, our appointed time of departure, arrived with no sign of Macmillan, but knowing that he would turn up sooner or later, I was not unduly worried; and whilst the compasses on the machine were being swung we went over to the Trust House on the aerodrome in order to have lunch. As Macmillan had not appeared by the time we had finished I began to grow anxious and telephoned through to his Club and to various places in London for him. He duly arrived, having discovered that his pilot's licence needed renewing and having had to proceed to the Air Ministry to be medically examined to take out his licence. Almost at once we said good-bye, climbed into the machine and amidst much waving of hands and clicking of cameras, taxied into position and with a final wave rose into the air. We circled round the aerodrome a few times to gain height and in order that Macmillan might satisfy himself with regard to the machine; for it should be remembered that this was the first time he had handled her. Mechanics were

working on the D.H.9, which had been given the registration mark of G—EBDE., until the very last moment, somebody even giving a dab of paint to the fuselage as we actually taxied off.

After a few minutes Macmillan turned round to me and signified that he was satisfied with the machine, and then swung her head south-east and we set off on our thirty thousand mile flight.

The first stage of our journey, to Paris, took us longer than is usually the case because we went out of our way to pass over Dover and so added considerably to the distance of the route. Our actual flying time between Croydon and Le Bourget was three hours six minutes, and on arriving we found that already there was some little anxiety as we were rather overdue. We flew at about four thousand feet most of the way and had not even left England before we began to experience trouble with our kinematograph camera. Broome, who sat in the tail of the machine, was busy photographing our last glimpses of Dover when the camera, which worked by means of compressed air, jammed, necessitating his opening up the instrument in the air and wasting many feet of valuable film. In addition all the air leaked out of the containers and he was forced to fix on a handle. A few minutes later something caused me to turn round and I found Broome standing up in his seat frantically throwing kisses in the direction of Dover, obviously saying good-bye to his last glimpse of England!

It was the original intention that a second aero-

plane carrying a kinematographer should accompany us as far as Rome; but this machine did not leave Croydon with us and as it did not turn up at Le Bourget that evening I telephoned over to England asking for it to be hurried up, and also that a rigger might be sent by it in order to make slight adjustments to the tail-plane of our machine, which was a trifle heavy. During the evening Mr Lawrence Cadbury and Mr Hugh Martin of the *Daily News*, who was describing the first stages of our flight for that paper, arrived in Paris, and after a hectic day we turned in to bed at the Grande Bretagne.

The following day, 25th May, was my birthday. Early in the morning the telephone bell woke me up and I found that Mr G. Malins, the kinematographer, who should have accompanied us from London on the second machine, had just arrived at Le Bourget. At this time there was no suggestion of Malins coming with the expedition, though subsequently, owing to various circumstances, he joined us at Marseilles and accompanied the machine throughout the voyage. Apparently there had been some misunderstanding about his coming, and he had merely gone into his machine and flown round over London. Even now he had only arrived by the ordinary daily service between Croydon and Paris. Once again I 'phoned through to England for the second machine to be sent at once. Later in the day news came through that the machine had started from Stag Lane Aerodrome and on landing at

Croydon to pick up the rigger, whom we had asked for, had broken its undercarriage.

All that afternoon Broome and Malins worked on the kinecamera which had given out over the Channel. After a great deal of trouble it was found to be unfinished; and here I would like to say that throughout the trip this camera and also the still camera gave us the greatest possible trouble on all occasions, nearly sending Malins off his head. It speaks well for his skill as an operator that he should have obtained such wonderful films with such unsatisfactory apparatus.

The rigger arrived a little later and at once set to work to alter the tail-plane. We left him at it, and after arranging to start at six a.m. the following morning, I cabled to Croydon to send over the second De Havilland machine at dawn in order that our departure might not be again delayed. We were, however, once more fated to disappointment.

On arriving at Le Bourget aerodrome at about six in the morning, we found that the rigger had been unable to finish his work owing to lack of material. A cable arrived, however, to say that Mr Wilson had left Croydon at three-fifty-five a.m. with our second machine. The hours passed and it did not come. Eventually a message came through to say that it had landed at Penshurst owing to fog, so that we were still hung up. We then arranged to start for Turin at two o'clock if the tail-plane was finished, but by that time the rigger was again held up, being unable to obtain certain nuts and bolts

which were necessary. We then decided to start at four in the afternoon and spend the night at Lyons, but even this decision came to nothing owing to another and different set of circumstances.

At this time a great race meeting was being held by the "Vielles Tiges" (whom we immediately christened the "Old Beans"), and on this particular day the President of the French Republic, Monsieur Millerand, arrived at Le Bourget to witness the racing. Shortly before four o'clock arrived, when we were due to start for Lyons, a message arrived from the President that he wished to see us. As we were all working on the machine trying to get it ready in time, I arranged to send for Macmillan and Broome as soon as the President was ready to receive us. Meanwhile I was asked to stand by to await Monsieur Millerand's return from his tour of inspection on the aerodrome. I stood by for over an hour and then became impatient to start off, and after much difficulty succeeded in persuading one of those in attendance on the President to try to ascertain when he would wish to see us, at the same time telling him that we were anxious to depart. I again waited a considerable time and at last, when it was far too late for us to leave Le Bourget, I was informed that the President had left the aerodrome and returned to Paris.

Needless to say we were all considerably annoyed at having been forced to waste our afternoon in this manner. We were anxious to depart, but we were told that there had obviously been some misunder-

standing and it would be best if we would go along to the Élysée to apologise to the President for it. I must say I was extremely loath to do this as I felt and still feel that the " misunderstanding " was not through any action of ours; but I consented to accompany the others in order to apologise for a fault which we had certainly not committed. Our cards were sent in to Monsieur Millerand's secretary, and we were informed that he was too busy to see us but sent out his son instead.

The annoyance caused by this waste of time put the finishing touch to a trouble from which I had been suffering for some days. Prior to leaving England I had been working day and night in order that we should start at the time stated, and had been reduced to such a state of unfitness that a couple of days before we left an abscess had begun to form in my throat. The worry of telephoning to England, endeavouring to trace our lost machine, the delays owing to the alterations we were making at Paris and the strain of the whole thing, had by that time such an effect on me that I was almost unable to stand, and had to go to bed and send for medical help. Doctor Kresser promptly visited me and found my temperature to be about 103°. He lanced the abscess in my throat and gave me medicine which I should think would have made an elephant sweat, so that by the time he came back to see me at ten o'clock that night my temperature was almost normal. He provided me with gargle and various medicines and did his best to persuade me to stay in

Paris and rest, but as he admitted that though it was inadvisable to continue the flight the next day, it was not actually dangerous, I naturally decided to go on.

That evening Wilson arrived on the D.H.9.c., but as he had definite orders to be back in two days' time it was obvious that the second machine would not be able to accompany us as far as we wished.

During our flight, needless to say, many amusing statements appeared in various newspapers. The first of these was the announcement that appeared in the Paris edition of the *New York Herald* which came out with the announcement that we had already left Le Bourget, amidst cheering crowds, in a seaplane!

The following morning we left Le Bourget at ten-forty-three, hoping to get through to Turin the same evening.

CHAPTER III

PARIS—MARSEILLES

We left Paris on a dull morning with low clouds and rain unable to decide whether to fall or not, and flew round about over the aerodrome for twenty minutes waiting for the second machine to rise. A moment before we started the crew were standing by with the propeller ticking over, apparently all ready to push off, but though we flew round for some time they did not leave the aerodrome, so I decided to go on to Turin.

With the object of reaching Italy without landing for petrol we intended to cut straight across the Alps, gaining as much height as we could, but until we were well south of Paris we did not get out of the cloudy weather and even then fleecy clouds were scattered at various altitudes. We approached the Alps in a direct line for Turin, but found the mountains heavily enshrouded in mist and so decided to alter our course and land at Lyons for petrol, after which we would again attempt to get to Turin by way of Chambery. We thereupon turned and flew due west in order to pick up the Saone and go on to Lyons. We were in no particular hurry, and as the towns along the river bank seemed inviting and there

were large open fields close by, we landed at Macon in order to get a drink and have a look at the town.

All the time that we had been flying I had been taking mouthfuls of medicine out of a port bottle and gargling, much to the distress of Broome who was sitting immediately behind me. I had also tried to eat raw eggs, but I discovered that in an open aeroplane it is an extremely difficult business to suck the matter from the shell, for if a sufficiently large hole to enable easy suction is made, as soon as one removes the lips from the hole, the air from the propeller fills the cavity and the yolk and white are blown out of the shell. Broome again suffered!

Macon is a quaint old town and we remained there for two hours. The field we had landed in was large and covered with high grass. At first we thought that the farmer might possibly object to our damaging his crop, but he came out to visit us and assured us that it was a pleasure for an aeroplane to land in his field. The grass apparently did not matter.

We took off from the field and landed at Lyons about twenty-five minutes later. Here we found our accompanying machine waiting for us. Wilson had stopped his engine shortly before we took off, as he had been waiting some time, and then there had been considerable difficulty in starting up again.

Our landing here created a certain sensation amongst the pilots of the French Air Force unit at Lyons, for Macmillan brought the machine in at a height of about two thousand feet, and when almost

over the edge of the aerodrome, tipped her into a steep side-slip, flattened out near the hangars and came to rest perfectly on the tarmac.

Monsieur Pelagaude, President de l'Union Lyonnaise des Combattants de l'Air met us, and the officers of the French Air Force did their best to make us comfortable, housing our machine in one of the military hangars instead of sending us to our correct place in the civil air station on the far side of the aerodrome. I should mention here that at Le Bourget the authorities had refused to accept landing fees or charges for accommodation from us.

One small disaster overtook us at Lyons. Following the Doctor's advice I had been carrying a pocketful of raw eggs to suck at intervals. On getting into the machine again at Macon I unfortunately sat on three of them but was unaware of the fact until I climbed out at Lyons and found my clothes one sticky mess.

The following morning we were greeted with a copy of the local paper, *Eve*, the frontispiece being a photograph of Mike, whose name had been transformed into "Kiki." This photograph of Mike sitting on my shoulder followed us about through the whole of our flight and appeared in many countries.

May 28th is a date which none of us will soon forget. We left Lyons accompanied by our second machine intending to cross the Alps for Turin. It was rather misty but the Meteorological Officer at Lyons thought that we should probably find clear

weather in the mountains. We soon found that he was wrong, and Macmillan suggested turning back. Our escort had already given it up as a bad job, and, as we found afterwards, had returned to Lyons. I thought it better to proceed as far as Chambery, where there was an emergency landing ground which we had been told was in a very bad condition, thinking that if the weather proved too bad we could turn back at that point, which was the real beginning of the high Alps, whilst in case of necessity there was a spot on which we could land. We found, however, that matters did not improve, and the mountains with clouds obscuring them from a height of about four thousand feet upwards did not look at all encouraging, particularly as none of us had had any experience on that route before. We decided to make for Nice, landing on the aerodrome there and after refilling, continue our way to Turin or Pisa.

For a time we flew south-west until we picked up the Rhone, which we followed as far as Avignon.

Many of the delightful old towns in this part of the world look peculiarly picturesque from the air. This was particularly the case, I thought, with Romans on the Isere and Valence. In the sunlight the houses appeared to be built of wonderfully soft-looking yellow stone, whilst the formation of the Roman parts of the towns was clear and distinct from the more modern sections. The river itself looked muddy and uninteresting with little worth visiting along its banks despite the reputed beauty

of the Valley of the Rhone. Things, however, often look different from the air.

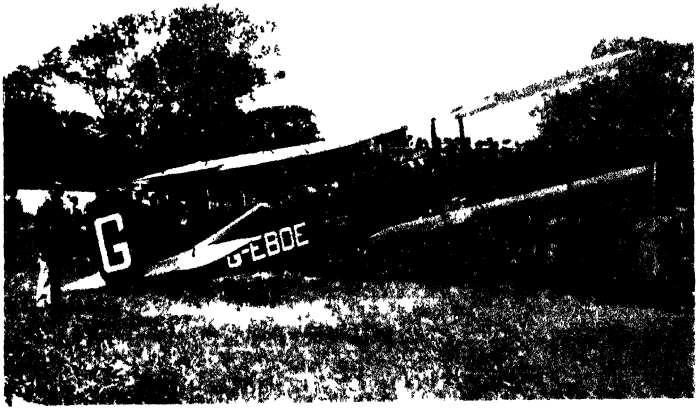
At Avignon we turned east to skirt the Alps for Nice. The mountains were well covered in mist and cloud so we did not venture to cut across them.

It was shortly after leaving Avignon when we were over Aix-en-Provence, that the engine began to show signs of trouble. It was vibrating a good deal and losing revolutions. Macmillan passed me back a chit asking what was the nearest landing ground. There were several to which we might have struggled, but relying upon information given me at Lyons I told him to proceed to Marseilles, which appeared to be the nearest place. Below us the country was bad for forced landings—rocky, hilly, and covered with small vineyards. As we approached Marseilles the country grew worse. Even the few small vineyards into which we might possibly have come down, began to disappear, and the country became one mass of rocks upon which it would have been impossible to land a machine without crashing badly. At Marseilles itself the engine was decidedly worse and we circled round looking for the aerodrome, but there was no sign of any landing ground either in Marseilles or in its neighbourhood. We flew round the town several times but could see no place at all where it looked possible to put down a machine. In the town itself there was an open space occupied by the Exhibition which was then on; and close to the sea a small race-course, in which were many people, a race meeting

being in progress, and which was half covered by some obstructions which we afterwards found to be stands erected for a gymnastic exhibition. The sea came right up to the rocky cliffs so that there was no possibility of landing on the beach. It appeared impossible to fly on to any place where there was a landing ground; so we did the only thing there was to be done, and tried to land on the race-course. We flew low over it once or twice and the people, after running about in all directions, withdrew to the course itself, leaving the centre clear. Then we flew in at a height of about one hundred feet, Macmillan tipping the machine into a vertical side-slip, clearing the obstructions by inches, and flattening out when the wing tip was almost on the ground. It was a masterly exhibition of piloting.

As we came down I had a vivid impression of crowds of people, their white faces turned upwards, throwing their arms in the air, obviously expecting to see us crash. In front of me was Macmillan, his right hand on the joy-stick, his left holding the side of the fuselage, as he looked over to judge his landing. I glanced behind at Broome who was sitting well down inside the seat, tightly clutching the precious kinecamera.

Macmillan almost brought it off. He touched the ground a very few yards from the surrounding stands, and as we were running rapidly across the grass I had hoped that we might pull up before crashing into the rails on the other side. Unfortunately there was a ditch across the ground, and this



After the forced landing at Parc Borelly Marseilles Little damage was done

caught our left wheel and threw us up again. The aeroplane came down with a crash on her nose and her tail shot into the air. I was bumped violently forward in the cockpit, but escaped with slight bruises on my knees, whilst Broome cut his knuckles. For a moment the tail hung in the air and the machine quivered as though undecided whether to turn right over or recover her normal position. Then she fell back on her tail skid, and except for a slight list to one side she was standing in her ordinary manner.

"Well done, Mac," I said as I jumped out. "Jolly good effort."

Macmillan's reply was to the point.

"Well I'm damned."

Broome said nothing.

As the crowd ran up I glanced round the machine and saw that the left wheel of the under-carriage and the shock absorber tube were smashed, one blade of the propeller was splintered and an aileron king post had snapped off when the wheel had collapsed letting the wing bump on the ground.

Macmillan climbed out and joined me and was presently followed by Broome, who appeared to have been half winded with the bump on landing.

Leaving Macmillan and Broome with the machine I went into the town to see if it was possible to get help with our repairs and to find where was the nearest aerodrome.

I was informed, "Oh yes, of course, we have an aerodrome here."

"Where is it?" I asked.

"Oh, it's at Istres."

After further enquiries I found out that the aerodrome was at Istres which was sixty-five kilometres to the west, though this was apparently quite good enough to be described as being Marseilles.

Before leaving the race-course at Parc Borelly where we had landed, Macmillan and I had both come to the conclusion that it would probably not be possible to fly out of the place as we had little over one hundred yards in which to take off. The only thing which we could do would be to take down the machine, carry it away to the nearest aerodrome and re-erect it.

I telephoned through to Istres and found that it was a large French military station. The officer in command, Commandant Saqui-Sanes, was kindness itself and at once promised me all the help that we should require. He arranged to send a lorry and float with mechanics to help us take down the machine and carry it through to Istres. That was all I could arrange for the time being, but the following day a lorry arrived and we began to dismantle the aeroplane. This was not a very big job. It was soon accomplished and all would have been well had it not been for the anxiety of a large crowd, which came together, to help. They managed to tear the fabric in several places, to bend up several of our raf wires and in lifting the tail of the fuselage after the wings had been taken off, did matters so thoroughly that she crashed forward on to her

nose, and we had grave fears that the engine might have been damaged. One fellow gallantly hung on to the tail skid in an effort to keep the tail down; he was carried high into the air and remained hanging some ten or twelve feet from the ground, until we had lifted the nose and got the machine back into a normal position. Then whilst we were getting the fuselage on the float which had been sent, she fell through the floor of this conveyance, the planking being thoroughly rotten. After being bumped and banged about for sixty-five kilometres on almost the most atrocious roads I have ever seen, it is not to be wondered at that the machine was in a far worse condition when she arrived at Istres than she had been immediately after our landing.

However, the Commandant was kindness itself and provided us with some of his best mechanics, one of whom, Corporal Dugas, had lived most of his life in Canada and spoke perfect English. In fact I believe he spoke better English than French and was only in France in order to carry out his military service. Sergeant Grier also helped us tremendously and worked almost day and night to help us through. I am, however, being rather premature, for it was some considerable time before we were able to leave Istres.

CHAPTER IV

ISTRES

I DO not propose to describe in detail the happenings at Istres. For the first few days we lived at Marseilles at the Hôtel Noailles and went out to the aerodrome every day as there was no accommodation approaching comfort any nearer to Istres. As the train service was so bad and the expense of living in Marseilles so high, and we found that we should be there for longer than we expected, we looked round and found a small inn at Miramas, about four miles away from Istres, and here we lived for the rest of the time.

The Hôtel Moderne was small and dirty. In addition it was swarming with the most virile type of mosquito, and as the beds were not fitted with curtains sleep was almost impossible. After a few nights all three of us were covered with lumps due to the bites of the insects.

The proprietor and his wife did their best to make us comfortable, the latter, in particular, going out of her way to improve matters. Henry, the waiter (I do not know his real name) afforded the comic relief; and apparently he found in us exactly the

type of mad Englishman that he imagined came from Britain, for we appeared to be a never failing source of amusement to him.

On the aerodrome Commandant Saqui-Sanes did many things to help us. He was a man of about forty-five, wounded in the war and, of course, a soldier before he took up aviation. Captain Latour who was in charge of the workshops also helped us and personally devoted a great deal of time to our repairs. When I tried to thank the Commandant for his help he merely smiled saying,

"It is nothing. We must help one another for flying is international."

We invariably had lunch with him and his officers in a café in the village at Istres, there apparently being no mess on the station, though it was one of the largest in France. Some of the officers had lunch in the canteen but the vast majority of them, who were pupils under instruction, numbering some hundreds, lived in barracks. It was a peculiar thing that during the whole of the time we were there we did not find a single officer who appeared to speak or understand English, whilst there was only one of the men—Corporal Dugas—who spoke our own language.

We arrived at the aerodrome ourselves the day after the machine got there, it having taken a whole day over the journey. We found that several things which would be needed could not be obtained from the French air station. Notably I had to get

a new propeller, carburettor float, wheel and other details from England, and in order to save as much time as possible I cabled home for these things to be sent off by air to Paris, whilst I went there myself to fetch them.

There were several days' delay owing to the fact that several of the spares which I asked for were mislaid at Le Bourget aerodrome and took some considerable time to find. Whilst in Paris I received a cable to say that the gentleman who was financing the flight, and Mr Ryland, late of the Royal Air Force and my solicitor, were coming over to see me. Whilst speaking of Mr Ryland I must here state that the value of the work which he did on behalf of the flight was incalculable. He practically undertook the whole of the management of matters after we left England, in addition to looking after the personal interests of Captain Macmillan, Colonel Broome and myself. Being an ex-officer of the Royal Air Force himself, he was able to understand points which would not be appreciated by the layman. I cannot thank him sufficiently for all his help.

At Paris I received several shocks. When we left England it had been arranged that the film which Broome was taking en route should be shown weekly as we progressed and the arrangements had been placed in certain hands. Two thousand pounds had been paid to the man in question to carry out his part of the contract, whilst he was, in addition, to receive a percentage of the profits.

Much to my astonishment, for I regret that I was responsible for introducing him into the scheme, I was informed that no sooner had we left England than the film of our departure had been put on at one place alone in London and that this place was placarded with the announcement to the effect that the film of our flight was exclusive to this theatre. The man himself, instead of remaining to manage affairs, had promptly departed abroad and left matters to go their own way. In addition there were further complications which rendered it essential that we should lose Colonel Broome, who subsequently went to Japan, in order to organise the route from Tokio to Vancouver. In Colonel Broome's place it was suggested that Mr Geoffery Malins, a well-known kinematographer, who was responsible for the films taken in France during the war, including " The Battle of the Somme," should become a member of the crew. Shortly after this conference Malins went out to Rome, where it was intended that we should pick him up. New film arrangements were concluded with Messrs Gaumont, and things looked more hopeful from the business point of view.

On leaving Paris, carrying the spares with me, I had another shock. I had taken the propeller, etc., with me in a taxi from my hotel to the station. These spares were left on a trolley in the booking hall whilst I took my ticket. My back was not turned for two minutes, but in the interval the propeller and all the spares vanished. Luckily I

had some three-quarters of an hour before the train started. I visited every part of the station, inspected every goods coach of the train and found part of the spares but not the propeller nor the wheel —the two most important things for the machine. For forty-four and a half of the forty-five minutes I went from place to place, reducing the guard of the train to an apoplectic fury and the porter whom I commandeered to tears of distress. As the train moved off, realising that I could do no more at the station, I climbed into a compartment and hoped for the best. I had thoroughly inspected every luggage van and interviewed all the attendants on the train, none of whom had seen the missing things. Yet on arrival in Marseilles the following morning the things duly appeared out of a luggage van! How they got there is a complete mystery to me.

On my return Whitsuntide was being celebrated, and of course all the mechanics were on leave and no work was done. This continued for three days, during which time Macmillan and I worked on the machine and got things ready for assembling. By the 8th June we had her practically assembled with both wing cells fitted and only the truing up and checking of the rigging to be done. We entertained hopes of getting off on the 9th June. Then our troubles recommenced. I have previously stated that during the dismantling of the machine many of the raf wires got damaged, but we were obliged to refit them as there was no French substi-

tute which could take their place. On tightening up these wires one of them was found to be so badly damaged that we could not use it, the threads having been stripped from the screw. The only thing we could do was to arrange for a double cable to be substituted. This involved new fittings and the removal of a strut to get them in place.

The following day Macmillan and I were on the aerodrome very early. On looking over the machine we found that the centre section bolts had to be taken up, and various other minor things were damaged whilst we were still waiting for the fittings which were being made in the workshops to replace our damaged raf wire.

I notice in my diary at this time that practically every entry concludes—" badly bitten by mosquitoes during night." This, however, was a detail in the light of later experiences with insects.

On 9th January, too, our machine was nearly written off by one of the station pupils who was learning to fly a Caudron. He went up for his first solo and misjudged his landing with the result that he nearly flew into the hangar bang on top of our machine. Luckily he hit the door first, smashing it to smithereens and crashing the Caudron badly.

Next day more trouble occurred. In truing up the centre section a raf wire broke. This necessitated more special fittings and each time a new cable was tried it broke. Five new cables and fittings were made and four of them broke, one after

the other. The fifth held, but this had occasioned a few more days' delay, especially as all the mechanics went on week-end leave.

During this time life was not without its relaxations. The temperature was extremely high and as the hangars were made of iron they were like ovens. Though we wore nothing except shirts and trousers, perspiration was running down us in a continual stream all the time we worked, and after several hours of this we had to go into the open to get a breath of fresh air. Part of the aerodrome was covered with bushes of rosemary and small thorns, and in many of these shrubs lived insects of all kinds. The ones that particularly amused us were a species of cricket. They were about two inches long in the body and had very long spidery legs with which they scuttled in all directions making a high plaintive squeak like an excited mouse. They were bright blue in colour and altogether presented a comic appearance. Scorpions and tarantulas also abounded, and there was a moment of excitement one day when Broome got out of the machine and a large centipede detached itself from his trousers.

One Sunday when it was impossible to work as all the shops were closed and the mechanics on leave, we hired an ancient car, a twelve years old Mors, which we proceeded to drive all round the Etang-de-Berre in the hopes of finding better quarters, and then went on to Saint Chamas, on the borders of the lake, for dinner. Macmillan and I

took it in turns to drive the old bus, which had many peculiarities. Great force, suddenly exerted, was needed to change gear and if one turned a corner the brake was automatically applied, whilst if the driver attempted to use the foot-brake the accelerator was at first violently depressed. We had quite an exciting drive, particularly as it was very hilly!

Saint Chamas is a quaint little town on the lake overlooked by a huge bluff in which caves have been cut, obviously by the very early inhabitants of the place. Subsequently these caves have been slightly improved and they are still inhabited; the whole of this part of the little town is a place of cave-dwellers. It is an interesting sight to walk along the base of the cliff and see small children running about a narrow ledge two or three hundred feet above, half-way up the cliff, whilst the thin barking of dogs comes down from the sky.

When we had the machine nearly ready the Mistral began to blow. This is a wind which comes from the north, intensely local in character, and attains violent speed, filling the air with drifting sand. Despite the Mistral, which on the first day was blowing at thirty-eight miles an hour, we decided to start on 12th June; but again various little things cropped up, preventing our leaving, and it was eight o'clock in the evening before we ran up the engine. Much to the surprise of the mechanics, and also ourselves, she started with the self-starter the first time I placed her on com-

pression. She ran sweetly up to thirteen hundred revolutions, so we left her in the hands of the mechanics for the night and returned to Miramas intending to make a dawn start on the 13th June. In the morning the wind had increased to over forty miles an hour and one could only see about fifty yards through the drifting sand. We resolved to wait a few hours in the hope that the wind would drop, deciding in any case to leave at ten o'clock for Pisa.

Shortly before the hour of our intended departure, when we were all ready to leave, the Commandant came up and made a personal request that we should not start as he considered that the wind was too high and dangerous and he thought it was due to him, as he had helped us so much, not to run the risk of crashing our machine when attempting to take off. We had no option but to fall in with his request, and so decided to tune the engine up a bit in the hope of getting her up to thirteen hundred and fifty revolutions. The net result of our work was that when we ran her up again she had dropped three hundred and fifty revolutions! Then the starting magneto cut out, and at last at one a.m. we ran the engine up for a third time, getting twelve hundred and eighty revolutions, and decided to leave it at that and go to bed.

That night we slept on the aerodrome and the following morning the wind had dropped almost to a calm, so after once more changing the carburetter float we left the aerodrome at eight-

thirty-nine, the engine running fairly well and picking up revolutions considerably once we were in the air.

For about twenty minutes all went splendidly. Macmillan passed a chit back to me saying that the machine flew far better than when we left England —he was delighted with the rigging.

All continued well until we reached Aix-en-Provence where our previous engine trouble had developed. At almost the same spot as before she began to vibrate and dropped one hundred revolutions, whilst a petrol leak started badly from the hand pump by my seat. We decided to return and inspect the engine rather than run the risk of a forced landing by trying to get on to St Raphael, the next aerodrome on the coast. On looking over the engine at Istres we found a great deal of grit and gravel in the oil, together with small scrapings obviously from the bearings. We decided that we should have to take the engine down in order to see if there was any serious damage and to thoroughly clean out the grit which was there.

Somewhat naturally the officers at Istres were getting tired of us. They had lent us some of their best mechanics all the time we had been there with the result that their own work had suffered, and we were anxious to get on as soon as possible. Unfortunately we had not the requisite tools to take the engine down and our French friends could not supply them, so I had to cable to England for the tools and, at Macmillan's request, asked for a

mechanic to be sent out with them in order to help us on with the job.

I then went into Marseilles in order to obtain fresh oil. This oil was stored in large tanks and fifty kilograms was run off from the tanks into cans for our machine. I did not see the cans filled, but they were delivered to me at my hotel in Marseilles sealed and packed in cases. I personally took them out to the aerodrome and kept them under my eye until we decided to re-fill the tanks. When this time eventually came—about which I shall speak later—for my own satisfaction I decided to filter one can of oil before putting it into the machine. From this can I took more than two ounces of dust, grit and sawdust. All the remaining tins revealed a similar quantity of dirt which could not have got there of its own accord. I wish to emphasise the fact that from the time of delivery in Marseilles until the time of putting into the machine at Istres the oil was under my own observation.

During this time Malins had been waiting for us in Rome, but as our departure was further delayed I cabled for him to join us at Istres and Broome returned to England to make arrangements for proceeding to Japan.

These continual disappointments made it very hard to keep cheerful, but we continued to struggle along in order to get off as soon as possible, as we were already far overdue at many of our stations *en route*. As it happened the despatch of the Fairey seaplane to Calcutta was later than had been

intended and our delay in Marseilles eventually made no difference to our plans; for, had we gone straight through to Calcutta, we should have had to wait there between three and four weeks for the arrival of our second machine.

On the 17th June, whilst we were sitting outside the headquarters offices at Istres waiting for the tender which would take the staff down to the village for lunch, a cable was given me from London, saying that a new D.H.9 was being sent out from England and would arrive in a few days' time. We were to proceed with this machine whilst mechanics accompanying the new machine would repair the other engine and the aeroplane would be flown back to England and afterwards be sent out to Vancouver, where we should pick it up again.

To say that we were delighted is to state things mildly. The last few weeks had so got on our nerves that we were all feeling thoroughly depressed. Work as we might some fresh obstacle appeared to crop up every time, and though we had no thoughts of giving in we were absolutely fed up. On receipt of this telegram we realised that we could knock off work for a few days, and at once decided to get away from Istres and have a change. We therefore motored over to Arles intending to spend the week-end in visiting the interesting old towns of that part of the world; but after inspecting the Roman amphitheatre and seeing a play performed in this ancient place by the Comédie Française, and the whole place crowded with people in modern

clothes sitting on the ancient Roman masonry, whilst rows of electric lights swung from the marble pillars, we decided to seek a place where ancient and modern did not clash quite so obviously. We therefore pushed off to Marseilles by train and then on to St Raphael. Here we chartered a car and drove to Mentone along the Corniche road.

I have no time to describe the wonderful beauty of the coast or the marvellous performance of the little Citroën car which carried us there. We were so delighted to get away from the workshops for a day or so that we were like schoolboys with an unexpected half holiday. That night we slept soundly at the Hôtel des Anglais at Mentone.

The following day, 19th June, was the seventh anniversary of my wedding day. We spent the greater part of the morning sitting on the verandah in the sun in our pyjamas and then we wandered about, idling away the time bathing, climbing the rocks and—great event—crossed the frontier into Italy. We had actually got to Italy, but unfortunately our aeroplane was still in France! After lunch we returned to St Raphael by the precipitous La Turbie road which was even more wonderful than the drive along the Corniche on the day before. It may help to explain our feelings of relief from the last few weeks when I say that at one point we stopped the car in a desolate spot, solemnly climbed out, fixed up a small stone as a mark, just as solemnly fired at it with our automatics until it was knocked over, after which we climbed back and went

on our way rejoicing. The chauffeur thought we were quite mad, though at least two persons blessed us that day, for we found a very ancient driver with a broken-down car right up in the mountains, miles from anywhere. He did not know what to do and was afraid of having to spend the night in the forests. His wife was equally anxious and knew just as little. It did not take us long to find his trouble and Macmillan repaired the damage to the magneto in a very few minutes.

That evening at St Raphael we again amused ourselves in a perhaps not perfectly conventional manner. The Hôtel de la Plage at St Raphael was not very full, but a gramophone was screeching out foxtrots whilst a tourist party danced decorously to its strains. We found that the manager had been a major in the French Air Force and talked to him for some time before we felt the need of a little excitement, even though it was of a very mild order. We asked his permission to have a little revolver practice in the gardens of the hotel and, as he consented, fixed up a piece of white paper as a mark which we could dimly see in the dusk and proceeded to fire at it.

At the first shot there was an awful screech from the gramophone as though someone had started violently and dragged the needle right across the record. At the second shot the dancing ceased and everyone inside the hotel rushed out into the garden to help pick up the body of the man who, it appeared, they thought had committed suicide. At

the third shot they vanished abruptly and were seen no more that evening. The manager appeared to think that the affair was a huge joke and thanked us profusely for sending his guests to bed so early!

Next day we returned to Marseilles to await the arrival of the new machine.

CHAPTER V

ISTRES—BRINDISI

CAPTAIN R. H. STOCKEN, the test pilot of the Aircraft Disposal Company, was due to have brought our new machine out from England on the Tuesday, but by the time it was dark on Tuesday evening nothing had arrived. We had received no news of its non-departure and we waited anxiously on the aerodrome, scanning the sky for the sign of an approaching machine. At last when it was almost dark we saw an aeroplane appearing from the right direction, searching about as though looking for an unfamiliar aerodrome. I got out the Very's pistol and began to fire lights into the air to attract the attention of the pilot who appeared to see my signals and headed straight for the aerodrome, gliding down and landing. In the dark we could not see what type of machine it was, but we had little doubt that it was Stocken on the D.H.9. We rushed up to greet him, only to find that the aeroplane was an Hanriot from the French air station at St Raphael.

On Wednesday we waited all day for the machine, thinking that as we had not heard to the contrary,

it must have left as stated on the Tuesday. I began to telephone and cable to all the aerodromes *en route* for news, but nothing had been heard of the machine in France. My cables to England were unanswered and when evening came on with no more news, we began to feel anxious for the safety of the machine and pilot.

Thursday arrived with no news. We spent an anxious morning, again cabling and telephoning all over France hoping for information. After lunch in the village, I received a cable to say that the machine had left Croydon at five-thirty a.m. We hurried back to the aerodrome just in time to miss the arrival of the D.H.9 which was taxi-ing across the ground as we came up. Stocken had left Croydon at nine-thirty and not five-thirty as stated and had only stopped once *en route*, coming down at Lyons in order to have a fresh landing wire fitted to the machine, for the trip had been terribly bumpy and one of the raf wires had burst in the bumps. Stocken himself had to get off at once to pilot a machine in a race meeting at Brussels, but we got to work on the D.H.9 the same evening.

We tried to get off before dark, hoping to make St Raphael, but on examining the new engine, we found the same type of grit present as we found in our machine after our flight from Lyons to Marseilles and decided to flush it out with petrol, empty the oil tanks, and renew the oil.

It was then that I discovered that the oil which I

had obtained from Marseilles contained sand and sawdust. I personally strained all the oil twice and then filled the tanks, whilst mechanics altered our seating arrangements and made things ready for a departure in the morning. At one-forty-five a.m. Macmillan lay down in the open outside the hangar. At two-forty-five a.m. Malins put a mattress under the right wing and slept on the concrete floor. Sergeant Grier, Sergeant Valliere, Corporal Dugas and mechanic Fiat worked with me all night and at three-thirty we had the machine ready to depart in the morning, the tanks filled, alterations made, stores loaded—in fact all complete. I lay down to get a few winks of sleep at three-thirty and at four o'clock the bugler sounded réveillé and the camp began to come to life again; so I got up, washed as well as I could in a brook which ran through the aerodrome, and got ready a breakfast of bully beef, bovril and bread. We then ran up the engine and found all well, at last getting away from Istres at eight-five a.m. with a following wind.

Everything went well. We cut overland to St Raphael and then followed the wonderful Riviera coast right down to Pisa. As we crossed the frontier by Bordighera an inexpressible feeling of relief came over me. We had at last got out of France and were on our way again. Moved by a common impulse we all cheered and waved in our joy. People had been very good to us in France, but our continual disappointments and hard work day after day, and the slight feeling of constraint

which became noticeable before we left, had been a great strain on us all.

As far as San Remo the weather was beautifully clear, but then we flew into clouds and were driven down until we were flying under one thousand feet above the sea. We had intended to cut across the Gulf of Genoa to Pisa, but the weather made us change our minds and we hugged the coast all the way round. From Genoa to Spezia the coastal scenery was grand in the extreme. Macmillan kept the machine close in to the cliffs, not more than fifty yards away, whilst crags and mountains towered hundreds of feet above us. Houses were perched in almost impossible positions on these crags and I cannot understand how traffic could possibly have got up and down to them. Certainly wheeled traffic could not have reached many of the houses. The inhabitants ran out on the terraces in front of these places in wild excitement as we went by, waving and shouting frantically. When we cut over one headland we found a flat top covered with small vineyards. In these men and women were working, but as we appeared out of the mist flying only about fifty feet above their heads, they fled in all directions, thinking we were about to land.

Pisa with its leaning tower was very easily picked up, but we had some small difficulty at first in finding the aerodrome, as the grass had recently been cut and the whole surface was covered with haycocks leaving no single open space on which to come down.

At our first effort we had to take off again, finding it impossible to dodge the heaps of grass, but at a second attempt Macmillan put her down safely and zigzagged in and out between the haycocks, finally bringing the 'bus up to the hangars, where we were met by officers of the Italian Air Force who were stationed there.

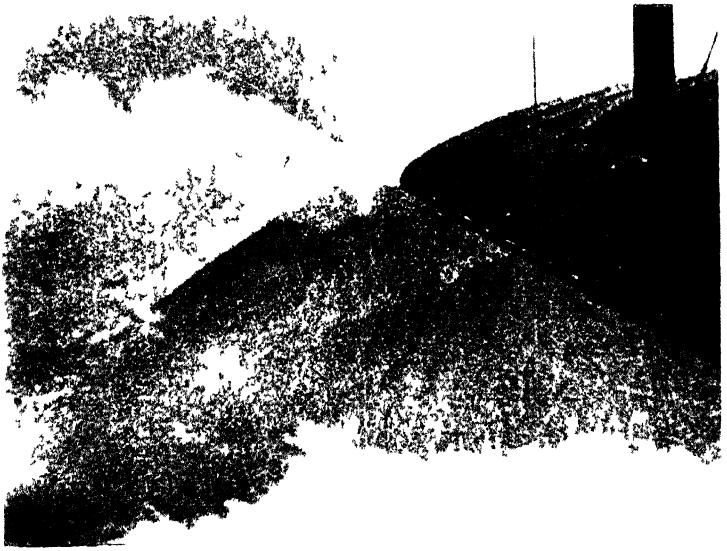
At Pisa we were looked after splendidly, friendly officers taking us over the town and showing us the sights before allowing us to leave. We then filled up and left for Rome, which we reached about two hours later, just as it was getting dark.

Next day we continued to Naples—a small aerodrome difficultly situated between trees and houses, leaving only one narrow avenue of approach. We could not help smiling at the powerful guard placed over our machine that evening. There was an ammunition store on the aerodrome, so that an armed guard was always present; but four men with fixed bayonets were stationed round the machine, whilst the machine-gun battery was ready for action close by! Our friends here obviously intended that our machine should not be molested during the night, and we left it perfectly happily under their care.

That evening we went to a local fair and were soon attracted to the cocoanut shies. The proprietor in a most unsporting manner had fixed his nuts into cups so firmly that only a tiny bit of the top showed and it had to be an extremely hard direct hit on the nut itself which removed it.

Several of our shots actually smashed the nuts to pieces without knocking them out of the cups. After we had captured about seven prizes, the proprietor began to get rather fed up with the accuracy of our aim and did not want to supply us with any more balls. Later, however, he recovered his equanimity and laughed with the others at our success. Little by little a large crowd had collected at our heels and more people assembled as the heap of nuts at our feet grew larger. When we had captured nineteen we began to scramble them amongst the crowd, but the excitement got a little too violent for our liking, so we moved on to another side-show. Obviously the Italians do not play cricket or they would not have been so surprised at our aim.

Whilst we were in Naples Vesuvius was in a mild state of eruption. A cloud of smoke hung over the crater, and at night a dull red glow could be seen at the summit. Consequently when we took off the following day we decided to have a close look at the volcano before we went on. First of all we flew right round the mountain at a respectable distance and then, having ascertained the best avenue of approach, flew straight up to it and over the crater. We saw very little for our trouble. The machine went into a dense cloud of sulphurous smoke in which it was almost impossible to breathe. As we got over the crater itself, the machine was bumped about in all directions, and I for one was relieved when we emerged from the sulphurous cloud,



Eruption of Vesuvius in 1906

How we kept fit at Brindisi

To face page 58

choking and spitting, and were able to get a breath of fresh air into our lungs. Scientists have since told me that there is no sulphur in Vesuvius, but if it was not sulphur which tasted in our mouths for two or three days afterwards, it was the most excellent imitation that I have ever encountered. The sides of the mountain and the whole country about its base were one mass of sterile lava fields, seamed in gulleys where the molten stone had rolled down from the summit at various times. It was an exciting experience and one which, I think, very few people have undergone.

We rose to a height of about ten thousand feet in order to cross the Appenines, but even at this altitude, after passing Foggia, it became so bumpy that we headed for the coast and put out to sea, flying to Brindisi about half a mile from the shore.

On arriving at Brindisi we found that instead of one aerodrome, which we had been led to expect, there were actually two aerodromes separated by a distance of about a kilometre. Both of them were equipped with hangars, but neither of them had wind indicators, nor landing T.'s, and there was no sign of life at either place. Consequently we were somewhat puzzled as to which of the two grounds was the correct one on which to land, and after flying round for about ten minutes, nothing was done to help us, so we flew to the town of Brindisi itself, some ten kilometres away, in order to notice the ships in harbour and get the exact direction of the wind. After that we glided down over the sheds to

land. Only then did we see mechanics just emerging from the buildings.

Macmillan made a good landing in long grass, but just as his run ended and he was about to turn to taxi in, the undercarriage dipped into a ditch which was concealed by the high grass, throwing the machine on its nose and again our propeller was splintered. The undercarriage also was broken.

For some minutes we stood there and cursed our luck, until mechanics came out to us and we got to work to bring the machine into the hangar. Only three officers and about twenty men were stationed there, but these took us in and did their best for us in every way. Incidentally they informed us that we had chosen the wrong aerodrome, that this one was about to be given up and that the other aerodrome had been prepared to take its place. Apparently it was the fact that they were moving from one aerodrome and had not actually arrived at the other, which caused the lack of landing signs.

We soon found that the undercarriage could be mended on the spot, but we had to send away to obtain a new propeller. I sent a message to Istres where we had left the airscrew which I had collected in Paris, asking Lovelace, the mechanic who had flown out with Stocken and who had remained to put the old machine in order, to bring over that propeller as soon as possible. When a reply came from Lovelace it was to the effect that the propeller

at Istres was cracked and useless, so I had again to cable England urging that an airscrew should be sent with all haste.

Meanwhile we got on with the repair of the undercarriage. The Italian mechanics made an excellent job of this until they came to fitting the new shock absorber. The little elastic cord we had was used and promptly broke. They sent to the seaplane station at Brindisi and obtained a few yards which they had in stock, but this broke. They then sent to Taranto and Foggia, and the shock absorber from these places also collapsed as they were straining it into position. All of it appeared hopelessly perished and useless and we began to wonder how we could find a way out of the difficulty. At last, on looking round the derelict hangars of the aerodrome, we found some old Caproni machines which had been standing there since 1918 and were dropping to pieces with old age. From these we removed the shock absorber and strangely enough found it in excellent condition though it had been there so long. This carried us through as far as Athens perfectly satisfactorily, and it was only precaution which made us have some fresh elastic fitted there.

Whilst we were waiting for the propeller to arrive there was little that we could do. We thoroughly looked over the machine and spent a large part of our time bathing and boating in the harbour. Brindisi itself is not a very interesting town, its chief claim to fame being the excellent Hôtel Internazionale where we stayed. Here the rooms

were good, the food excellent, prices reasonable, and I have never in my life been so well attended. Unfortunately for the hotel and for Brindisi, the withdrawal of the P. & O. boats, which now run from Marseilles, has made a very great difference to the place, but hopes are entertained that the line may return.

Many boats put into the quay opposite the hotel whilst we were there. Some of these we boarded in our efforts to obtain English tobacco and cigarettes, invariably without success for the boats were almost all either Greek or Italian.

We met a number of English people from the boats in the hotel, among them Mr MacEwen from the British Legation at Athens, who told us that we could rely on an excellent reception in Greece where we had been expected for some time. The explanation which we gave him for our stay at Brindisi was rather amusing for we had not made known the fact of our slight crash on arriving, so we told him that our propeller was not quite satisfactory, and we did not think we were justified in crossing the Adriatic with the airscrew in its present condition. As one blade was snapped off close to the hub and the other badly splintered, there was no doubt about the inadvisability of attempting the flight!

It was at Brindisi, too, that the tale of two drones and a pibroch and the Roumanian kilt with no pleats behind arose. This is a long and essentially Scotch story produced largely by Macmillan and

added to for his benefit. He will doubtless be glad to tell the whole tale to anyone interested.

Our new propeller eventually arrived in the charge of Mr Sturdy of the *Daily News.* It was quickly fixed in position, but by then it was too late to leave that day, so we decided to sleep at the camp and make an early start. Next day, of course, we having arisen at three a.m. the engine resolutely refused to fire. It took us three hours to start her up and we eventually left Brindisi at six-ten a.m., intending to fly to Athens. When we had covered about twenty miles and were well over the Adriatic, the engine began to pop and bang. Macmillan swung her round quickly and we returned to the aerodrome.

We inspected the engine but could not find anything definitely wrong and at eleven-forty-four we started again, and once more all went well until we were far over the sea, when the engine resumed her popping and began to lose revolutions worse than before. We got back to the aerodrome safely, tested the petrol for water, looked at the valves, cleaned out the carburetters, but could find no trouble. Again we ran the engine up and after a time the same trouble developed once more.

It is here worth noting that all this trouble happened on a Sunday. Our crash at Brindisi had happened on a Sunday, and our crash at Marseilles had happened on a Sunday. We had only flown on these three Sundays and each time trouble had followed. We regarded this third occasion as a

warning and a let off, so made a solemn vow not to fly again on Sabbaths during the trip. We kept our vow faithfully until we arrived in India. Then one Saturday night we landed at Sibi, the hottest and one of the most desolate, God-forsaken, spots in Baluchistan. There was no accommodation, little food and a temperature of 120° in the shade. The following day things were even worse and though it was Sunday we thought we could not possibly remain in the place for a day, standing out on the open sandy plain with no shelter from the sun. We therefore broke our vow and attempted to reach Quetta, only about seventy miles off. On account of the mist we were unable to get through the mountains and on returning, the inevitable thing happened. Macmillan stalled the machine and crashed the undercarriage and tail skid. It was obviously intended that we should not fly on Sunday.

Though the insects at Marseilles had troubled us a good deal, they were as nothing compared with the swarms of animals which bothered us at Brindisi. The huge blue crickets crawled up our trousers, large locusts flew down our necks, and the whole aerodrome was one mass of large grasshoppers with bright red wings. These flew up in clouds as we walked through the grass, banging into our faces, falling into our open shirt fronts and generally making themselves objectionable. If one sat down on the grass for two minutes, large centipedes, scorpions or sometimes a tarantula, would approach

as though to make friendly inspection. We always left in a hurry!

One morning Macmillan got up almost tearing himself to pieces. On taking his shirt off we found that the whole of his neck, one side of his face and the greater part of his back and chest were covered with a mass of large blisters and inflamed blotches —the result of bites from a peculiarly poisonous type of bug. Nothing that we could do seemed to relieve the pain, and he was driven almost mad by the irritation. At last we opened our only bottle of whisky and literally poured it over him, dabbing his skin with the neat spirit in an endeavour to relieve the itching and burning. In this it was successful but the agony of a Scotsman's mind over the waste of a bottle of good whisky can easily be imagined, and it is hard to say whether Macmillan suffered more physically from the bites or mentally from the cure we employed.

On the Monday, the day after our Sunday attempt to leave Brindisi, we thoroughly overhauled the engine again and found nothing wrong with it. We spent the whole day on this work and decided to try our luck again on the morrow. As we had not got life belts with us and as the engine had already shown signs of cutting out, I went along to the Italian seaplane station and borrowed three kapok life jackets, as the prospect of hanging on to a machine in the middle of the Adriatic, knowing that the aeroplane would sink in a few minutes, was not cheering.

That evening on coming back from the aerodrome in the only car which the place possessed, we had a slight accident. A horse and cart driven by a man who lay fast asleep in the bottom of the trap whilst the horse took charge suddenly turned right across the road in front of us. The driver lost his head, jumped the car over a heap of stones, hit a telegraph pole which snapped off, and then let the car collapse in a ditch. The telegraph pole fell across the car and Macmillan, who was sitting on the outside, had his foot crushed between the telegraph pole and the car. There was little damage but his small toe was badly bruised.

We managed to get the car out of the ditch again, and then the officer in charge of the party turned back with his men in order to interview the driver of the trap who had calmly proceeded on his journey without waiting. Macmillan and I sat by the roadside to wait their return and they presently appeared with the front wheels wobbling dangerously. Apparently they had handed out summary justice to the offender. They had dragged him from the cart and ordered him to apologise for his bad behaviour for allowing his horse to stray. As the man had proved truculent and had tried to strike the officer with his whip instead of apologising, they had laid hold of him and thrashed him with his own whip until he was reduced to tears and expressed the desired apology, then went on their way rejoicing.

As this car was to take us back the following morning and was in such an extremely groggy con-

dition that it could hardly be driven I asked whether they would be able to repair it in time to fetch us on the morrow.

" Oh yes," was the reply. " We shall just take it back and hit it with a hammer for an hour and it will be all right again."

This I found afterwards is what actually happened. The bent parts of the car were just hit hard with a large hammer until they became straight again, after which the car was put back into service.

The next morning we got off, the engine, having recovered from its fit of bad temper of Sunday, running splendidly throughout the day.

CHAPTER VI

BRINDISI—ABOUKIR

OUR flight from Brindisi to Athens was interesting from several points of view. First it was so far our longest sea-crossing and we wondered if the engine was going to run perfectly or not. Then the scenery over which we passed was grand and beautiful in the extreme.

Being somewhat shy of the engine, instead of cutting straight across to the Gulf of Corinth as we had at first intended, we moved over to the Albanian coast in order to make the sea crossing as short as possible and then turned south over the Ionian Islands to the Gulf. As we flew fairly high, for some considerable time we could see both the Italian and the Albanian coasts. Straight ahead of us were lofty ranges of mountains with brilliant white clouds floating among the peaks. A perfect representation of the range appeared hanging inverted in the sky above the summits. This mirage lasted until we turned south for Corfu. From the air Corfu lacked its reputed beauty, but the whole aspect of the sea, studded with islands of peculiarly irregular outline, was interesting in the extreme. We passed between

the Isle of Leuca and the mainland, seeing Ithaka, the ancient home of Ulysses whose wanderings resembled our own in more ways than one, in the distance. Once in the Gulf range after range of mountains rose on either side of us. To the south a peculiar formation made several of the mountains seem perfectly flat at their summits and apparently suitable for landing on.

Instead of making a straight line from the end of the Gulf to Athens we kept slightly to the north of a true line, in order to avoid the highest mountains, but as soon as we left the sea behind and were over the mainland the machine was bumped about in all directions, one of the worst bumps being a vertical drop of not less than four hundred feet which brought the machine up quivering. We then turned round to the south and flew between the ranges of hills along the valley to Tatoi, where the naval aerodrome of Athens is situated.

We landed here shortly after midday and found large numbers of people waiting for us. Much to my surprise an officer dressed in Royal Air Force uniform, and whom I mistook for a British officer, came up to me and welcomed us in perfect English. His face was so familiar that I asked where I had met him before and he told me that he had been one of the Greek contingent sent over to Aboukir during the war when I was stationed there. I afterwards found that the majority of the officers spoke English as many of them had been trained in Egypt with the Royal Air Force. They also, in most cases,

wore Royal Air Force uniform. The men were dressed in uniform similar to that of the British sailor and had also been largely trained by British instructors. In addition the British Naval Mission in Greece under Admiral Smith, had naturally had great influence on the Greek Naval Air Service, and this to a certain extent explains the smartness and efficiency of the garrison at Tatoi. We were much struck by this smartness and the excellence of the work done in Greece; and I must say that the Greek Air Force appeared to compare more than favourably with that of any other foreign country through which we passed.

Our machine was immediately taken over and we were told that as the Greeks themselves were using the same type of machine and engine they would overhaul it for us and remedy any defects that might be found.

We were then introduced to an official of the Greek Foreign Office who had been deputed to look after us during our stay in Athens. He gave us a message from King Constantine, and informed us that whilst we were there we were to be the guests of the Foreign Office. A car took us out to the hotel at Kifissia where quarters had been reserved for us and arrangements were made for the following day.

Next morning we were taken by Monsieur Parren of the Foreign Office to Monsieur Leonidas, the Minister of Marine, who promised us every help in his power, after which we lunched with Monsieur

and Madame Aravantinos of the Foreign Office and in the evening dined with Mr Lindley, the British Minister in Athens.

At the time of our visit to Athens the British Minister was in a peculiar position inasmuch as the British Government were recognising the Greek Government but were not recognising the Greek Royal Family on account of various incidents which happened during the war. Hence Mr Lindley explained to us that he had been unable to meet us on the aerodrome as he understood that members of the Greek Royal Family would be there, and similarly he said that he would come to see us off the following day if he found that no members of the Royal Family would be there to witness our departure. The position was further complicated by the fact that the British Naval Mission under Admiral Smith were on the best of terms with the Royal Family.

After dinner we were taken to one of the local kinematograph theatres in order to be shown our arrival on the screen. That morning the papers had contained long accounts of our landing and many photographs, so that as we entered the theatre in company with Monsieur Parren and Monsieur and Madame Aravantinos we were recognised by the audience who cheered and showed the greatest signs of interest in our flight. The film was excellent and was interesting to both Macmillan and myself by reason of the fact that it was the first time that we had had an opportunity of seeing what

we were really like! Malins, of course, through his connection with the kinema world, was somewhat blasé.

Afterwards we motored up to the Acropolis which had been opened for our benefit. A brilliant moon was shining, and we saw this ancient and beautiful temple, or rather collection of temples, under the best possible circumstances. This is one of the three world-famous things which I have seen and in which I have not been disappointed. When one hears of a thing of wonderful beauty, size, or strangeness, one inevitably conjures up ideas, generally in excess of the truth, with the result that when the real thing is seen, disappointment is felt. The three things which have even surpassed my expectations were the Pyramids for size and grandeur, the Acropolis for wonderful proportion, dignity, and calm beauty, and the Taj Mahal at Agra, for sheer beauty of outline, proportion, and romance. I can quite imagine that the Acropolis on a public day with crowds of people jostling one among the ruins of the temples could be quite an everyday affair, but seeing it in the beautiful Grecian moonlight with only about half a dozen of us in its enclosure, perched on a rocky eminence high above surrounding Athens, one could feel the spirit of the place; and a feeling of constraint, almost of awe, descended upon one. It had the same impressive effect as is conveyed by some of the more beautiful cathedrals. One was afraid to speak aloud and there was even an inclination to

walk on tiptoe. Bathed in moonlight the old columns and capitals made a scene of breathless beauty.

Next day we were to carry out the first really tough proposition of our flight. As the aerodromes at Gythion in southern Greece, and Suda Bay in Crete, were derelict, and we were told were practically impossible to land on except in case of extreme emergency, we had decided to make the crossing of the Mediterranean direct from Athens to Egypt, landing at Sollum, a British post on the frontier of Tripoli. This was a journey of some five hundred miles, over water all the way and out of sight of land practically the whole time. It was not on any shipping line, though we naturally crossed one or two of the Mediterranean trade routes. Had we been forced to descend there would have been little possibility of being picked up. However our engine had run perfectly from Brindisi to Athens and we felt that matters would be all right. Nevertheless I think that we all felt that our kapok life belts borrowed from Brindisi were useful stand-bys.

We were rung up by Monsieur Aravantinos to know at what time we proposed to depart, as he informed us the Queen and Prince Nicholas intended to be on the aerodrome to witness our departure. We arrived at the aerodrome at about eleven-thirty to find that the Queen and the Prince had already arrived. I was first presented to Her Majesty and then presented Macmillan and Malins. She showed

the greatest interest in our flight, looking over the whole of the machine, and asking for various of our gadgets, particularly the navigational instruments, to be explained to her. She was very concerned about Macmillan's foot which was still painful after the motor accident at Brindisi and caused him to limp, insisting on taking him about the aerodrome in her car. She was also much worried because we had no food, other than our emergency rations, on board the machine, and sent for eggs, fruit, meat, etc., for us, she herself loading the things into our locker.

She is a very handsome woman now and must have been extremely beautiful.

When we were ready to depart, she bade me good-bye with tears in her eyes.

"Good-bye, God bless you. I do so hope you arrive safely in Egypt."

She appeared really anxious for our safety on our five hundred mile flight across the Mediterranean and made me promise to send a cable when we arrived at Sollum. The Queen's lady-in-waiting and Prince Nicholas also appeared interested in the flight and did everything they could to help us. Before we left Her Majesty posed for her photographs for Malins and was taken both with the still camera and with the kinecamera.

It was extremely hot when we took off and the machine needed a long run before she climbed into the air. We then turned and flew south, saluting Her Majesty with three dips of the machine as we

passed. We continued almost due south over the Acropolis and over the islands of the Ægean Sea, heading for Crete.

Here I would like to say a word of thanks for the work carried out by the Greek Air Force. When we arrived on the aerodrome we found that the undercarriage had been attended to, our compass re-swung, petrol and oil tanks re-filled, and the engine actually started up and ticking over, waiting for us to take off. We had nothing at all to do, and in addition the Greek authorities refused to receive any payment for petrol, oil or work.

Our journey over the sea took us four and a half hours. We were steering entirely by compass, after making allowance for drift which I calculated by means of a bearing plate and Very's lights. From time to time I checked our position by the various islands we saw in the distance and when we reached Crete with the engine running sweetly it was quite unnecessary for us to attempt the landing at Suda Bay, so we took a fresh bearing and headed directly for Sollum on the African coast. During our whole journey we saw three ships, and for three hours we sighted neither land nor vessel, so that it was a tremendous relief when we saw the low-lying African coast on the horizon. At first, owing to the lack of any big landmark I could not verify our position, but knowing that we could not be far out, we continued on our course, finally sighting Sollum in a line dead ahead.

It was some years since I had been at this tiny

frontier place but the landing ground marked in the desert still appeared in good condition, perched on the top of the steep cliff which runs up from the sea at Sollum. Once or twice we flew round, thoroughly inspecting the aerodrome for obstacles and firing Very's lights to obtain the true direction of the wind. Within a few minutes of our arriving we saw cars coming out in a column from Sollum fort and realising that a landing party was arriving, we remained aloft whilst they lighted a smoke bomb. We then gently floated in over the barbed wire entanglements, erected against possible offensive raiders, pulling up within about fifty yards of the wire—a feat which pleased Macmillan very much.

Officers and men of the Tank Corps, Frontier Districts' Administration, and one solitary storeman of the Royal Air Force who was stationed there, came out to greet us. Needless to say there were no hangars, so we put ropes through the wing skids of the machine and weighted them down with heavy stones, after which a guard was placed over the aeroplane for the night and we went back to the fort for tea.

Sollum is only a tiny place. A British garrison resides in the old Turkish fort on top of the cliff, while down on the shore are a few huts round about the wireless station, and farther along, a number of Bedouin tents. The cliffs make a wonderful curve round the bay and the water here is bluer than I have ever seen it elsewhere. In the moonlight the

scene was indescribably beautiful as we sat outside the mess talking and just watching the wonderful shadows made in the rugged cliffs by the bright full moon and feeling at peace with the world. Presently we went down to the sea to bathe. The beautiful sandy bottom and the phosphorescent glow of the splashes of water all added to our enjoyment.

From Sollum every fortnight a patrol of Ford cars manned by the Tank Corps, proceeds inland over the desert to Siwa. The duty of this patrol is to look out for possible Arab concentrations, for the Senussi country is close by. This constant patrol has an excellent moral effect on the Bedouin, and trouble is only rarely experienced. When not engaged in patrol work the Fords are sometimes used to hunt gazelle and provide fresh meat for the garrison. The method of hunting is as follows.

Three or four cars go out into the desert until a herd of these tiny deer is sighted; then the chase begins. At first the gazelles out-distance the Fords quite easily, the latter bumping and clanging about in their wake at speeds often in the neighbourhood of fifty miles an hour, jumping ditches, dodging boulders and holding together only by the miracle of their construction and the skill of the drivers. Gradually the gazelles tire and the cars slowly overhaul them, until they are within rifle shot. Then they stop and the party fire on the deer, until they are out of range, when the chase continues.

The sport is not without its dangers, for the desert is hardly a place in which to drive a car at these

speeds and bad crashes frequently occur. It is, however, the only method of obtaining fresh meat. No other cars could possibly stand up to the rough usage which these Fords undergo, and the more I see of the " Tin Lizzie " the more I respect her. There are a number of Rolls-Royce armoured cars in the fort, but these are kept for use in case of emergency, and, indeed, everyone frankly prefers the Fords, as they are more suitable for these journeys over the desert.

Another use for them is for descending the six hundred feet high cliff from the fort to the wireless station on the shore. The road, which, it is said, was originally engineered by the Romans, follows the cliffs in their curve round the bay, and has an average gradient of one in six, whilst in many parts it is one in four and in one place about one in two and a half. It is so steep that stopping places are cut in the cliff at various places, so that cars climbing from the beach may run in to cool down their engines before proceeding. The drivers, who by familiarity have grown contemptuous of the road, drive down at a breakneck speed. On one side is the cliff and about six or eight feet away is a sheer drop of hundreds of feet to the sands, but still the cars career down this narrow ledge on the face of the cliff at speeds of forty or fifty miles an hour, cutting round corners and invariably managing to get down safely, though I confess that I did not enjoy the few journeys that I made in this manner. Coming up again the

passengers generally have to dismount on the steepest parts and push, whilst the driver continues to persuade the car to keep going. It is really a wonderful performance carried out continually.

We had intended to start at dawn on the day after our arrival, but on taxying off to start, the shock absorber on the tail skid collapsed and we had to repair this before taking off. Meanwhile we saw the fortnightly desert patrol of five Fords carrying machine-guns and rifles, move off to Siwa.

As we could not finish our repairs before the heat of the day, we decided to wait until the afternoon before beginning our flight to Aboukir.

After lunch we were taken by the Political Officer to visit Sheikh Mahmoud Khalil el Seneni, an amiable rogue of the first water. He had in turn served with the Turks, Senussi and Italians in Tripoli and was now employed by the British. He stated quite naïvely that all the others were after his blood owing to the various tricks he had performed on them and it is therefore safer for him to stay with the British. He is, however, of inestimable value as a tracker and has a great reputation in this line. He is also a notorious smuggler, though, to his credit it may be stated that he has never been caught! In fact a short time ago he complained to the authorities that the Coast Guards and Frontier Districts Administration were not nearly thorough enough in their precautions to prevent goods being smuggled through into the

interior, and he asked them to be good enough to redouble their guards in order to prevent this smuggling going on! The truth of the matter was that many amateurs were following his example and stealing his trade and the old rogue wanted them stopped, knowing perfectly well that whatever precautions were taken he could always safely get his own goods through.

Having been notified of our coming, he and his son and tribesmen received us courteously outside his tent, after which we were taken in and squatted down on rugs to drink mint tea.

This drinking of tea is not only a social custom, but is of importance as showing in what esteem the guest is held by his host. Water is heated over a small brazier and the tea placed in it, whilst pieces of sugar are knocked off a huge lump with the aid of a hammer, and thrown in to make a sickly draught. Tiny cups of this are then drunk by all present. More water and more sugar is added, and, if the host wishes to pay a great compliment and indicate that he is highly honoured by the presence of his guests, mint is added to the second brew and tiny cups are again passed round. If the host only wishes to indicate his friendly feelings towards the guests, mint is not added until the third cup, whilst if it does not appear in the third brew, it is time to get up and depart. In any case three cups are drunk, and, if the mint duly appears, as many more as the guest is capable of holding. For each brew more lumps of sugar are knocked off the original

piece, so that the liquid becomes sweeter and sweeter as the cups grow more numerous.

We received mint in our second cups. It occasioned us quite a deal of surprise when we learnt that the sheikh had heard all about our flight and told us that it was common knowledge in the desert that three Englishmen were trying to fly round the world, though he appeared to have rather a hazy idea as to what that meant, but when we told him that we expected to be in Alexandria that evening —a journey which would take him many days—he was very much impressed.

After our tea drinking he consented to be photographed and was vastly intrigued with Malins' kinecamera. He accompanied us back to the aerodrome and witnessed our departure.

Before passing on to Aboukir, I may say that we had not been expected to land on the ground at Sollum, as information had been sent to say that we were coming in a seaplane, and the bay had therefore been marked out with buoys in order to indicate to us where to land. At Athens we had found that another misapprehension had existed, for though our machine was most obviously a D.H.9, many people insisted, that it was a Vickers " Viking " or Vickers " Vimy " and when we told them that they were misinformed they obviously did not believe us, saying :

" Well, all the papers say you are flying a Vickers' machine."

After leaving Sollum we made a straight flight

along the coast to Alexandria and thence to Aboukir. From the air the vastness and solitude of the Sahara is more obvious than from the ground. No sign of life was seen except at the small coastal towns over which we passed. There were many signs of the ancient Roman occupation in this part of the world, the lines of buried forts and ruined towns being clearly visible from the air.

We reached Aboukir just as darkness was falling and found large numbers of people waiting to meet us. Wing Commander Pink, R.A.F., who was in command, made us welcome and promised that everything we wanted done to the machine should be seen to. Within less than ten minutes of our arrival the A.D.C. of the High Commissioner, Field-Marshal Lord Allenby, had 'phoned up, asking us to lunch at the Residency the following day.

I felt very much at home at Aboukir and Alexandria, having been stationed at Aboukir some considerable time during the war. It had, however, altered considerably since I was there and grown almost out of recognition. Here we decided to stay for the week-end in order to arrange for our journey across the Syrian Desert to Baghdad.

CHAPTER VII

ABOUKIR—ZIZA

It had been our intention to stay at Aboukir for the week-end and then to fly to Amman, after which we proposed taking a compass course across the desert for Ramadie and thence to Baghdad. This idea was knocked on the head immediately we arrived, for we were informed that orders had been sent down from the Air Officer Commanding in Egypt, who said that we were not to cross the Syrian Desert without permission and that in any case we had to be escorted by a Royal Air Force machine. I was ordered to proceed to Cairo in order to discuss the matter with Air Vice-Marshal Sir Edward Ellington, the A.O.C.

As our own D.H.9 was being overhauled and I did not wish to make the journey to Cairo by train, time being short, I requested permission to fly to Cairo in one of the R.A.F. machines from Aboukir, and this permission being granted, I set off after breakfast one morning in company with Flight-Lieutenant Mailer on a D.H.9a.

The journey was a familiar one to me. We flew over the Nile Delta at a considerable altitude with

clouds generally below us, eventually sighting Cairo and the Pyramids from the Nile Barrage. We landed at Heliopolis aerodrome after a journey of only a few minutes over the hour and I at once went into Cairo to see Air Vice-Marshal Ellington. At first he was most unwilling to allow us to proceed for nearly a fortnight, when the next air mail machine was due to leave for Baghdad, but on my representing to him how time pressed us, he arranged for a Vickers' " Vernon " which had to be sent out to 'Iraq, to proceed with us in two days time. He gave me very definite orders that we were to stick to our escort all the time and on no account to leave the track which had been marked out through the desert. He also warned me that it would be an extremely uncomfortable trip, hot and bumpy to a degree, and that if we attempted to rise to a great altitude and so get out of the worst of the bumps, we should not be able to see the track.

It is worth describing how this track across the desert came to be made. When it was decided to run a regular air mail service between Cairo and Baghdad, the Air Force authorities quickly came to the conclusion that if machines were to navigate across the desert flying from point to point and had to descend for any reason, it would be impossible for them to send their exact position on this waterless waste by wireless to either end, and machines sent out to search for them would have an almost impossible task to pick out a tiny speck in the surrounding desert.

It was therefore arranged that a motor-car convoy should serve the double purpose of surveying the interior of Arabia and marking out a permanent air route across the desert. A convoy of Crossley tenders and Ford cars, accompanied by aeroplanes, set out, each car following in the tracks of the preceding one, so that a deep parallel line was cut across the surface of the sand. At intervals of approximately twenty miles where good level spaces were found, the cars ran round and round in circles, and inside each circle was marked a sign to indicate a landing ground. If the track turned, as it frequently did (the cars having to avoid patches of rocky country), a deep arrow was cut in the sand, so that the pilot of any aircraft would know that a turn was about to take place.

As the winds which blow over central Arabia are generally not very strong and the ground itself is comparatively firm and not like the shifting sand of the Sahara, these tracks remain visible for a very long time. They were renewed last year.

The system by which air mails are carried between Cairo and Baghdad is for a machine to leave Cairo and proceed to Amman, where it may land to take in more petrol, and from which point the desert track commences. It then proceeds across the desert closely following the route. As a pilot goes along he notices the marks on the landing grounds which are lettered as far as El Jid—approximately half way across—and from El Jid to Baghdad are distinguished by numbers. As he

flies he keeps careful note of every landing ground which he passes, and if trouble forces his machine to the ground he merely sends a message by wireless to Cairo or Baghdad stating that he has landed between landing grounds four and five or wherever he may be. On the ground he rigs up an emergency wireless station with which he can get in touch with the authorities and if the trouble is too bad to be repaired by him, relief machines are sent out and find him quite easily by flying along the track until they come to the landing ground indicated, when the pilot keeps a sharp look-out until he sees his stranded comrade beside the double lines left by the cars. This method of crossing the desert has received a good deal of criticism, particularly by commercial pilots, but it is an extremely cheap, safe and efficient method of sending aircraft across these trackless wastes and finding them easily in case of trouble. Doubtless in course of time lighthouses will be erected along the route and night flying will become the normal method of crossing the desert, for there will be less discomfort from the bumps; and as the surface is generally good it will be possible to land in case of trouble with very little danger.

My interview with Air Vice-Marshal Ellington concluded, I returned to Heliopolis, took my last glimpse of the Pyramids from the air, and returned to Aboukir and Alexandria in time for lunch—not a bad morning's work. It is very interesting to note the speed of this journey which it would have

been impossible to cover in anything like the time by any other method of transport. During this morning I had an appointment with the *Times* Correspondent, but had to leave a note saying that I was going to Cairo that morning but would be back for lunch and hoped to see him then. I duly kept my appointment, as did he, but he confessed that he did not for a moment expect to see me there, not thinking that even by aeroplane I could cover the distance and carry out my business in the short space between breakfast and lunch.

Whilst at Alexandria we lunched with Lord Allenby, the High Commissioner, at the Residency. At this meal I sat next to Mrs Moore, whom I had previously met at a Regatta at Aboukir in 1917. She is a well-known owner of race-horses in Egypt and as we were naturally going to the races that afternoon she gave me a sure tip, backing up her recommendation with the information that she was not biassed that afternoon as none of her horses were running. Needless to say, getting information "straight from the horse's mouth," I went all out on the tip and equally, needless to say, the horse was unplaced, coming in third in a race where there were only five starters!

In preparation for the desert journey we had received orders to take on board fifteen gallons of water and five days rations. As we were already fully loaded, we could not carry this extra load of over one hundreed and fifty pounds so it was arranged that we should not take on the stores until

we landed at Ziza to the south of Amman, and that the "Vernon," which would escort us, would carry all our stores for us, so that we could have the necessary water on board. As we had to leave Ziza, in company with the "Vernon" which was to be piloted by Flight-Lieutenant Hilton, on the morning of the 11th July, we arranged to leave Aboukir on the afternoon of the 10th, Monday, in order to reach there in time. Unfortunately we were somewhat later in starting than had been intended and failing light caused us to head for Ramleh where we could spend the night.

The whole journey from Aboukir to Ziza was full of interest. We circled round the peninsula on which the aerodrome was situated to gain height, and flying round could see the forts and the submerged baths used by Cleopatra whose favourite bathing place this was. The masonry of these baths can be clearly seen through the water, though they are several feet below the surface. The old forts surrounding the place look very imposing from the air, and proved a tough problem for Nelson when he fought the Battle of the Nile in Aboukir Bay. Many of the round shots used in this battle are still embedded in the walls of the forts, and the big old guns which lie about the battlements in many cases still contain the charges which they carried so many years ago. The forts last saw active service during Arabi Pasha's rebellion, though during the past war we mounted several six-inch guns as protection from possible submarine attacks.

From Aboukir we flew east over the lakes of the Nile Delta, watching the tiny feluccas fishing below us, until we reached Port Said, where we crossed over the mouth of the famous canal full of shipping, its large breakwater jutting out in the Mediterranean. The statue of de Lessepps was clearly visible from the air. We continued easterly as we intended to cut straight across the Bay of Pelusium and make the coast of Palestine at Gaza on a direct line for Ziza.

Unfortunately our engine began to run a little rough so we edged in towards the coast, following it along to El Arish where the old aerodrome was still faintly visible.

By this time it began to appear very doubtful whether we should be able to reach Ziza that night and the country over which we had to pass was so mountainous as to be very dangerous in case of a landing after dark, so that we decided to continue past Gaza on to Ramleh where there was an Air Force unit stationed.

All this country still bore unmistakable signs of war. Trenches zigzagged their way across the desert and here and there redoubts constructed during the battles of Gaza still retained their clear outlines. The country was sandy and desolate. As the sun began to sink, we dropped lower and lower flying above the railway which we were trying to follow to Ramleh. As night fell it became more and more difficult to find our way. We could only see for a very short distance ahead of, and

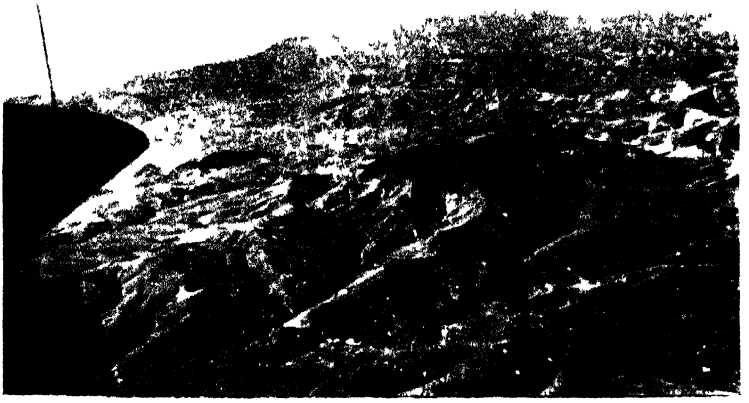
around, us. To our right were mountains; to our left desert and sea. We began to feel anxious. The engine had been running all out for some time and Macmillan had been keeping down the nose of the machine in order to gain all possible speed. Once or twice I fired Very's lights in the hope that they would be seen from the aerodrome and signals would be sent up there to show us its position and landing lights put out to guide us to earth. Unfortunately my signals were not seen. Then suddenly a fair-sized town loomed up out of the darkness. We had reached Ramleh but it was then so dark that we could hardly distinguish anything underneath us, and not knowing exactly the position of the aerodrome we had to cast around in search of it. We saw the outline of the hangars suddenly immediately beneath us and without more ado Macmillan throttled back and glided down to land.

The first person I met on stepping out of the machine was Wing-Commander Carmichael who was my first C.O. in the R.F.C. early in 1915. The machine was quickly stowed away and we went in to the Mess.

Either Cairo or Aboukir had thoughtfully wirelessed through to Ramleh saying that we might possibly land there. As there was a large garrison in the place, immediately on landing we received an invitation from the G.O.C. to attend a dance which was being held that night. This we regretfully declined as we had to be off early on the morrow.

Wing-Commander Carmichael had arranged that

Jerusalem at dawn



The hills of Palestine on the shores of the Dead Sea

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he would escort us as far as Ziza over the mountains of southern Palestine. He told us the route was exceedingly hard to follow and extremely difficult in case of a forced landing, but took off with us shortly after five o'clock the following morning in a Bristol "Fighter." After about ten minutes we saw his machine suddenly turn abruptly and dart back towards Ramleh. Obviously the engine was running badly and he did not wish to chance a landing in that difficult country.

Below us there was nothing but mountains. There was not a single patch of level country into which it would have been possible to land a machine without damage. Rugged, serrated hills, their sides covered with ravines and huge boulders, occupied the whole land as far as the eye could see.

Our route took us directly over Jerusalem which lay bathed in the morning sunlight. In the clear atmosphere we could pick out every detail, the Mount of Olives, the mosques, the various quarters of the city and every point which had become so familiar to me during the war, for I spent the greater part of that time in Egypt and Palestine. All around the city were more mountains. A more sterile, inhospitable-looking country I have never seen.

Jericho lay just out of sight to our left and soon after leaving Jerusalem we sighted the Dead Sea ahead with the narrow winding trickle of the muddy Jordan flowing into it at its northern extremity. The Dead Sea, which is some one thousand two

hundred and ninety feet below the level of the Mediterranean and surrounded by high hills, looked very calm and placid, though the glistening white of its shores showed the presence of immense quantities of salt.

From this point on we began to keep a careful look out for Ziza. We had been told that there was no village worthy of the name but only a collection of a few mud huts, almost invisible from the air. There was no aerodrome because Ziza was only used occasionally for large or heavily-loaded machines, Amman, some thirty miles to the north, being unsafe for these types. When Ziza was to be used a detachment of the R.A.F. was sent down from Amman bringing the necessary petrol and a field wireless set. The one thing that would help us to identify Ziza was a large square tank. It was for this we kept our eyes open.

We duly picked up the railway from Amman and followed this until we saw the gleam of water in the distance, having identified the tank. We could see the white dots of a couple of tents which had been erected by the R.A.F. landing party and two aeroplanes resting on the desert. The aerodrome was an emergency landing ground unprepared in any way. The surface was somewhat rough and intersected by tracks, so that when we landed the bumping over the tracks caused our shock absorber to give way. No damage was done beyond this, but as we had only a small supply with us for use in case of emergency, we sent a wireless message to

Amman, asking for more shock absorber to be sent down.

The two machines which were awaiting us proved to be the Vickers' " Vernon " and a D.H.9a which had been detached from its squadron in order to convoy us across the desert. Shortly before there had been a certain amount of trouble with some of the desert tribes, and as our aeroplane, being a civilian machine, was unarmed, it was thought advisible to send an armed escort with us. As it turned out the D.H.9a did not even start with us for there was an urgent call on the machines at Amman and at the last moment it was decided that the D.H.9a could not be spared. The pilot, however, made several journeys backwards and forwards bringing us shock absorber, etc., and we were enabled to get our undercarriage put right quite easily.

Then our first casualty occurred. Malins was feeling very queer so that I made him lie down in the shade of the machine and sent a request by wireless to Amman for the M.O. to come down and see him. I also abandoned all idea of starting that day, not caring to risk trouble in the desert with Malins feeling queer. The M.O. arrived very rapidly by air and found that Malins had a temperature of just over 100° and a slight touch of the sun. He gave him some medicine and made him lie down for the rest of the day. On the morrow, though not well, he was better, and we continued our journey.

Having time to look round Macmillan and I went down to visit the well at Ziza, which we were told was quite worth seeing. It proved to be an immense tank about one hundred yards square, formed of huge blocks of masonry with steps going down to the water at intervals. It had been built by the Romans nearly two thousand years ago, for at that time they had a large garrison here. There was obviously a spring at this point for the well never failed and the inhabitants of the desert for miles around came in to water their flocks.

I have seldom seen a more amazing sight than that which we witnessed at the well. There were hundreds of Bedouin mounted, some on camel, some on horseback, with others on foot. All of them were clad in the burnous and the majority were heavily bearded and truculent looking. Without exception they wore rifles slung across their shoulders, whilst one or two of them carried two of these weapons. In the majority of cases they were hopelessly antique, though quite a number of them had obviously been obtained in various ways from the Turks or ourselves during the war. I have never seen such a miscellaneous collection of arms. Ammunition was carried in two belts slung cross-ways across their chests and in a third belt round their waists in some cases. The type of ammunition varied as much as the arms, every man having at least half a dozen kinds of cartridges. The fact that they were often of an entirely different bore from the rifles they carried did not appear to worry

them in the least, though they were obviously carrying about a considerable amount of useless weight. In their belts they all had two or more knives and one or two of them had revolvers. Altogether they formed the most picturesque and diversely-armed crowd that I had ever seen. Our presence amongst them was clearly unpopular, though no definite feeling made itself shown.

With these dwellers of the desert were mixed flocks of camel, sheep and goats, which had all come in to be watered. Stone troughs were placed round the edges of the well, and these the Arabs proceeded to fill from four-gallon petrol tins, which they lowered to the water by means of a rope. It is an amazing fact that aircraft appear to have had a great influence in certain obscure ways on these semi-savages. Petrol tins make excellent buckets as the Arabs have not been slow to discover, whilst more than one of these people had fashioned his burnous out of the fabric, dope and all complete, torn from the wings of wrecked aeroplanes. One fellow had the red white and blue circle of the Royal Air Force aeroplanes squarely planted across his back. Another of them was extremely proud of a rusty Gilette safety razor which he wore as a mascot, dangling from his right ear.

The troughs were filled and the sheep and goats watered, flock after flock, as they arrived. It amazed me to see the training of these stupid animals. There was no rushing or crowding, but as each lot of sheep were satisfied, the ranks behind

them quietly took their places, whilst the others calmly turned round to form up in the rear of the flock. The whole was carried out in a most orderly fashion. We stayed watching this watering going on for some hours, taking photographs of the proceedings and securing most excellent results.

Then we returned to the so-called village in an endeavour to buy tomatoes and eggs, but with one accord all the villagers flatly refused to supply us, telling us in no uncertain language that the sooner we got out the better. There was therefore nothing for it but to return to our camp and lunch off bully beef and biscuits, whilst we listened to the strains of the gramophone which was part of the equipment of the " Vernon."

During the afternoon we rested from the glare of the sun, lying under the huge wings of the big Vickers machine. Throughout the day the heat was intense. Needless to say there were no trees or bushes under which we could shelter. There were not even any boulders, the country here being merely flat dry sand and gravel. During the day the stones were so hot that we could not bear our hands on them and we gasped and panted in the extreme temperature. Personally I was more or less acclimatised, but it was the first time that either Macmillan or Malins had been out of Europe, and, as is often the case, they did not realise the power of the sun and took more liberties than they should have done. Malins' touch of sunstroke was therefore a blessing in disguise, for whilst it was slight

Arabs watering their herds at the old Roman well at Giza

Typical Bedouins of the Arabian Desert.

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enough to be harmless, though he felt pretty queer, it gave them both a useful warning which neither neglected in the future.

When the sun sank the atmosphere changed rapidly. The heat departed out of the desert and the night air became bitterly cold by comparison with the day. We shivered and walked about to keep ourselves warm. A petrol can was opened and sunk partly in the sand when a match thrown into it produced a huge blaze which burned merrily for hours. Round this blazing tin we all huddled. Whilst the fronts of us were scorched by the flames, our backs were frozen by the cold night air. One by one we went to the tent and got blankets which had been brought down from Amman, and sitting with these wrapped round us, with the light of the fire throwing weird lights on our faces, we proceeded to make our dinner of bully beef and biscuits, washed down by tea which we made over the petrol fire. Bully beef and these hard biscuits form the desert rations issued to the Royal Air Force. Doubtless they are nutritious but they are most unpalatable and when, after much difficulty one succeeds in breaking one of these awful biscuits, several maggots and beetles fall out, it is not conducive to a good appetite.

For some hours we stayed round the fire talking of the war, flying and mutual friends. All around us was pitch darkness and perfect stillness, not a breath of wind causing even the sand to stir. Now and again faintly from the mud huts at Ziza came

the bark of a dog. Then someone got tired of talking and started up the gramophone, tearing the serenity of the desert with the weird sounds of fox-trots and two-steps, whilst the latest musical comedy successes in London were blared out into the night.

Suddenly the moon rose over the edge of the desert. It appeared to shoot up into the sky like a huge white ball of flame. Immediately tiny shadows began to creep up over the sand; every pebble, every hillock and undulation appeared to move and the whole night was filled with an eerie sense of slightly moving invisible beings. The moon at once put an end to the gramophone and one by one we stretched ourselves down on the desert under the wings of one or other of the machines, rolled ourselves up in our blankets and tried to sleep. Soon the silence became intense—in fact so intense that it was impossible to sleep. A little distance away one could not hear the breathing or restless movements of one's companions. There was nothing except silence, the brilliant light of the moon and the shadows which crept across the desert. The stillness could almost be felt, oppressing one like a heavy weight. There is a difference between quietness and absolute stillness which few people realise, and I can quite understand a man rapidly going mad in the solitude of the desert despite the wonderful beauty of the moonlight nights.

From where I lay under the wings of our own machine I could see the huge bulk of the Vickers "Vernon" outlined against the sky, whilst the

two tiny tents glimmered whitely in the moonshine. Elsewhere there was nothing except the creeping shadows. There was no horizon, no hills to break the sky-line, no trees to whisper in the night; nothing, except the moon, the shadows, and the interminable silence.

CHAPTER VIII

THE ARABIAN DESERT

WE arose from the ground at two-thirty a.m. cramped and stiff with the cold, all running about the desert and stamping our feet in an effort to restore circulation; but the petrol fire which was started to boil the tea for breakfast, soon attracted us and once more we huddled over the flames.

We breakfasted off hard boiled eggs and bacon brought from Amman, finally taking off to cross the desert to Baghdad at four-twenty-three a.m. It was arranged that the " Vernon " should lead the way and we should follow on behind or abreast of her. Thus the whole responsibility for keeping to the route would belong to Flight-Lieutenant Hilton, the pilot of the " Vernon," who had made the journey several times before and was in every way an excellent man to take us across. Unfortunately his machine was heavily loaded, having to carry spares and immense quantities of petrol in order to make the six hundred mile journey to Baghdad. Her take off frightened me for she ran for fully a mile over the ground before she at last lifted slightly into the air, vanishing almost from sight in an effort to

get some altitude. For our part we took off fairly easily, as the sun was not yet high and the heat of the day had not commenced. We circled round our camp waiting for the " Vernon " to re-appear which she eventually did, flying a couple of hundred feet above the ground, having travelled a good many miles in her endeavours to reach this height. She then turned off due east towards a range of low hills which we could see from the air, whilst we followed about a thousand feet above the desert.

We very quickly got out of the sandy country into a district of basalt boulders and hills interspersed with yellow mud flats which make excellent landing grounds when dry and which are seas of mud during the rare rains. As the hills in front of us went up several hundred feet, it began to appear very doubtful if the " Vernon " would be able to get sufficient altitude to clear them. She nosed her way along the range of hills looking for a gap, and at last finding a low pass, turned into this and just managed to scrape through, though it appeared to us, some hundreds of feet above her, that she was actually taxying along the ground.

This patch of country was difficult, there being no track to guide us, for this started from Amman, farther to the north, and we had to pick it up on the far side of the hills. In the distance we soon sighted the oasis of Kasr Azrak which used to be the taking off point for the desert journey, it being the last cultivated spot until Ramadie is reached. Azrak itself is merely an oasis in the surrounding desert.

Unfortunately the tribesmen had given trouble recently, and it had been thought advisable to withdraw the small Air Force unit stationed there.

It was about this time that we picked up the tiny track which we saw stretching like a thread beneath us right across the desert. At times this would vanish as it passed over hard rocky ground into which the tyres of the cars had not sunk, but it could dimly be discerned miles ahead crossing a soft patch of desert. The track was so slight that it was impossible to see it from more than a few hundred feet above, and even at this altitude unless continually watched it was very easily lost and extremely difficult to pick up again. At this stage we were not troubling too much about watching the track for we were following our guide on whom this duty evolved, but I noticed how difficult it was to pick up the trail when one looked away, even though I knew we were flying along the right line.

As the sun gained power the air began to be full of disturbances caused by the heating up of the desert. Our machine was rocked about from side to side and flying became extremely unpleasant. The sky was absolutely cloudless and a most brilliant blue. Beneath us the desert glared back bright yellow, so that there was no relief for one's eyes in whatever direction one looked, and we were glad of the coloured goggles which we were wearing. We tried to rise higher and so get out of the worst of the bumps, but found that before we had got sufficiently high we had entirely lost sight of the

track. This was a thing which could not be allowed to happen even though we were being shown the way, for should we all get lost a fatal end to the flight was highly probable. We therefore had to make up our minds to endure the bumps, and I could see that Macmillan, who was flying the machine, was in for a very rough time.

Malins, of course, was enthusiastic over the unique opportunity presented him of making a wonderful film, and wishing to make the best of his chances, he passed me a chit, saying that he wanted to get as close to our escort as possible in order that he could photograph her flying over the route and rolling about in the terrible bumps. Unfortunately we were not able to advise Hilton of this, and Macmillan faithfully carrying out Malins' request, flew so close to the " Vernon " that Hilton of course wondered what was happening, thinking that possibly Macmillan had got a touch of the sun. He therefore kept a very close eye on our movements, as naturally he did not wish to run the risk of a collision. Malins meanwhile was happily reeling off yards of film, and everything appeared to be going well when the " Vernon " suddenly turned, throttled down her engine and landed in a mud flat. It was only then that it occurred to any of us to look for the track, which was nowhere in sight, and obeying our previous orders we at once throttled down and landed beside the " Vernon."

It appeared that what had happened was that Hilton, being anxious on account of our erratic

movements, had been watching us instead of the track which he had lost. For our part Malins was so busy taking his film that he was fully occupied, as was Macmillan in keeping his machine close to the " Vernon " whilst not getting too close and moving from side to side as Malins directed. I was so interested in the proceedings that I also forgot all about the trail.

We were now in a quandary. It was just after six in the morning and we had no idea in which direction the track lay. Also there was no method of informing either Cairo or Baghdad of our position as we did not know it ourselves. Malins was the only happy man, he having obtained, as after events proved, an excellent film.

The last spot that any of us had definitely recognised was landing ground " G."

As showing the difficulties under which the " Vernon " had been flying, the wireless mechanic carried on this trip told me that they had lost two aerials through them bumping on the ground as they flew along, the " Vernon " not having been able to climb high enough for the aerial to be fully let out. It was therefore useless to think of sending out the Vickers to search for the track, and as Hilton was the only one who had any knowledge at all of the country we decided that the best thing to do was for Macmillan to take him up in the D.H.9 and look for the path to Baghdad, whilst we remained below with the " Vernon " to await their return.

The engine of the D.H.9 was therefore started up

again, Hilton climbed into my seat, and after circling a few minutes to climb a few hundred feet into the air in order to see as far as possible, they vanished in the distance. Hilton knew that the track went through a gap in the basalt rocks to the east, and it was with a view to finding the edge of the basalt formation that they set off on their search.

For an hour we sat on the bright yellow mud flat under the shade of the wings of the machine. There was nothing which we could do except wait, so I occupied the time in writing up my diary. There was no sign of vegetation for miles around, and there was no animal life other than countless swarms of house flies which appeared from nowhere and settled on every uncovered part of our bodies. I cannot understand where these insects could have come from or what they lived on, but I have never in any part of the East, or elsewhere, seen so many flies. They literally settled in swarms, blackening our hands and faces as they came at us.

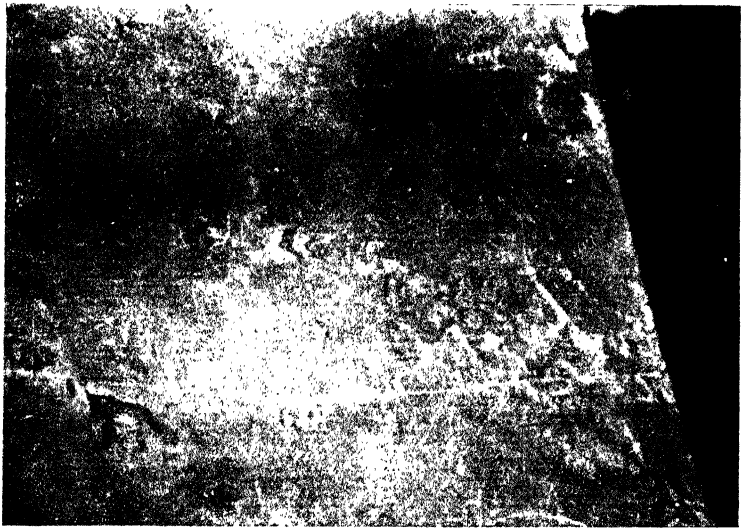
It was an eerie sensation being stranded alone in the middle of the Arabian Desert with no knowledge of our whereabouts and no certainty that the machine which had set off to find the track, would be able to find its way back to us again. As I have said, we could do nothing but wait, and in about an hour we heard the hum of an engine and the D.H.9 glided down once more on to the mud flat. The track had been found about five miles away to the west.

This extra flying had, needless to say, used a

considerable amount of our petrol, and as I feared that we might not be able to complete our journey across the desert through lack of fuel, we took on board an extra thirty gallons from the " Vernon's " tanks. Then once more we both took off.

This time it was arranged that we should lead the way as we were much the faster machine. Between ourselves we had fixed matters so that Macmillan was to watch the track ahead and follow the route, whilst I checked the route as we passed over it, comparing it mile by mile with the specially prepared map which had been lent us by the Air Force. Malins' job was to watch the " Vernon " all the time so that the two of us did not get separated.

All went well for an hour and a half, during which time, though the machine was flying with the engine throttled back as far as possible, we continually drew ahead of the " Vernon " and had to circle back in order to keep in touch with her. The bumps were becoming terrific. We were shot hundreds of feet into the air and then suddenly dropped an equal distance. First one wing and then the other would be banged into the air, then the nose would drop, and for a second we would go down like a stone. The wires were vibrating with the strains imposed upon them and Macmillan was continually wrestling with the controls. The heat of the sun struck down on our heads with terrible violence, whilst beneath us we felt the hot air rising from the desert. On top of this we had the heat of the engine being blown



The faint track of a motor car, which is the only guide over the Arabian Desert.

Baghdad, showing the Maude Bridge over the Tigris.

back into the cockpit, so that the whole time we were bathed in sweat and our clothes were clinging to us. The country continued to alternate between sand, mud flats, and patches of basalt on which the track was invisible. We dared not take our eyes from the narrow trail in case we should lose it, and the strain of watching in the glare with our eyes glued on the track was almost intolerable. Every detail I marked off on the map; as we passed each landing ground I ticked it off; every arrow or corner I noted so that at any moment I could put my finger on the map and say, " We are here."

Suddenly Malins tapped me on the shoulder and pointed violently behind. The " Vernon " was almost out of sight, but I could see her banking steeply, obviously coming down to earth. I drew Macmillan's attention to this and he turned the machine back to see what was happening to the " Vernon." We followed her down to the ground on landing ground " O " to find that the oil pressure of one of the engines had gone wrong and repairs were necessary before we could proceed. We were none of us sorry that this had happened for we were all glad of a respite from the terrible bumping which we had been undergoing.

The first thing that happened on landing was that the wireless operator of the " Vernon " immediately erected a mast and connected up his aerial from the mast to the aeroplane. He then at once began to send a message through to Cairo and Baghdad

informing them of what had happened, stating that at present we did not need any assistance sent out to us.

Throughout that day we stayed at landing ground "O" almost in the middle of the Arabian Desert, whilst the engine mechanic and Flight-Lieutenant Hilton worked at their oil system.

This part of the desert was not sandy but was a terrible place covered in pebbles as thickly as a seaside beach. Each individual stone became almost red hot in the glare of the sun. It was quite impossible to put one's hand on the ground, and the heated stones burned through the soles of one's boots, making it extremely painful to walk. Heat radiated from the ground in shimmering waves, whilst a little way from us we could quite clearly see a large pool of water surrounded by palms glistening in the sunlight. We knew that it was only a mirage and did not make for it, though it all looked so terribly real. A few small plants like sage grew here and there, though how they managed to exist I cannot conceive. Even in this arid spot there were signs of life for Hilton put up a large spider fully six inches across, bright yellow in colour and covered with hairs. He had a huge horny jaw with which he menaced us, so that we did not feel disposed to handle him, and let him scuttle away over the stones in search of food. A black scorpion was another visitor who arrived out of the stones. He seemed to display considerable interest in our activities, standing staring at us, his head stuck

stiffly out, his tail erect. This fellow again we carefully refrained from interfering with.

During the worst heat of the day we lay down in the cabin of the " Vernon," but shortly after four o'clock I thought it time for us to move on, despite the fact that the " Vernon " was unable to proceed. I made this decision in view of the fact that the " Vernon " was in wireless communication with both Cairo and Baghdad, and help could reach her very quickly if necessary; that our own machine was in perfect condition and ready to continue the flight; and, thirdly, that our stock of provisions and water was not so large that any unnecessary delay in this inhospitable land could be permitted. Macmillan wished to stand by the " Vernon " until it was ready to proceed, but we eventually decided to go on and took off at about half-past four in the evening, knowing that we could not reach Baghdad that night but expecting to cover about half the distance before dark, and then to get in early the following morning. By doing this we should fly in the cool of the evening and the cool of the early morning, and so avoid the terrible bumping and straining of the machine which it was bound to undergo when flying over the desert with the sun well up.

A little way ahead of us was landing ground " XI " near the wells of El Jid, the only wells that we should encounter before reaching Ramadie. I therefore thought it would be a good idea to land here and re-fill our water bottles in case of eventuali-

ties, whilst the engine could also do with a little in the radiator, the heat having caused it to evaporate.

We landed safely and I left Macmillan with the machine whilst Malins and I set out with the water bottles to find the well which was not visible from the landing ground. We had arranged that in case we were lost or encountered trouble we would fire a few shots with our automatics and Macmillan would reply by firing a Very's light into the sky, so that it would guide us back to the machine. With me I, of course, took a small compass.

We had not gone more than a few hundred yards from the machine when a tall, bearded, Arab—armed to the teeth as usual—came towards us, whilst behind came another of a similar type and in the distance a crowd of people, nearly all armed, appeared. I began to wonder what this demonstration might mean, but the foremost Arab laid his rifle on the ground and advanced towards me. He threw his arms round my neck and kissed me on both cheeks. I returned the compliment and he then went on to Malins! The second and third Arabs did likewise, and I began to wonder if we should have to kiss the whole tribe, but apparently the first three had been the Sheikh, his brother, and son, and the others were merely tribesmen.

Unfortunately I could not understand what he was saying as the little Arabic I could understand was learnt in Egypt and I found that the dialect used in Arabia was almost a different language.

The Sheikh grew more and more excited as he

talked to me and his followers joined in the conversation. He then pointed in the distance making signs and gestures at me and I once more began to wonder what was in his mind. My apprehensions were increased when he drew his hand across his throat in a significant manner at the same time making gurgling noises. My hand went to my pocket where my pistol was carried but fortunately I made no aggressive movement. At that moment I caught a few words which I could understand, among them being the words " sheep " and " eat." At once everything became clear to me and I laughed in my relief as I explained things to Malins. I had, however, experienced Arab feasts before and was not in the mood for repeating the process then as it was necessary that we hurried on. The Sheikh, however, was not to be outdone. I explained to him as well as I could that we had to decline his offer, but he said that if we would not come to the sheep which had been killed, he would bring the sheep to us. His children had seen the machine flying over, and as he was the friend of all flying men he at once gave orders for the animal to be killed and the feast to be prepared. If we did not come he would be very disappointed, but he supposed that it could not be helped, though, under no circumstances would he allow us to leave until we had partaken of his hospitality.

We therefore returned to the machine and squatted down in a circle beside it. A skin bag of sour goat's milk was produced, and having found

our Bovril cups from the machine, we proceeded to drink some of the filthy mess. I explained to Macmillan and Malins that they would have to drink at least three cups in order not to offend the Sheikh, but when they saw the curdled, clotted, dirty mess it was as much as they could do to swallow it. We had considerable difficulty in keeping it down, but as soon as our cups were emptied, a Bedouin, who was holding the neck of the skin, immediately let go and a flow of sour milk gushed out. In order to prevent it flowing over our clothes we had to catch it in our cups, and once these were filled the mess had to be swallowed, though all the time Macmillan and Malins were protesting vigorously. Not only did we have three cups of the mess, but more than double that number. The climax arrived when the Sheikh, to pay me a compliment, thrust a hairy arm into the neck of the skin and produced a handful of curds which he rolled up into a ball as big as a billiard ball and then thrust the mess into my mouth, at the same time making noises of satisfaction as though to explain what a wonderful treat this was that he was giving me. It was only by exerting all my will power and thinking hard of other matters, that I was able to bolt it, and even now I can see the stuff with lumps of goats' hair and dirt from the Sheikh's hands sticking all over it, and can feel the beastly sensation of having it in my mouth.

After that I jumped to my feet and walked round to the front of the machine to start up the propeller,

Macmillan and Malins following suit, not being loath to stop drinking the milk, though they rather wished to stay the night and sample the Sheikh's hospitality. Their desire to stay was further increased when some of the maidens of the tribe arrived—handsome girls with soft brown melting eyes and thick curly hair that hung nearly to their waists. They added their entreaties to those of the Sheikh and we had a hard job to resist their importunities.

Then the sheep arrived. It was newly flayed and dripping with blood, the complete carcase, head and all, being brought along to us. We had to take it away whole, so I wrapped it up in the fabric which we were carrying to repair the wings in case of accident, and stuffed it among the spare parts in the locker at the bottom of the machine. I was helped, or rather hindered, in this by the girls who would insist on holding my hand and stroking my arm. The fairness of our skin was obviously very strange to them, though by that time faces, arms and knees were sunburnt almost the colour of mahogany. When I climbed out from under the fuselage, having accomplished my job, I found Macmillan sitting in the cockpit with a girl on either side of him with both their arms round his neck, imploring him to stay a while as their father's guest!

Meanwhile water had been brought in another skin, and with this we filled up our water-bottles and the radiator. It occasioned great surprise

among the Arabs to see us put water in the aeroplane and they became firmly convinced that it was not a piece of machinery at all but a strange animal unlike any that dwelt in that part of the world.

With great pride the Sheikh explained to me that he had flown. About a year before he had been very ill and an aeroplane had chanced to land in the desert not far away. His tribesmen had therefore carried him out to the pilot, who, realising that the man was dying, flew him in to Baghdad where appendicitis was diagnosed and he was operated upon. Afterwards he was flown back to the desert and handed over to his tribe. This story I afterwards verified in Baghdad and was told that if any aeroplane landed anywhere near the wells of El Jid the Arabs almost overwhelmed the crew with hospitality, and if hostile tribes were in the neighbourhood, always supplied an armed guard all the time they were there.

We had some difficulty in starting up the engine for the Bedouins, particularly the girls, would not keep clear of the machine, and I was afraid one of them would get damaged, and was still more afraid of damaging the propeller. Eventually, however, Malins and I took it in turns to keep them away whilst the other pulled the propeller into position and Macmillan started her up with the hand starter. As we were about to move off, the Sheikh made a last request for us to stay. It was getting dark and it was obvious that we could not proceed very far, but I was extremely anxious to move on. Macmillan

and Malins rather wanted to remain but eventually telling the Sheikh that we had to be in Baghdad that evening—an impossible feat—we climbed into the machine and flew off, firing one or two Very's lights for the amusement of our host as we headed towards the east.

Before we left we gave them handfuls of foreign coins, cigarettes and chocolates which they seized on eagerly, and as most of the girls are decorated with bangles of coins, it is highly probable that Italian, Greek and Egyptian money will be added to their dowries by now.

After about twenty minutes flying it was so dark that we were unable to continue, so we came down and landed on landing ground " X," about twenty miles away from El Jid, intending to stay here for the night and continue in the morning.

CHAPTER IX

THE DESERT—BAGHDAD—BASRA

IMMEDIATELY we got out of the machine, with one accord we were violently overcome with nausea from the horrid mess which we had swallowed at El Jid. Somebody then demanded the whisky to take the taste out of his mouth and I went to the machine for it, thrusting my hand into the rear locker expecting the familiar feel of a bottle, but it was not there. Macmillan searched the forward locker and Malins looked over every other part of the machine. There was no doubt about it, the whisky had gone, it had obviously been stolen at one of our previous stopping places. We had no appetite for bully beef, biscuits and Bovril, so we went to bed dinnerless.

That night we did not sleep well. Our friends at El Jid had intimated to us that there were raiding tribes in the neighbourhood and naturally we were all somewhat anxious. It was so dark when we landed that we could do nothing except turn in. Ever since leaving El Jid we had only flown at a height of about one hundred feet in order not to miss the track across the desert. Flying so low we frequently overshot a turn and had to swing round

to pick it up again. We had not landed actually on the landing ground but kept beside the track as all the country for miles around was splendid landing.

As he had a decided disliking for the huge spiders and scorpions with which the desert abounded, Malins slept in the machine, whilst Macmillan and I, hacking holes in the gravelly desert for our hips, lay down and tried to sleep, but again the awful silence almost made sleep impossible. As before the moon shed a brilliant light over the earth, but here there were no rocks or hummocks to cause shadows, just a perfect stillness and the moonlight glimmering on the gravelly desert.

During the night the wind changed direction and the machine began to rock, so we got up and moved her head-on to the breeze; then we again dug holes for our hips and lay down once more.

We were up before dawn. Almost the first thing I saw when the sun rose was a huge spider, huger than any I have ever seen, with a large body fully three inches long covered in yellow hairs. Across his outspread legs he was at least eight inches to a foot in diameter. He cruised about, turning over stones as large as a hen's egg, in search of food. Before we left we saw several more of the same variety though slightly smaller, and one or two scorpions and centipedes.

Owing to the fact that we had very little water with us, about four gallons in all, as we could not carry more owing to the weight involved, we were

unable to wash or shave. We breakfasted off Bovril and cold water and hard weevilly ration biscuits. Then we started up the engine and once more attempted to reach Baghdad.

Mile after mile we flew along the trail. Occasionally it vanished from sight only to reappear far ahead. Two or three times we lost it and had to circle round until we picked it up again, thus using a lot of our valuable petrol. Hour after hour we flew across sand and gravel, interspersed with dried-up wadis. In one of these wadis, or river-beds, we came across a large Bedouin encampment. As we approached the tribesmen scattered in all directions, galloping off on camels and horses leaving the tents and women behind. A good many of them fired at us as we passed over and we heard the whistle of bullets, though none of them actually hit the machine. They were obviously afraid of us for probably they had experienced the effects of bombs dropped by the Royal Air Force. We were tempted to empty our automatics at them but no good could have come of it so we just continued along the trail.

As the sun rose higher the bumps began again, though, as it was early in the morning, they were not nearly as bad as they had been on the preceding day.

About fifty miles from Ramadie, the first town on the outskirts of the desert, the engine began to bang, and Macmillan switched on to our last petrol tank. Mile by mile we flew along, getting

closer and closer to some sort of civilisation and gradually our supply of petrol crept lower and lower. It began to be extremely doubtful if we could reach Ramadie. If we came down in the desert one or other of us would have to walk miles over the hot sand in the blazing sun before help would be obtained and I was all for pushing on. Macmillan, however, was afraid that if we went on we might not be able to find a suitable place on which to land and should wreck the machine on coming down. The desert all seemed very flat and suitable for landing but somewhat against my judgment I gave way and we decided to come down on landing ground " I " about twenty miles short of Ramadie. Nearby were the huge bitumen pools, a splendid landmark from a very long way off.

On inspecting the map I found that we were some ten miles from the nearest village which lay to the north, on the River Euphrates, and was beginning to make up my mind to walk in, steering by compass and leaving the others with the machine. Before leaving, however, Malins and I examined all the petrol tanks and found that there was a little left in each of them, though not enough to run the engine on. We then made up our minds that if we could obtain four gallons of petrol we would push on for Ramadie. Whilst I stood on the top of the machine Malins drained the tanks one by one into a spare water-bottle, and passed it up to me so that I could pour it into the centre gravity tank. Fearing to waste a spoonful of it, I made a funnel of paper and

poured it in in this manner. Bottle by bottle we drained the tanks, rocking the machine violently to and fro (which was not too good for it) in order to make the last drops of spirit flow out of the tanks. When every tank was dry we had secured about four gallons and decided to push on. We had no petrol to waste in running up the engine or to fly round in getting height, and as soon as the propeller commenced to revolve Malins and I climbed into our seats, and before we had settled in them Macmillan had opened the throttle and we took the air in a direct line for Ramadie. We did not even waste petrol in getting height but covered the intervening twenty miles at a minimum altitude.

At last we saw Ramadie in the distance and it became a question whether we could just creep in or drop just short of the town. I saw, however, that the desert was flat, and even if we came down we should probably be able to land safely, whilst every minute we cut a mile or more off the terrible walk that one of us would have had to undertake. We landed at Ramadie with hardly a drop of petrol left in the tank, not even being able to taxi up to the skeleton of what had once been a hangar.

Normally, of course, we should have had ample petrol for the journey, but the time occupied in searching for the lost route when we had first landed on the previous day, our landings at El Jid and landing ground "X," and our many circlings in

order to find the lost track, had consumed great quantities of spirit. However, we had just scraped through, hungry, tired out, unwashed and unshaven.

A detachment of the Royal Air Force—a Corporal and five men—who were stationed at Ramadie, came out to welcome us. One of the first things I asked them was if they frequently got fresh meat. The Corporal was somewhat puzzled by my question and told me in a confidential manner that fresh meat was a comparatively rare luxury. I thereupon told him to open the bottom locker and take out the carcase of the sheep which the Sheikh had given us, and the fresh meat was gladly borne off to the kitchen quarters. We then went along to see the Political Officer, as we were told that, apart from the five men of the Royal Air Force, he was almost the only white man in the place.

It seemed to grow hotter every day that we flew east. It must be remembered that this was in the middle of July, about the hottest part of the year, in one of the hottest places in the world. Also that morning we had done two hours hard work in the heat of the desert in draining our petrol tanks, consequently when the Political Officer produced large glasses of beer with ice floating about on the top we thought we had arrived in heaven. Our thirst was even greater than our hunger, but our fatigue was almost equal to our thirst, and as I talked to the P.O. Macmillan and Malins dropped soundly asleep in their chairs. We had hardly slept at all during

the last two nights, only lying down for two or three hours, whilst during the days we had put in a great deal of hard work on very little food.

After we had been here for a few minutes the R.A.F. Ford which had brought us from the aerodrome, pulled up outside again. This time it carried an officer of the R.A.F. who had flown over from Baghdad to escort us to that city. He told us that two machines were on the aerodrome at Baghdad actually on the point of leaving to search the desert for us, when a message arrived from Ramadie saying we had arrived. Apparently atmospheric disturbances had caused the wireless messages sent from the " Vernon " to be so confused as to be unintelligible, and as we were two days overdue the Commanding Officer was getting anxious on our behalf. One of the machines had then been put back in the hangar, whilst the second had come on to Ramadie to greet us. We found this same willingness to help everywhere the Air Force was stationed. At every R.A.F. station which we passed I was fortunate enough to find friends—officers with whom I had been stationed during the war—and all of them did their utmost to help us in every possible way, going to a great deal of trouble on our behalf and giving us the best of times whilst we were with them. The help of the R.A.F. was one of the greatest factors in enabling us to get as far as we did.

We stayed at Ramadie for lunch and after a wash and shave we once more climbed into our machine

and flew into Baghdad, where a large crowd had assembled to meet us.

It is rather amusing to relate that on that same morning the local paper came out with a complete report and description of our arrival the day before! Group Captain Borton, who was in command in Palestine during the latter part of the war, and who, in company with Sir Ross Smith, had flown over a good part of the route on which we were travelling, was then in command of the Air Force in 'Iraq. He took Malins and me along to the Headquarters Mess, whilst Macmillan elected to stay on the aerodrome with 40 Squadron as he had found an old friend in Flight-Lieutenant Frew.

Malins by this time was again feeling ill. The days in the desert had not improved his slight touch of the sun and he was at once sent to bed, whilst the M.O. came to see him. His temperature was considerably higher than it had been at Ziza and he was both looking and feeling very queer. The shade temperature in Baghdad at that time was not unduly high, being about 110° in the sun. It was, however, quite hot enough for us.

That evening Group-Captain Borton took me down the Tigris in his launch to call on Sir Percy Cox, the High Commissioner, who was interested in our venture. We stayed for some time at the Residency sitting in the shade and watching the tennis.

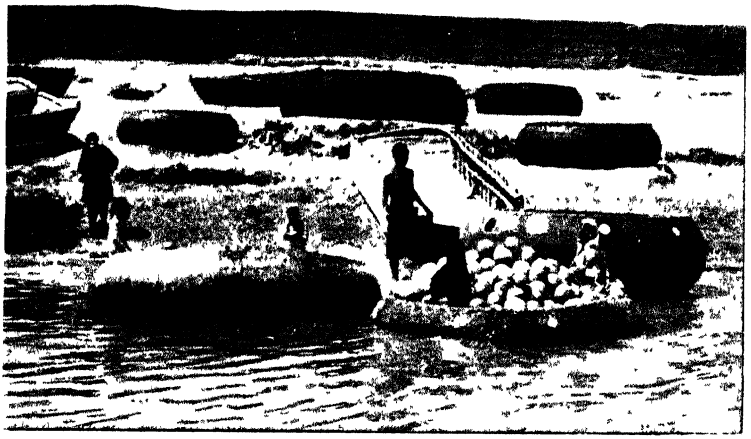
Lady Cox had a pet bear brought her as a mascot from Mosul by the R.A.F. She warned me to be

very careful with the animal as it was growing up from a cub and almost invariably bit everyone, with the exception of one or two favoured persons, with whom it came in contact. For Lady Cox it appeared to have a genuine affection and was happiest sitting beside her licking her hand. After a time it turned its attention to me, first licking my hand and then reaching up and licking my face. This, I was told, was an unprecedented happening, and when it climbed up on to the seat beside me and settled down I was informed that I was a very favoured person, as the bear had never been known to take the slightest notice of strangers before, unless he decided to bite them.

That night I slept soundly. We had only three and a half hours rest in bed at Ramleh, about four on the desert at Ziza and about the same on the desert at landing ground " X," so that a long night was welcome. Malins was still very queer and remained in bed all next day, whilst I lazed about and in the evening went up up-stream with the R.A.F. and bathed in the Tigris.

That evening we had to decide to remain a day longer in Baghdad as Malins, though better, was so queer that the M.O. insisted that he remained in bed until the morrow, when we could go on to Basra in the cool and stay there over Sunday before flying along the Persian Gulf.

Next day we were able to see the wonderful old city of Baghdad and take films of some of the quaint bazaars, after which we went out on the Tigris in a



The quaint river craft (gufas) in use on the Tigris

A typical scene on the Tigris.

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launch and Malins filmed the mosques along the banks, the quaint Arab restaurants, the round gufas with their loads of melons and the stream of brightly-coloured motley traffic pouring over the pontoon bridges. Then we rested a while before going down to the aerodrome, having decided to leave at about three-thirty.

On the way to Basra we were to be escorted by a D.H.9a piloted by Flying Officer Hewson.

The previous day Flight-Lieutenant Hilton had got in from the desert on the Vickers "Vernon," having managed to patch up his machine sufficiently to crawl in, though for the last part of the journey he had been flying almost entirely on one engine, and just crept over the surface of the ground. The Vickers "Vernon" is not popular in 'Iraq and Egypt and does not appear suited to the country.

Our machine was waiting for us on the aerodrome with every detail attended to and we wasted no time in getting off.

We flew south following our escort over rather uninteresting country. The river course which appears the most direct was not followed owing to the fact that hostile tribesmen lived in the villages on the banks and a forced landing might be unpleasant, whilst there was the added disadvantage that it would be difficult to get help. We therefore followed the railway over the greater part of the way. During the whole journey we were bumped about, whilst all around us we could see dust devils spiralling up thousands of feet into the sky.

Indeed, at seven thousand feet, the highest altitude we reached, there was still a considerable quantity of dust in the air. Needless to say under these conditions visibility was not of the best and the ruins of Babylon over which we passed were only dimly visible to our right. However, we made Basra in fairly good time, taking less than three hours over the journey.

The first man I encountered on landing was Squadron Leader Vernon Brown who was in command of the Air Force at Basra. Again I had bumped in to an old friend and as usual everything was done to look after the machine and to give us a good time.

CHAPTER X

THE PERSIAN GULF

THE air station of Basra is at Shaibah some seventeen miles away. It is situated in the midst of a vast mud plain and in many ways is an ideal aerodrome for this part of the world. Occasionally dust storms blow up making the visibility very low, but normal flying conditions are good though the temperature is high.

Whilst we were flying down from Baghdad the temperature of our engine rose to over 99° centigrade and stayed at that point all the time, narrowly escaping boiling. As the temperature had also been extremely high whilst we were crossing the desert, Macmillan wanted something done to keep the temperature lower and an excellent piece of work was carried out for us by a Flight-Sergeant of the Royal Air Force, who, working almost alone continually for eight hours, soldered on to our radiator—which was of the tropical type—an extra one hundred and sixty square inches of cooling surface. The work was excellent in every way and produced an immediate effect by lowering our temperature to about 77°. Afterwards we had

no trouble from this source, though we flew through India in the hottest part of the year.

The night we arrived at Shaibah, Malins and I were taken into Basra to dine at the Club just outside the town, but we returned early in order to have a good night's sleep.

The following day, being Sunday, we did not attempt to fly, it being, as I have said, our rule not to fly on Sundays. We spent the day in a thoroughly lazy manner, sleeping the greater part of the time and doing little more than look at some of the local Turkish forts on the scene of the great battle which had taken place in the early days of the Mesopotamian campaign.

On the Monday we intended to leave Basra for Bushire, and after filling up with petrol proceeded to Bunder Abbas, on the Persian Gulf. Elaborate arrangements had been made for our safety by Group-Captain Borton acting in conjunction with the Navy. It was arranged that H.M.S. *Triad* should stand by off Bushire and would render help in case we came down on the coast. The time of our departure from Basra was to be wirelessed to the ship together with our expected time of arrival at Bushire and afterwards the process was to be repeated for our flight to Bunder Abbas. If we were more than a few hours overdue H.M.S. *Triad* would set out to search the coast on the look-out for us. For our part, as we were not equipped with wireless, all we had to do was to hug the coast and, in case of trouble, land as close to the sea as possible

and await the coming of the *Triad*, when we were to signal to her by means of smoke fires and Very's lights.

At Shaibah we acquired various new mascots which by this time were dangling from many parts of the machine. Perhaps the most curious of all the things attached to our aeroplane was an onion impaled on a horseshoe which was tied to a strut by the mechanics of the R.A.F. at Shaibah. I have never quite understood the exact significance attached to the onion, but following our practice we left the mascot in place until somewhere in India on a very bumpy day the onion became dislodged and was blown overboard.

From Shaibah as far as the sea we were escorted by two D.H.9a's of the R.A.F., after which they turned about to return to their aerodrome, whilst we continued along to Bushire.

The country along the Persian Gulf continued to be sand and sterile rock, though inland we could see high mountains, and at places they came almost down to the sea. We saw little enough green stuff in the south of France, Italy and Greece, the summer sun having parched up everything except the trees, but we of course saw a number of these and that relieved the general aridness. After leaving Athens we had flown continuously over desert—over the Sahara, Sinai Desert and Arabian Desert, and then through parched 'Iraq. All the time we had seen nothing but sand and desolation, and this continued along the Persian Gulf.

After about two and a quarter hours flying we sighted Bushire with its closely packed houses lying at the extreme end of an island. Off the town was H.M.S. *Triad* with steam up, ready to leave in search of us at any moment. We circled round and landed on a good aerodrome whilst the Consul, Major Anderson, came out to meet us.

Before leaving England I had been informed that whilst aerodromes had been established at Bushire, Bunder Abbas and Charbar, it was not known in what state they were at the present time. I was informed that they would probably be quite unfit to land on, and that it was most improbable that we should be able to obtain petrol or oil. I was reassured on this point in 'Iraq before leaving, as an officer had recently returned from inspecting these stations. What we did find surprised us intensely. Not only were the surfaces of all three aerodromes in very fair condition, but at each place there were thousands of gallons of petrol and hundreds of gallons of oil. Hangars were not available except at Bushire, but each aerodrome had a powerful wireless station, which, however, was closed down through lack of personnel to work it, a R.A.F. operator being occasionally sent down to see that things were still in order. At Charbar the masts had been damaged in a storm and then temporarily dismantled to save further damage. There is little which needs to be done to these aerodromes to fit them for any air service which may spring into being between England and India.

At Bushire we were helped by the Consul and a number of Indian troops to fill the petrol and oil tanks, after which we went back with Major Anderson for lunch, arranging to leave about two p.m. in order to reach Bunder Abbas before nightfall.

We duly returned to the aerodrome and were about to start when Macmillan found that the cushion off his seat, which he had left to be covered with twill, had not returned from the Indian tailor. We at once sent off for the cushion, but owing to the delay caused we were almost an hour late in starting, and as after events showed, this wait proved extremely unfortunate for us. It is these small unimportant happenings that have such a great bearing on the general run of things. When we did start it was about three o'clock and I realised that we might not be able to get through to Bunder Abbas that night as, by seven o'clock, it would be too dark for flying and we had a distance of three hundred and fifty-five miles to go as the crow flies and well over four hundred following the coast. To make matters worse the wind was against us so that the speed of the machine would be very considerably reduced.

From time to time I took observations of our position and calculated the distance to go. When we were considerably more than half-way, I was half tempted to come down at an emergency landing ground at Lingah, but a hasty calculation showed me that with luck we might just scrape through, and

I was anxious to keep up to schedule. I passed a note of my calculatons up to Macmillan and urged him to get every possible ounce of speed from the machine. With nose slightly down and the engine roaring at full throttle, we thundered along the coast. Parallel ranges of mountains covered with sharp saw-toothed rocks came down almost to the shore, making landing difficult, though here and there were places where we might conceivably have descended in safety. The mountains assumed most fantastic forms, in many places looking as though they were ruined cities. So regular was the formation that we could distinguish streets and the definite outlines of houses complete with windows and doors, and it was hard to believe that these were really mountain formations and not the ruins of lost towns.

The sun set behind us. From time to time both Macmillan and I glanced over our shoulders to see how far it was from the horizon. Wonderful colours showed all over the sky and Malins was busy with the kinecamera taking cloud effects, quite oblivious of the anxiety felt both by Macmillan and myself. Gradually it grew darker and we could see a continual stream of fire pouring from the exhaust.

By this time we were flying along a sandy coast with mountains some miles inland. Bunder Abbas could not be far off and I hoped that landing lights might have been put out for us. With the object of attracting the attention of any people on the

aerodrome and having rockets sent up to indicate to us its exact position, I commenced to fire Very's lights into the air, but there was no result from my signals. Our maps were not too good and we found that particularly in this sector of the route they were inaccurate, so that it was impossible to gauge the exact distance we had yet to go.

At last we were flying at about one hundred feet above the ground and barely able to see the way in the darkness, dimly discerning the huge shapes of the mountains a few miles away. We passed over a fair sized sandy plain and Macmillan turned round to me and pointed below and I could see his face lighted up by the flame from the exhaust. I nodded my assent. There was nothing else for it but to land. We might possibly have made Bunder Abbas that night but as we did not know the exact position of the aerodrome, nor whether landing lights would be put out for us, it was not worth the risk of going on. It was better to chance landing in this desolate spot in Persia and risk being molested by unfriendly tribes about which we had been warned previously. We made a good landing in the darkness and then set about considering our position.

Realising that messages would be sent to H.M.S. *Triad* to say that we had not arrived, I wished to prevent any alarm on our account if it was possible, as we were perfectly safe and able to get off again when daylight arrived. The only way to do this

was to get a message sent in to Bunder Abbas, which we calculated was about twenty miles away. As we had flown along the coast I noticed some huts not far distant, so leaving Macmillan with the machine, Malins and I set out in the hope of being able to find a camel or horse in order that one or the other of us might go into Bunder Abbas and ask for a guard if it was considered necessary and in any case warn the Consul of our whereabouts. We were without food, other than our usual ration biscuits and Bovril, and our water supply was extremely low.

When Malins and I were about a mile away from the machine we came in contact with some Persian peasants who did not appear too badly disposed, though they were hardly amiable. The difference of language prevented either side understanding a word that the other side was talking about, but by dint of saying "British Consul, Bunder Abbas" and holding up a piece of paper together with a twenty rupee note, I made them understand that I wanted a message taken in to Bunder Abbas, and handed it over to a man who gave me to understand that he would leave at once. Later, somewhat distrusting the first messenger, I sent a duplicate, telling the Consul of our whereabouts and asking him to let the *Triad* know that we were not in need of help, though we should like some food if it could be conveyed to us. For some time about twenty of the peasants wearing sheepskin hats and covered in rags stood about, but after a time they got tired of

staring at us in the darkness and retired to a distance.

The sea was about a hundred yards away just over a slight ridge of sand and we could hear the swish of the waves on the shore. We settled down by the machine and awaited the possible arrival of food, but as the hours went by I realised that nothing would eventuate. We swallowed some biscuits and Bovril, together with a tin of lobster, which had been left over from the provisions given us by the Queen of Greece; then a very small drink of water and a spot of whisky finished our dinner.

Not altogether trusting the inhabitants I arranged that one of us should keep watch all night, spells of one hour on duty and two hours off being taken in turn. It was terribly hot and we all suffered intensely from thirst, but as we had less than a quarter of a pint of water left, I thought we must keep this for use in case of any emergency on the morrow. Neat whisky did little to ease our burning throats.

I took the first hour's duty, whilst Macmillan and Malins slept. Nothing happened, though from time to time I saw lights moving about at a distance in various positions and obviously signalling to one another in a code, which, needless to say, I did not understand. At the end of my hour Macmillan relieved me and I pointed out these lights to him, suggesting that he should keep his eyes open. I then lay down on the sand and slept until two hours

later, when Malins awoke me to go on watch once more.

Dawn came at last and we at once climbed into the machine and set off for Bunder Abbas, which we reached in less than twenty minutes flying. Not a soul was to be seen on the aerodrome at that early hour and it was not until after we landed that people came out to see us. Mr Fagan, the Consul, told us that they had been expecting us the night before and had put out flares and kept watch for a good hour after darkness, but we had obviously been too far away for them to see the Very's lights which I had fired into the air. Neither of the messengers whom I sent off the previous night had arrived. They both turned up about two hours after we did, and I then learned that we had passed the night not far away from the village of Bostaneh. We all had baths and breakfast, and then after we had seen the machine filled up with petrol and oil Macmillan and Malins went to bed in order to get a few hours rest before we left for Charbar which we wished to reach that evening.

Wireless messages were sent to the *Triad* to inform her of our safety; and I was told that from Bunder Abbas on to Karachi, H.M.S. *Crocus* was standing by to render us similar help in case of necessity.

From Bunder Abbas to Charbar was a distance of about three hundred miles or rather more going round the coast. We left at about three o'clock hoping that we should be able to get through before dark. Our departure was delayed to this hour

Indian Troops guarding our Machine at Bunder Abbas

The inhospitable country over which we flew along the Persian Gulf.

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through one of the tyres puncturing on the camel thorn, which grew in patches all over the aerodrome, just as we were starting off. This did not delay us long but we knew that it would make all the difference between our getting to Charbar with ease and not getting there at all, and for a time I was almost tempted to take Macmillan's advice and leave the flight over to the following day. Here I may say that very frequently Macmillan and I held rather opposite views on matters, he being imbued with a sense of Scottish caution and I, perhaps, having too much Irish impulsiveness. The result was that we got the two extremes in each case, and almost invariably chose the average between the two with the result that we were rarely out in our reckonings.

Before leaving Bunder Abbas I arranged that the Consul should cable Charbar asking for landing lights to be put out and lighted soon after sunset in order to guide us in if we were late in arriving, as appeared highly probable. I also asked him to cable to Jask, about half-way, asking the officials of the wireless station there to put a mark on the emergency landing ground which existed there, so that if by the time taken to reach this place we found that we should probably not get through to Charbar, we could land there for the night. I may say that these emergency landing grounds exist nearly all the way along the Persian Gulf. There is indeed quite a good organisation in existence in this part of the world.

We made excellent time to Jask, the wind not hindering us unduly as we had been flying almost due south until this point, after which the flight continued due east.

As we passed over Jask, Macmillan turned round to me with a questioning look on his face as though to ask whether we should land or go on. I worked out the times and passed him up the result, saying that I thought we could reach Charbar. Then, of course, we ran into a head wind and our flying became like that of the preceding evening—a race against the sun. Mile after mile we covered in the growing dusk, the sun sinking lower and lower into the sea behind the mountains. Range upon range of rocky mountains came down to the coast and the country, if possible, was even more inhospitable than it had been on the previous day. The sun had set about ten minutes when we came to the headland opposite which we knew Charbar to lie, and we cut across the sea, making a dead line for the direction of the town. We landed by the light of the flares which had been duly set out for our guidance and found large crowds of people awaiting us.

I had forgotten to say that at Bunder Abbas the whole town turned out to witness our arrival on the evening that we had been forced to come down at Bostaneh. In some cases they came out of a natural curiosity; but the Persian Governor, at the suggestion of the British Consul, had issued a definite order that every inhabitant was to be on the

aerodrome to see the machine arrive. Propaganda with a vengeance!

Charbar is a most desolate hole, as indeed are all these tiny stations along the Persian Gulf. At Bushire, at Bunder Abbas, at Jask, and at Charbar are tiny British outposts, established for the protection of cables or routes into the interior. Two or three Englishmen together with a few Indian troops alone uphold the prestige of the British Empire. At Charbar, for example, we found two British officers and a company of Indian troops. The day after we left, one of the British officers was due to leave for India, and his companion would be left there alone. There was nothing to do except fish and occasionally obtain a little shooting in the mountains nearby, though if a white man, or an Indian for that matter, ventured too far away from the little camp, he was sure to be captured and probably murdered by the natives. Everything is surrounded by barbed wire entanglements and occasional surprise attacks are made by the tribes from the interior so that any moment the little garrison has to turn out and man the guns to beat off a raid. One of these took place a week or so before we arrived. The enemy got right up to the barbed wire between twenty or thirty yards away from the Headquarters of the cable station which in this case is the particular point which the garrison protects. I cannot imagine a more desolate job than that carried out by men in this unenviable part of the world. Society is nil, there is literally

nothing to do; the heat is intense, the food monotonous. It is small wonder that our arrival was looked upon as an event.

I think that at Charbar our behaviour at dinner reached its height of rudeness. The British officers and the manager of the cable station fixed up a big dinner for us. We were all so thoroughly tired with our sleepless nights, labours, and lack of food, that during the meal it was impossible for us to keep awake. Whilst I was conversing with one of my hosts I chanced to look up and found Macmillan with his head dropped forward on his chest and Malins lolling well back in his chair with his mouth open. I kicked them both under the table and they woke up with starts. A few minutes later a curious sensation on my shin made me raise my head from my plate where it had fallen after I had aroused the other two. Thus the meal went on, we took a few mouthfuls of food, made a few remarks, woke up the one who happened to be asleep and then dropped asleep ourselves. We were quite unable to keep awake and I have never felt so sleepy in my life. Eventually our hosts took pity on us and let us go to bed. It was not long before we were all snoring hard.

CHAPTER XI

CHARBAR—SIBI

BEFORE leaving Charbar the machine needed a certain amount of attention. The fabric with which the wings were covered had become unstitched in several places, and we were afraid that the material might tear in the air. As we had no facilities for sewing it down in a proper manner, we decided to tie it down as best we could. The only long lengths of any suitable material were bundles of Government red tape, so we proceeded to tie this over the wings in order to make them safe as much as possible, hoping that it would hold until we reached Karachi.

We had a four hundred mile flight in front of us, and so decided to start fairly early in case we had to descend along the Mekran coast, where we should be searched for by H.M.S. *Crocus*.

As we had a reasonable amount of time we followed along the coast cruising with the engine at about three-quarters throttle. Here again we saw the peculiar rock formations which we had noticed along the Persian Gulf. Mountains with sharp jagged summits, their sides covered with boulders and ravines, ran down to the sea in ridges parallel

to the shore. In between these in many cases were open sandy plains in which it seemed that we might be able to land in case of an emergency. The shore itself was generally sandy and again a possible place for a forced landing. At many places along the coast we could see the iridescent sheen of oil which appeared to ooze from the sands and run out some considerable distance into the sea. I took care afterwards to ascertain if these oil patches could be the result of any shipping going from India up the Persian Gulf, but found it was not possible; and at the time I had little doubt that the country itself contained oil, and by the way in which it oozed out into the sea, it must contain large quantities.

We did not see a sign of life all the way along this coast.

It had been our intention to cut across the Gulf to the north of Karachi direct from the Mekran coast, but half-way through our flight we ran into mist and a slight drizzling rain—our first introduction to the monsoons. For this reason we did not cut across the sea, but hugged the coast, following it right round until we reached Karachi, over which we flew for some little time before we could pick up the aerodrome.

Karachi itself from the air looks a very fine city with broad straight streets and green spaces which were extremely soothing to our eyes after thousands of miles of glaring desert and desolation. The station was none too easy to pick up as it had no aerodrome markings of any nature, and the hangars

themselves had a curious appearance from the air. In front of the hangars was a peculiar mark which I took to be filter beds of a sewage farm, but which we afterwards discovered to be the aerodrome cricket pitch! My first indication that this was our landing ground was when I saw large crowds of people and ranks of cars lined up to one side. Immediately afterwards I saw the wind vane and realised that the large open sandy space below was Drigh Road Aerodrome, Karachi.

We fired one or two Very's lights to test the direction of the wind, and then glided down over the hangars and landed. We had arrived in India.

Our reception here was wonderful. We found Wing-Commander Breese, with whom I was stationed at the Central Flying School in 1915, in command, and Squadron Leader Williamson who was a ferry pilot at Farnborough whilst I was there, as second-in-command, so that we at once encountered friends. As we left the machine several people ran up to us, one of whom was carrying a large bundle, and as we approached, this bundle, which proved to be a carpet, was unrolled before us with one wonderful gesture. We were then requested to walk over this carpet, as the people of Karachi desired that it should be the first thing which we touched on arrival in India. Sir Montagu Webb then read the following address:

"We, citizens of Karachi, India's Western air port, desire to welcome you and wish you God-speed

on your heroic endeavour along with your gallant companions. We realise that in the attempt and accomplishment of your round-the-world flight there is much more than a mechanical triumph, because in this way the different countries of the world will be the closer linked together, thus becoming more and more that happy family which it is the ideal of civilisation to promote. We are proud that the task has been assumed by a fellow-citizen of the British Empire, and we know right well that in success or non-success you will maintain the great tradition of courage in the face of difficulties which is our proudest heritage. We ask you to accept as keepsake of a happy meeting this eastern carpet which, in after years, may serve to remind you that flying far you yet landed among friends who will continue to wish you and your party all success and happiness in this and other adventures of your career."

The carpet, bought by subscription, from the English and Indian inhabitants of Karachi, was then presented. This had been made for the visit of the Prince of Wales to Karachi and was the last thing he touched on leaving India, after his recent visit to India and Japan. It is a magnificent example of Persian work made under the supervision of Professor Shirazi. The principal colours are red and blue, but the whole is symbolic of the magic carpet of King Solomon by which he was carried through the air, at each corner being one of

the winged lions which formed his motive power on this occasion.

I replied to the address as best I could, but when one remembers that we had been for several days out of touch with civilisation and were unshaven, unwashed, and clothed in rags, it will be seen that I found myself in an unenviable position with the greater part of the European population of Karachi crowding round. I was wearing a ragged shirt with no collar, and sleeves cut off at the elbows; it was open to the waist, and beyond my shorts I had nothing else on except a pair of slippers. However, everybody was extremely kind to us and this kindness continued the whole of the time we were in Karachi.

Whilst we were at Bunder Abbas I had received a cable from the Commissioner in Sind, Mr Rieu, asking us to stay at Government House as his guests during the time we were in Karachi. Even customs officials were kind to us, though immediately the presentation ceremony was over I was escorted by Mr Lalkaka, Chief Collector of Customs, to an office, where I was made to fill in innumerable forms declaring the value of all the arms, scents, and other dutiable goods which it was supposed we might have been able to carry! I laughingly remarked to him that this was the first time we had been troubled with customs formalities during our flight, and that whilst we had tied down the machine with red tape at Charbar, we were now encountering the real thing at Karachi. Needless to say the Chief Collector of

Customs was perfectly courteous in all his requests, but my very silly remarks made in a joking spirit were unfortunately taken seriously by some of the people of Karachi, and a certain amount of unpleasant newspaper correspondence ensued, blaming the Customs Authorities for being officious, for which I was extremely sorry, as needless to say, none of us had any complaint whatsoever against them.

As soon as we arrived in Government House gifts began to arrive. I was first presented with a silver camel as emblematic of Sind, inscribed :

" Karachi to Major W. T. Blake, World Flight. God-speed from friends in Karachi. Erin go bragh. 19th July, 1922."

Macmillan and Malins were presented with silver cigarette cases with similar inscriptions, though Macmillan's, of course, had " Scotland yet " on his. These they unfortunately lost in the disaster in the Bay of Bengal. From other friends came gifts of cuff links and studs of Indian silver, engraved with the likeness of the Goddess Kali; boxes of cigars; bundles of the latest English papers; photographs and many other mementoes, were sent to us here; and I think that for overwhelming hospitably our reception at Karachi was the best which we received during our flight.

Throughout our time in Karachi Mr Rieu, the Commissioner, was kindness itself. The first even-

ing he had arranged a dinner at which we met some of the well-known people in Sind, and afterwards, whilst we remained his guests, he gave us an excellent time in every way and helped us in every possible manner.

Early the following morning I was awakened to receive a cable of congratulation on arriving in India from His Excellency the Viceroy. Then one by one messages began to arrive from England, Japan, Australia, and almost every other part of the British Empire. By even getting to India at all we had accomplished what the majority of people had frankly told us was impossible to do at that time of the year with a machine of our type carrying her load.

In the morning we went down to the aerodrome to see to the machine which was being overhauled for us by the Royal Air Force before we continued our journey across India to Calcutta. Our propeller laminations were separating, but as we were unable to secure a new one which had not suffered also, the R.A.F. re-glued and re-covered the one with which we had flown so many thousand miles.

The Press here gave us a wonderful reception, and I am sure they will forgive me for saying that we contrived to obtain our usual amount of amusement out of some of the statements made about the flight. Perhaps one which made us smile most was that which said that we were carrying pistols in order to commit *felo de se* in case of necessity, whilst Macmillan was particularly amused by the state-

ment that we arrived " gliding down the spirals of the sky."

Of course being in India, the land of mysticism, we had to have our fortunes told; and our friends on the *Daily Gazette* sent " Alastor," perhaps the best-known fortune-teller in India, to see us one morning. He certainly did his job thoroughly, reading our palms and casting our horoscopes, spending about two hours over each of us. Among many other things, he told me that I should probably live to be about eighty, and become the father of twins at thirty-three. He told me a certain number of true things about the early arrangements for the flight and continued that many things would happen to us in India and I should receive great help from the people, particularly the Parsees. He said that all the while I was there I should have a good time, but when I arrived in Calcutta I should have the best time of all. (Rather an amusing statement as after events proved.) Apparently I am fated to spend my life as a journalist, and shall eventually become the editor of one of the world's greatest newspapers—a fate which I do not altogether relish. However, I was born under the sign of the heavens which is known as the aviation sign, of the sun, Neptune, Jupiter, and Mercury. I was assured of a very big success in America, though on what lines was not indicated, whilst I was advised to cultivate the friendship of Mr Lloyd George.

Macmillan was told that he will probably spend

the greater part of his life in Spain where he will live in great happiness, but it has proved very difficult to drag any details from him so I can only conclude that his future will not bear investigation! Alastor, however, told him of certain dates when he would be in danger and should exercise the greatest possible caution. Macmillan made a note of the dates, and it is curious to find that the three days when Alastor told him to be particularly careful were the three days spent in drifting about the Bay of Bengal on the wrecked seaplane.

Malins' horoscope was in many ways the best of the lot. I cannot do better than quote the *Daily Gazette* for the account of his character as revealed by Alastor.

"He is concerned with the deep issues of life, and his work will be to reveal the hidden beauties in obscure persons and places. He is entirely selfless and ever the champion of helpless women and children at all costs."

It was our original intention on leaving Karachi to proceed across India via Nasirabad, Delhi, Allahabad, and Calcutta. As things turned out this itinerary was very greatly upset through causes over which we had no control.

Almost the first thing which happened on our landing at Karachi was the receipt of a letter from the Headquarters of the R.A.F. at Ambala, promising us all the help which they could possibly give

us, and saying that we should not proceed on any stage of our journey until we had received instructions from the R.A.F. authorities as to the fitness of the route. We were told not to proceed to Nasirabad and Delhi, but to proceed to Ambala via Sukkur and Multan. About an hour before we left Karachi a cable arrived to say that the aerodromes at Sukkur and Multan were both under water, owing to the breaking of the monsoon in the upper reaches of the Indus and consequent flooding of the river and bursting of the banks. We were told that the only route now lay through Jacobabad or Sibi and Lahore.

Accordingly we left Karachi at eleven-twenty-four in the morning expecting to reach Lahore the same day. We again experienced a little difficulty with the small scale and inaccuracy of the maps, and reached Jacobabad after about four hours flying. The aerodrome was just outside the town and proved quite a good landing place, but no sooner had we come to earth than the whole population turned out with one accord and rushed to the landing ground. There was not a white man to be seen and not a single Indian who spoke a word of English. Consequently it was some little time before we were able to make our needs know, but at last a man who was obviously the chaukidar or caretaker of the landing ground, appeared waving a bunch of keys. He was an old grey-headed, long-bearded man of about ninety, and I followed him across the aerodrome as he hobbled towards a small square stone

building which was obviously the petrol store. He inserted a huge key in the lock and threw the door wide open, stepping inside and inviting me to follow. He then pointed to each corner of the place with a gesture which needed no words to explain.

"There you are. This is the petrol store. As you see, it is perfectly empty."

We had not sufficient petrol to get on to Lahore, so we were forced to go farther out of our course and proceed to Sibi, the next aerodrome on the way towards Quetta.

We had a good deal of difficulty in persuading the natives to get out of the way whilst we started up the machine and took off. We were glad to leave, for although we had only been there for twenty minutes we had found the heat so terrific that we could hardly breathe. Indeed, Jacobabad and Sibi both claim to be the hottest places in India, lying, as they do, on the borders of the terrible Sind Desert, which has been responsible for the deaths of so many British troops.

Our flight from Jacobabad to Sibi, a distance of about a hundred miles, was a nasty experience. Owing to the terrific heat we were unable to climb to any cool altitude. The air was like a furnace and the sand of the Sind Desert reflected heat and glare. Needless to say we were badly bumped about all the time. We flew into a sand storm which forced us to descend very low, so that we should not lose our route, which was perfectly easy to follow, our guide being a railway across the desert. At

last Sibi appeared in sight, and we easily picked up the aerodrome, clearly marked with a white circle.

Here the reverse to the happenings at Jacobabad took place. We landed but not a single soul came out to us. For some little time we sat there in the heat expecting someone to arrive and then decided to go into the town in search of petrol. At that moment a tonga drove up in which was an Indian who spoke very good English. He turned out to be the Political Tahsildar, who was a sensible man and had brought with him drinks and large quantities of ice, this being the cause of the delay, for immediately he saw us arrive he began to get these things ready. He informed us that he had received a cable from Karachi, saying that we might possibly land there and telling him to get petrol, etc., ready for us. He had done his best and ransacked the town for spirit, but the most that he could obtain was twelve gallons, or less than the quantity which we consumed in an hour. We had exhausted almost all the petrol we had taken on board at Karachi, and were many miles from the nearest source of supply, Quetta, about eighty miles distant up in the mountains of Baluchistan, being the nearest aerodrome on which a unit of the R.A.F. was stationed. On the edge of the aerodrome was a square building similar to the petrol store at Jacobabad. This was strongly locked and barred and resisted our attempts to break it open. There was no chaukidar on the place, and natives told us

that in any case there was no petrol in the store. By then it was, however, too late to proceed elsewhere, and we decided that we should have to stay at Sibi the night and try and find a way out of the difficulty the following morning—Sunday.

The Tahsildar took us to the railway station, which luckily for us, is large owing to the fact that the railway works are here. We managed to get food in the station restaurant, for Sibi is the stopping place of trains going up to Quetta, it being the last town before the locomotives take the terrible ascent of the Bolan Pass, for whereas Sibi is in the plains, Quetta, not far distant, is six thousand five hundred feet above sea level. A guard of native levies were turned out to look after the machine and then we began to search for quarters for the night.

Sibi is just over the borders of Baluchistan and the British Agent resides there during some of the cool months of the year. In order to uphold his dignity and afford protection in case of necessity, he is then accompanied by a certain number of troops, so that there is an officers' rest house in the neighbourhood. This we had opened for us and there we did our best to sleep.

I have never in all my life been in such a hot place as Sibi. On the day we arrived the temperature was 119° in the shade. It was like being in an oven. The hot air scorched our lungs, burnt our eyes, and made the perspiration run down us in continual streams. Our thirst was intense and we

had to drink at frequent intervals in order to make up for the loss by perspiration. Before going to bed we decided to have cold baths in order to cool down, and told the chaukidar of the rest house to draw water from the house's cistern. Unfortunately this cistern was an iron tank situated on the roof of the building, and when the water was run off it was so hot that we could not bear our hands in it. As there was no cooler water to be had, we had to do without our baths and lie down on charpoys in the open. Mosquitoes, sand flies, and fleas added to the discomforts of the heat, and when dawn arrived, and with it a breath of comparatively cool air, we were all feeling in the last stages of irritation. However, we decided to push on to Quetta. Indeed we had no choice for we had to obtain petrol in order to proceed on our journey, and it meant that either we had to wait at Sibi while petrol came from Quetta or go to Quetta to get it. One night in Sibi had been enough for us and we decided that though the day was Sunday we would fly up to the hills, fill up with petrol and incidentally get a breath of cool air. We should have known better, as our previous Sunday experiences had shown us quite clearly that it was a bad day on which to fly.

CHAPTER XII

SIBI—QUETTA

We had managed to find another tin of petrol in addition to the twelve gallons which the Tahsildar had provided the previous day, so that we had about fourteen gallons to put in our tanks and a few gallons which were left over when we arrived. With this we decided to attempt the trip up to Quetta.

It was a rather misty morning when we took off and followed the railway towards the Bolan Pass which winds through the mountains seven thousand feet up to the great military station in the hills. As we left the desert behind and flew into the foothills the fog grew worse and as we did not know the route or what dangers might be concealed in the mist, we decided to return to Sibi and wait until a little later in the day when the mists would disperse through the heat of the sun and we could make a further attempt. There was, however, a disadvantage in this, for with the heat of the day it would become very problematical whether we could climb to a sufficient altitude to get over the

mountains to Quetta, though we had no choice other than attempting this.

We had only been in the air about twenty minutes when we returned to the aerodrome. This was a large open space, smooth and sandy, with no surrounding obstacles except a few bushes not more than about three feet high. It was still sufficiently cool for the air to be devoid of bumps. We had already landed on the aerodrome and therefore Macmillan knew that it was quite easy to put a machine down here. I am emphasising all this with a reason, for it was Sunday morning and for no reason whatsoever except the fact that it was Sunday, Macmillan by some unaccountable error of judgment of which he had never before been guilty, stalled the machine, with the result that she flopped on to the sand, breaking the undercarriage and tail-skid.

To say that we were annoyed is to put it mildly. We were stranded in about the hottest part of India —a place so hot that the natives say that if a man has a house in Sibi and a house in hell, he should sell the one in Sibi, and if he dies and goes to hell he should take a spare blanket with him. We had no petrol; we had no facilities for repairing the broken undercarriage; and we were miles away from any help. The only thing to do was to telephone through to Quetta to ask for a mechanic and the necessary spares, petrol, etc., to be sent down to us. Luckily the railway authorities had a telephone along the line from Sibi, so that with comparatively

little delay I managed to speak to an officer of the R.A.F. stationed up in the hills and told him of our requirements. He promised to send down a break-down party, bringing us the things we needed.

All that morning we worked, the temperature greatly increasing until it equalled the previous day's heat of 119°, and then went on climbing until it touched 121° in the shade. We kept as far as possible in the shade thrown by the wings of the machine, moving the aeroplane round as the sun moved so that a shadow always fell about the under-carriage where we were working. In addition we were wearing huge topees and thick spine pads, whilst natives brought large boxes of ice and dozens of bottles of soda water from the station at intervals during the day.

We were very greatly helped by Mr Trevethick and Mr Ghandy of the Railway Works at Sibi. They provided us with jacks and labourers so that we were able to dismantle the broken shock absorber tube and tail skid which were both taken down to the railway workshops as models for fresh parts which they offered to make there.

Just before lunch we heard the hum of an aeroplane and saw a Bristol " Fighter " approaching from the direction of Quetta. This came down and landed beside us, the pilot turning out to be Squadron Leader Maltby, who had been on the staff of the Midland Area with me when the Royal Air Force was first formed. He was then in command at Quetta and had come down bringing with him

Corporal Judd in order to see if he could give us any further help. He asked us to come up to Quetta and said that everyone was hoping that we should go there now that we were so close. We, however, decided that it would be better to push on as fast as possible as the erection of the Fairey seaplane was going on at Calcutta and we wished to be there as soon as possible. Also a breakdown party in two tenders had started early that morning from Quetta trying to find their way down the precipitous Bolan Pass bringing mechanics and petrol. Maltby stayed with us during the day and returned to Quetta in the evening, leaving Corporal Judd to help us in our work. We thereupon returned to the station and had some food, intending to await the arrival of the breakdown party and see them fixed up for the night before turning in, but as they had not arrived by about eleven o'clock we went across to the Dak Bungalow, where we had stayed the previous night and again lay down in the open.

We endured another night of the terrific heat and sand flies. Soon after we arose, before dawn the following morning, the breakdown party arrived, having had a very rough journey from Quetta, finding the roads flooded by the rains and eventually driving the tenders along the railway track for some distance in order to cross the local river. To manage this they had had to lift the gates off their hinges as the key to the locks was kept some miles away. Despite their fatigue, having been up all night, they at once started to work on our machine

and by lunch time had her ready for service once more.

Again the heat was intense, the thermometer steadily climbing until it reached 123° in the shade and about 170° in the sun—a temperature in which it was almost impossible for Europeans to live. We filled our tanks and got ready to take off but just as we were starting up the engine one of the mechanics suddenly collapsed, laid out by the heat. We had a little ice left, and with this we proceeded to do our best to bring him round, laying him under the wings of the machine in order to get the only available shade. Then without warning the Sergeant-Major, who was with the party, fell in a heap. We had no more ice and he was obviously in a very bad way so we had to give up all idea of starting and I went as quickly as possible down to the station hospital to get help and ice. As I climbed into the tonga to gallop away for assistance two more men went under and by the time I got to the hospital an Indian, who had been helping us, and who was with me in the tonga was also overcome by the terrific temperature. It was wonderful how everyone had managed to stick it until the work was done, after which their endurance gave out and they collapsed. It was probably only due to the fact that all three of us knew that we had to keep going that enabled us to carry on.

Whilst I went down to the hospital, Flying Officer Russell, who was in charge of the party from Quetta, fanned the Sergeant-Major and dabbed him

with a little water we had, but this was not much good for the purpose as we had already found it too hot to drink. In fact the bottles in which the water was kept and which had been all day inside the locker of the machine and therefore sheltered from the direct rays of the sun, were so hot that as I pulled them out my fingers were blistered and I had to drop them on the sand.

The doctor was not long in going to the aerodrome and we succeeded in getting all five of the men safely into hospital. Before this was done, however, the doctor proceeded to reduce their temperatures in a somewhat drastic manner, spreading ice all over the ground and placing them on top of it, after which he proceeded to bury them under mounds of ice. By evening they had so far recovered as to be able to stand the train journey up to Quetta as it was desirable that they should reach a cooler atmosphere as soon as possible and not remain in the oven of Sibi.

In the cool of the evening—a comparative term, for the temperature was still about 110°—I walked down to the hospital to see how the men were getting on and in course of conversation with the doctor was informed that he had been expecting the three of us to be taken ill at any moment.

"In fact," he said, "yesterday I had three beds prepared for you as I did not think it possible you could stand this heat when even natives are collapsing. However, the beds came in very useful for the men from Quetta."

Next day we tried to start early in the morning for Ambala, hoping to reach Lahore and then continue for another stage. Almost as soon as we got into the air Macmillan pointed in front to one of the air screws which worked the petrol pumps. It was not revolving, showing that the pump had jammed. Then the engine commenced to pop and it was obvious that the other pump was not delivering any petrol. I quickly put my hand down to work the emergency gravity pump and at the same time found that this was spurting petrol all over my leg. Macmillan brought the machine down again on the aerodrome.

The facilities in the railway workshops for the repair of our pumps were not quite suitable for the type of work required, though I cannot thank Mr Trevethick and Mr Ghandy sufficiently for all the things which they and their mechanics did for us. There was nothing for it but to get up to Quetta and have the pumps put right. Another day in that terrific temperature would probably have finished us off as far as any immediate departure was concerned, for it must be remembered that not only had we to endure the temperature which was well over 170° in the sun, but had to work very strenuously throughout the day. We, therefore, transferred all our kit and spares to the breakdown party who were arranging to have the tenders put on board the next train for Quetta. Then after wiring up the petrol pumps so that they could not interfere with the emergency supply we climbed into the machine

and began to fly to Quetta on our emergency system.

It was about nine o'clock in the morning when we started and the temperature was just beginning to stoke up again, so that we had great difficulty in climbing, although we were lightened of a considerable load. At our first attempt to get through the mountains we found we were not high enough and could not climb as rapidly as the Pass ascended the mountains, so we had to turn back and fly round whilst we slowly gained a few hundred extra feet of altitude. Then we again headed for the mountains, following the railway in and out the lofty peaks which towered above us on either side, turning and twisting through the narrow gorges, always following the thin permanent way, which was our only path to Quetta. Little by little we went along, Macmillan keeping the machine with her nose well in the air, always endeavouring to climb but with little result, other than to considerably reduce our speed. However, we just scraped over the highest point of the Pass and came out on the Plain of Quetta—a stretch of level sand surrounded by mountains climbing up to eleven and fourteen thousand feet.

By the time we reached the aerodrome my arm was numb from exertion. For nearly an hour and a half I had been forcing petrol into the emergency tanks and down to the engine. The Vickers pump was not conveniently placed and I had to make a vertical up and down motion with the pump placed

considerably in advance of my seat and rather under the top covering of my cockpit. Had it been in a horizontal position things might have been easier; as it was my work was more than doubled. If the petrol flow was to cease and the engine cut out there was little hope of our getting down without smashing the machine to pieces among the crags of the mountains. Every now and again a spurt of petrol from one of the tanks showed that it was full, then Macmillan switched over to that tank and I recommenced my labours in filling the other one. By the time that was full the first was empty and so I kept on pumping hard all the time, and I was indeed thankful when we landed at Quetta.

At Quetta we were given a wonderful time by everybody, Air Force, Army and civilians, alike. We were taken to the Club which is the best in Baluchistan and reminded me very much of the Officers' Club at Aldershot, whilst for the three days which we spent there we were taken about everywhere and shown everything there was to be seen in the place. We also acquired many new mascots, the most interesting being two keys labelled "The keys to success and happiness."

The Sergeant-Major and three men who had been suffering from the heat, got safely back to Quetta and were fit again in a few days. Owing to the fact that Quetta itself is six thousand five hundred feet above sea level, it has a very pleasant climate in the summer, being hot, though not unbearably so during the day and sufficiently cool at night to

enable one to sleep comfortably and so keep fit for the day's work.

When we first came to Quetta we had no intention at all of staying there for several days. It was our idea to put in one day in the place in order to have the petrol pumps put right, and then to carry on the following day at dawn; but though we arose at four-thirty, we did not get away. We loaded up the machine and took her to the extreme edge of the aerodrome, after which we tried to take off. Opening the throttle, Macmillan got the tail off the ground as the D.H.9 raced across the aerodrome. However, the machine showed no inclination at all to rise and Macmillan switched off just before we reached the hangars. It was obvious that with our full load we could not take off at that altitude even in the cool of the dawn. Squadron Leader Maltby then offered to fly two of us down to Sibi in two Bristols and Macmillan tried to take off alone, again without success, nearly crashing into the hangars in his effort to get the machine into the air.

By now, of course, it was getting hot and our chances of getting away that day were nil. We therefore decided to take out all our stores and send them down by train to Sibi, whilst Macmillan was to take the machine off alone at dawn next day with only sufficient petrol in the tanks to enable him to get down to Sibi. Malins and I were to travel down in two Bristol "Fighters" of the Royal Air Force. Maltby then at once despatched Flying Officer Saint with our stores, two mechanics, and petrol by train

The machine climbing over Quetta in order to cross the mountains 11,000 feet above sea level

Tea time in the hangar Left to right Mahns, Blake, Macmillan.

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to Sibi, there to await our arrival on the morrow.

The following morning at dawn we made another attempt to get away. Our D.H.9 and the two Bristols were brought out on the aerodrome and the engine of our machine was started up. She at once began to miss badly so that Macmillan switched off and we set to work to clean the plugs. Again she was started up and again she continued to miss. By this time the heat of the day was coming on, and once more we had to postpone our start, as even if Macmillan had succeeded in getting off Quetta aerodrome and we had all gone down to Sibi, by the time we had loaded up there it would have been so hot that we should not have been able to get the machine off the ground carrying her full load.

All that morning R.A.F. mechanics worked on the engine until at last she appeared to be running well. Then Macmillan took her off, carrying Flying Officer Dunbar as a passenger, and after flying round for about ten minutes on a test flight, he landed again with the oil pump not functioning.

That afternoon more work was done on the engine and at last Macmillan got off in the evening with about thirty gallons of petrol in his tanks, and set off in the direction of Sibi. As there was no point in taking two more of the Royal Air Force to endure a night in the temperature of the plain below, Malins and I stayed at Quetta that night, following down the next morning at dawn. We each landed without incident at Sibi and found Macmillan's

machine awaiting us. We then proceeded to fill up with petrol before pushing off for Lahore.

Then a rather amusing incident occurred. When Squadron Leader Maltby first flew down to Sibi to see us he told us that there was plenty of petrol in the store on the aerodrome and that there should have been a chaukidar present to issue it for us. The man had not turned up and to search for him was fruitless, so we had arranged that petrol should be sent down for us from Quetta. Just as we were about to depart the venerable gentleman turned up with the key, threw open the hut and promptly produced about five hundred gallons of spirit! Apparently he had been having a slack time and had decided to take a few days leave. Unfortunately he chose a rather bad time for his absence and I sincerely hope he duly suffered for it.

We just staggered off the aerodrome at Sibi, carrying all our spares and with all our tanks full, with the pumps functioning and everything going well, and at once headed south-east in order to clear the mountains which we knew we could not cross, and then pick up the Indus *en route* for Lahore.

CHAPTER XIII

QUETTA—AMBALA

ONCE more we flew along bumping over the Sind Desert, hugging the mountain mass which rose to our left in order to make our journey as short as possible. Gradually the sand gave place to rock and the rock to green fields and then in the distance we sighted the Indus which had flooded the whole country for many miles on either side of its banks. Indeed from this point almost as far as Calcutta a great part of the country over which we flew was more or less under water owing to the heaviness of the monsoon storms.

So far we had not encountered the monsoon proper, only flying through a slight drizzle between Charbar and Karachi.

We cut across from the Indus in order to pick up the railway running from Multan to Lahore, but after five hours flying against a head wind we decided that it would be advisable to land as it was doubtful whether our petrol would last us through as far as Lahore. We therefore came down at Montgomery, where there was a fair-sized landing ground with a very good sand surface. It was then

about one-fifteen p.m. so we decided to have lunch before going on.

At this place the chaukidar met us at once, so before proceeding in search of food we filled the tanks up with petrol and made all ready to start off. Then, leaving Macmillan and Malins to finish looking over the machine, I went off to find police to guard the D.H.9 whilst we went to the railway station for lunch.

Beside the aerodrome was a large gaol, the Governor of which was a Major Courtney. When I approached him and asked if he would be good enough to spare us two or three men to see that no one interfered with the machine whilst we obtained some lunch he stated that he was quite unable to do anything to help us, and though he knew we were without food and the day was, as usual, extremely hot, he did not even offer me a drink. I next went to the District Commissioner, an Indian, whom I disturbed during his afternoon's siesta, but he most courteously came down, gave me water to drink and at once arranged for a guard of police to go out to the machine. I then went on to the station to order lunch, sending a tonga back with a message to tell Macmillan and Malins to come down to the station as soon as the guard arrived, which it should do almost as soon as the tonga. Needless to say, my walks first to the Governor's house and then to the District Commissioner and then to the station had taken time, so that it was getting late in the afternoon by the time Macmillan and Malins turned up.

Macmillan arrived in a Ford car, having been brought along by an official of the Irrigation Canals. He apparently had begun to get worried at my continued absence and followed me along to find out what had happened, tracing me from Major Courtney to the District Commissioner and so on to the station. Next the tonga turned up with Malins, soaked to the skin, hungry, and in a very bad temper. It appeared that the guard had turned up and as soon as they had arrived, the heavens appeared to open and a solid sheet of rain had fallen on the aerodrome. At the same time a terrible gale of wind blew up and he had been obliged to make about fifty natives hold down the machine to prevent it being blown over backwards. Needless to say he was wet through and told me that the cockpits of the machine were awash and the aerodrome was about three inches under water. Altogether he had had a very rough half-hour, after which the rain had ceased, but he was much annoyed because neither Macmillan nor I had seen any rain at all, it having obviously been an extremely local shower.

When we returned to the aerodrome after lunch we found that Malins had certainly not exaggerated. The place was turned into a lake and was rapidly becoming a sea of mud. I saw that if we were to get off at all we should have to do so very quickly otherwise the ground would become so soft that the machine would sink in up to the axle. We splashed through to the machine ankle deep in mud and

water, started her up and slowly taxied to the far end of the aerodrome, the wheels every now and again sinking six or eight inches into the soft beds of sand. We then climbed in, filling the machine with mud from our boots, and tried to take off, but so tenaciously did the aerodrome cling to the aeroplane that we only ambled along at about twenty miles an hour and were unable to get even the tail off the ground. We returned to our starting point, and, helped by the station-master and irrigation officials, dumped every available spare part and all our kit, even including the kinecamera, on the ground, the station-master promising to have them packed and sent on by train to Lahore that evening.

Then we again tried to take off. Very slowly the machine got under way, gradually increasing her speed and at last lifted her tail off the ground. Showers of earth and water splashed over the fuselage and our faces were covered with blobs of mud, Macmillan just managing to lift her off the ground as we came to the extreme edge of the aerodrome, and dodging bushes and trees got her safely into the air, after which we had an easy flight to Lahore.

On the way Malins removed most of his wet clothes, being afraid of a chill, though I should not imagine it likely in that temperature. He hung his breeches over one side of the machine and his shirt over the other side, letting them flap in the wind in order to get them dry. He wore a pyjama

jacket and little else except a sheet of yellow oiled silk which he normally kept to wrap up the kinecamera.

Gliding down into the aerodrome at Lahore I saw an ambulance standing by and as we flew over about fifty feet from the ground, the mechanic began cranking up furiously as though hoping against hope that he would have to rush across the aerodrome to pick up our dead bodies. Fortunately we made a perfectly normal landing, after which we handed over the machine to the R.A.F.

As the station was a small one there was no mess and we went in Faletti's Hotel in Lahore for the night.

Next day was Sunday, so we decided to rest until late and look round the town, but unfortunately for my good intentions I was awakened in the early hours of the morning by the tender driver who had gone to the railway station to meet our spares which were being sent on from Montgomery. He was worried because they had not arrived, but they eventually turned up, the train being two and a quarter hours late on a normally three hour run!

Lahore struck me as being a remarkably fine city, the intense green of the grass and the trees being such a change after the barrenness of the previous thousands of miles. We had little time to see much of the place, but Mr Cooke, an ex-R.A.F. officer, then on the staff of the *Civil and Military Gazette*, took us out to the fort and mosque of Akbar and showed us the old gun called Zamzamah

or Bhangian Wali Top, an immense brass cannon cast in 1761 which bears the legend—"Who holds the gun holds the Punjab."

In the evening I went to the cathedral to service, but owing to the fact that my watch had been adjusted by an Indian watchmaker, only arrived just in time for the sermon! Lahore, which is of course the capital of the Punjab, has two cathedrals, one Roman Catholic and one Church of England, and is in every respect a very fine city.

That evening we dined at Government House with Sir Victor Maclagan, the Governor, who had only arrived that morning from Simla in order to open the new Punjab Parliament on the Monday.

Next day we went down to the aerodrome with the intention of pushing on to Ambala, as we had had a very definite request from the A.O.C., R.A.F. that we should proceed there before going on to Delhi, but on arriving at the aerodrome we received a message to say that it was pouring with rain at Ambala and the aerodrome was flooded, so we were not to proceed. I 'phoned through to Delhi and found that there it was all clear, but on my asking permission from the Headquarters of the R.A.F. to proceed direct to Delhi, I was definitely ordered to wait until the weather was clear at Ambala and not to proceed to Delhi. I was also informed that the aerodrome at Delhi was not, in any case, fit to land on, it being small, bad and almost under water.

Later that evening the weather cleared at Ambala

and we left Lahore at about half-past four in the evening.

Unfortunately we were not warned that Amritzar, which was on the direct line to Ambala, was a prohibited area and that no aircraft were allowed to fly within a certain radius of the city, having to make a detour in order to avoid it. The reason for this was that Amritzar possesses a famous mosque in which is a particularly holy copy of the Granth. So holy is the book that no one is allowed to sit in its presence, other than on the floor, and the same rule applies over a large radius around the sacred mosque, it being considered sacrilegious to sit higher than the book. By flying over Amritzar we were, of course, sitting higher than the book within the prohibited area; but this we did not know and apparently no complaints were made, though we had an excellent view of the golden mosque and the sacred tank. Shortly before an aeroplane had flown over the city with the result that it was with the greatest difficulty that a riot was prevented, the inhabitants having objected to the airmen sitting above the book and stating that the insult had been magnified because they had clearly seen that both the occupants of the machine were puffing large cheroots!

At Ambala our machine was taken over by the R.A.F. and we were put up by various members of the mess. Next day it appeared that the only reason why we had been summoned to Ambala was in order that I might be forced to pay cash for the

petrol, etc., which we had received in India. This, despite the fact that the sum of three hundred and fifty pounds had been paid over to the Air Ministry on account of any supplies which we might need, and also despite the fact that in accordance with instructions I had signed vouchers for every can of petrol and spare part which had been issued. I pointed this out to the Air Officer Commanding, Air Commodore Webb-Bowen, who had been my C.O. at Netheravon for a short time in 1915, and on my stating my inability to pay cash, I was asked to sign a duplicate set of vouchers, and then we were allowed to proceed on our journey. It was only for this reason that we had been forced tremendously out of our route across India. Had we proceeded as we originally intended, the flooding of the aerodromes at Sukkur and Multan would not have affected us, and we should not have been obliged to proceed to Sibi, Jacobabad and Quetta. I cannot understand the attitude of the Headquarters Staff of the Air Force in India with regard to this matter. Individually almost every officer and man of the Air Force in India, as elsewhere, helped us tremendously, this being particularly the case at Karachi and Quetta; but this lack of consideration on the part of Headquarters was undoubtedly the cause of a great deal of our delay in getting through to Calcutta.

At the same time, in common fairness, I must add that in another matter Air Commodore Webb-Bowen helped us tremendously, for I had made a request

before reaching India that he would allow mechanics to proceed to Calcutta to help with the erection of the Fairey seaplane and he at once acceded to my request and sent a Flight-Sergeant and Corporal and one A.C. to erect the machine, whilst Major Kemp, the Chief Inspector of Aircraft under the Indian Air Board, himself went down to supervise the erection. As Major Kemp not only knew our type of machine extremely well, but had also actually flown the very machine whilst she was in England, no better person for the job could have been found. He and the mechanics worked extraordinarily well and by the time we arrived in Calcutta the machine was erected and waiting for us, and I must thank both them and Air Commodore Webb-Bowen for their very great help in having this work done for us.

We tried to leave Ambala the day after we arrived and actually got off at about half-past three in the afternoon, intending to make Agra that night. After a few minutes in the air the engine started to pop and choke, so we returned to the aerodrome in order to see what was the matter. We were not long in finding the cause of the trouble, the petrol filters being foul with pieces of rubber from the joints. It was obvious that the rubber joints had perished badly, which was not to be wondered at, as rubber will not last in the Indian climate. We therefore decided to renew all the joints before continuing our journey.

Next day, having got the new joints on the

machine, we ran up the engine and found that she was giving much less than twelve hundred revolutions. We again found pieces of rubber in the filters. We therefore decided to empty all the tanks and flush out the whole petrol system, and then, just before dark, we started her up again and found she was running well on the gravity tanks, but very badly on the main tanks, so we again set to work cleaning her out.

When one is eager to get on, as we were, for the erection of the Fairey seaplane at Calcutta had been completed and she was ready for us to continue our voyage, delay is very difficult to bear with equanimity, and when time after time we worked on the engine and time after time met with disappointment, it was with the greatest difficulty that we could keep cheerful. However, we took off again on the 3rd August hoping to reach Agra and Allahabad. After flying round the aerodrome for half an hour all seemed well, but when we were getting towards Delhi, the engine again began to give trouble, so we turned back and once more landed at Ambala. Still the same trouble—pieces of rubber floating about in the petrol system blocking the pipes and filters and obstructing the carburetter jets.

The next morning we again took off, the engine running well, but after a few minutes flying, Macmillan turned round to me pointing frantically at the cowling. I had been busy with the maps and as the engine was obviously running well I

wondered what he was pointing at. I glanced at the instruments and saw that she was getting her revolutions and the temperature was all right. Then at last I saw where he was pointing. The heavy exhaust pipe had broken in half with the continuous vibration and was only holding in its bracket by a fraction of an inch. If this gave way the pipe would fall on to the wings, probably smashing either the plane itself or some of the struts in the process, and quite possibly causing an extremely serious crash. Once more we swung round and very gingerly made our way back to Ambala, where we had it riveted, and then set out on our fourth attempt to get away from a place which we had come to loathe almost as much as we hated Sibi.

CHAPTER XIV

AMBALA—AGRA

WE had hoped to get through to Agra from Ambala, and day after day we had cabled Agra and Allahabad saying that we were due to arrive, afterwards sending other cables to say that we had to return to our aerodrome.

This time things were much the same. All went well until we had just passed over Delhi when the engine abruptly cut out and then picked up slightly, popping and banging. We were over country on which it was impossible to make a decent landing, and as we knew there was an aerodrome at Delhi, only a few miles behind us, we turned back in the hopes of finding it. Unfortunately our engine would not carry us so far, and Macmillan very cleverly dropped her down into a soft ploughed field beside a narrow-gauge railway. The landing was perfectly judged, and on a very bad surface the aeroplane pulled up without a wire being damaged.

At once crowds of Indians arrived on the scene and with them a large number of Japs, or what appeared to be Japs. Not one of them spoke any

English, and it was some time before I found someone who grasped the word "telephone" and who escorted me several miles along the railway until we reached a spot where I could get in touch with civilisation. Macmillan and Malins meanwhile remained with the machine in order to look at the engine, though we had little doubt as to what was the cause of the trouble.

I telephoned through to the Leicester Regiment who were stationed at Delhi asking them if they would be good enough to send us out a guard, and on my return to the machine I found that Malins had at once found the cause of the trouble in a choked carburetter. Several engineers who were occupied in the construction of the new Delhi at Raisini had arrived on the scene and were helping. Macmillan, meanwhile, had found that the only hope of getting off was to remove the machine over about three-quarters of a mile of mud, then through banks, over ditches, through hedges, until we reached the road. After this we could tow her along about half a mile to a broad avenue from which it might be possible to take off.

Mr Rouse, of the Public Works Department, the Chief Engineer working on the new Delhi, offered to provide us with any labour we wanted, and invited us to stay with him that night. I had, however, previously accepted an invitation to be put up by the Leicesters; so as soon as the guard arrived Macmillan and Malins went back with Mr Rouse and I went to the Leicesters' mess in order that we

might have some food before beginning to move the machine.

We had landed near the tomb of Safdajung between the present Delhi and the new Delhi at Raisini.

It is interesting to note that there have been seven cities of Delhi built by various emperors. Most of these are in ruins, and there is a native legend which says that the building of a new Delhi marks the end of a nation's reign over India. Monsieur Clemenceau visited Raisini during his recent tour of India and was asked what he thought of the new Delhi which we are building.

For some time he surveyed the magnificent buildings, the long, broad, tree-lined avenues, and the heaps of gleaming white building material, and then said thoughtfully :

" Well, I suppose it will make just as good a ruin as any of the others."

Certainly the buildings of Raisini are on a magnificent scale but it will be very many years before the new city is finished.

After lunch I went out to see the aerodrome at Delhi, Colonel-Commandant K. Wigram commanding the Delhi Brigade, taking me out in his car, and much to my surprise I found a large aerodrome of good surface, not seriously softened by the rains. We found the chaukidar and put out a landing " T," also building up a smoke fire which we gave the chaukidar instructions to light as soon as he saw an aeroplane coming over. After that Colonel

Monsoon storms through which the expedition flew

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Wigram took me down to Safdajung where we found Macmillan and Malins, helped by Mr Rouse and many Indian labourers, getting well on with the job of moving the machine.

Whilst some natives were occupied in laying down sleepers to make a track over the mud, others were unloading trucks which were bringing the sleepers along the light railway. Still others were cutting holes in banks and filling in ditches, and some were occupied in cutting down trees. Altogether there was a scene of intense activity.

As the track grew we began to move the machine. It was a nerve-racking business trying to persuade hundreds of Indians, very few of whom understood a word which we said, to pull an aeroplane by the struts and not to push hard on the trailing edge. However, with the help of Colonel Wigram and Mr Rouse we moved her forward a few yards at a time over the sleepers. When we came to a ditch more care was necessary but inch by inch we got her along.

Darkness began to fall and with it came the rain. It did not merely rain, but the clouds seemed to burst and water came down in one solid sheet, soaking everything and turning the ground, on which we were standing, into a sea of liquid mud. Our clothes were clinging to our bodies, but everyone worked with a will. Then complete darkness came on and thunder and lightning commenced. The terrific crashes immediately overhead made orders impossible, and had it not been for

the lightning it would have been so dark that we could not possibly have continued with the job. As it was, the flashes were so frequent and so bright that we could see what we were doing, and before the storm finished we had got the machine out on the road. Then we proceeded to peg her down and cover her with a tarpaulin. One and all our helpers had stuck to the job until the end, cheerfully working amidst the mud and water. It is one of the very few occasions when I have seen a General Officer covered with mud and working with a will surrounded by others whose sole object appeared to be to get on with the job. Everyone was covered with filth, tired out, but happy in seeing the job successfully completed. Neat whisky out of a bottle was taken to ward off fever, then Macmillan and Malins went back with Mr Rouse for the night, whilst I returned to the Leicesters' mess, it being arranged that we should continue the work of pushing the machine along the road to the starting point at six o'clock the following morning.

On undressing I found that my pith helmet had turned to pulp and my letters of credit, etc., were like blotting paper.

Colonel Wigram called for me at five-thirty a.m., and after another look at the aerodrome to make sure that it had not suffered in the preceding night's rain, we went down to the D.H.9 and with the help of the Leicesters who had remained on guard all night and a few Indians, uncovered and untied her,

commencing to push her along the road to our taking off position. We had nearly completed this work when Macmillan and Malins arrived after a good night's rest.

The avenue which we had chosen as a likely site for taking off was about six hundred yards long and about thirty yards wide, lined with young trees surrounded by brick palisades. The wind was blowing across the road. In order to minimise the risk of hitting anything we removed the wing skids and then, at Macmillan's request, he took off alone. With only one up the machine literally bounced off the ground in about fifty yards, and in his relief Macmillan proceeded to scatter the crowd of helpers and sightseers by diving steeply at them and zooming up again just over their heads. He then turned and made off for the aerodrome, the rest of us following in cars, feeling happy at the end of our adventure and Malins overjoyed with the remarkable film which he had obtained.

After filling up our tanks we took off, hoping to make Allahabad without stopping. As I have remarked before I had frequently cabled Agra and Allahabad to say that we were arriving and then had to cancel the cable on account of our non-start or return. On this occasion I again cabled to Allahabad to say when we were expecting to arrive, and as we were not stopping at Agra I prepared a message bag in which I placed a letter apologising for all the trouble which I knew we must have given there by my various cables and saying how sorry we

were that we were not landing, but that we hoped to go straight through to Allahabad.

On our first attempt to take off at Delhi, we did not rise, having struck a very soft part of the aerodrome, so we taxied back and took off successfully in another part.

For a time all went well, but as we approached Agra the weather began to get very bad, thick clouds blowing up in front of us and the rain coming down in sheets. The whole country-side was blotted out by the falling rain, but we made Agra, found the aerodrome and successfully dropped our message bag, before continuing across the river to pick up the railway for Allahabad. We could hardly see the wondrous Taj Mahal because of the rain, but nevertheless obtaining some unique, if peculiar, photographs and films of this wonderful tomb. The weather got worse and worse, driving us down to within a few hundred feet of the ground. Ahead and on either side of us stretched dense clouds.

Macmillan then began to think it advisable to return to Agra, but owing to our many delays I was anxious to push on if possible, and as there was a slight break in the clouds ahead we flew towards this hoping to find clearer weather on the other side. Through the gap things were, if possible, even worse. The rain was falling in almost a solid sheet, filling the cockpits with water and almost cutting our faces by the violence with which it was driven against our skins. There appeared no hope of

getting on so I reluctantly assented to our return to Agra.

We had almost to force our way back through solid water, and just as we came within reach of the town, the engine suddenly started to bang and vibrate and drop revolutions. The rain was so dense that for some time we could not make out the landing ground, but flew about on its outskirts over an open space in which we could drop down in case the engine completely failed.

I began to wonder if the propeller would stand up to the strain, for rain will eat away the edges very rapidly, and on more than one occasion propellers have actually burst in the air from the action of rain and hail.

At last we managed to dive in through a gap in the storm and flop down in what appeared to be a lake. There was a good four inches of water over the aerodrome, and once we were down Malins and I climbed out to walk on ahead of the machine in order to search out any soft spots or obstacles which were likely to pitch the machine on to her nose. Very cautiously we then taxied her in under the shelter of some trees. I found afterwards that nearly five inches of rain had fallen in about six hours, and we had flown through the worst of the storm.

By then the rain had ceased and we were able to see the extent of the damage, which as I feared, had been done to the propeller. The fabric was stripped almost completely off both the blades, and pieces of it were hanging loose, these no doubt having

helped in the loss of revolutions and the vibrations of the engine. Pieces of wood the size of farthings had been bitten out of the edge of the airscrew, which throughout its length looked as if it had been gnawed all over by rats. Its work was evidently finished and we should need a fresh propeller. Macmillan, too, feared that one of the piston heads had cracked and that possibly one or two of the inlet valves had gone, whilst the rubber trouble was still present. Altogether we were in a bad way, and for a moment we thought it seemed almost impossible to proceed.

Lieutenant-Colonel Pattison, Commanding the Somerset Light Infantry looked after us wonderfully well. We told him of the message bag which we had dropped, saying that we had not intended to land, and asked him if it had been picked up. He had no knowledge of it, and during our stay at Agra it was not given to him, although we had seen people on the aerodrome when we dropped it and owing to the fact that long streamers were attached, it must have been visible as it fell from the machine.

He informed us that the Maharajah of Bharatpur, an Indian State some thirty miles away, owned a number of aeroplanes, among them, he believed, some D.H.9's. We at once felt hopeful again and determined to go over and interview the Maharajah to see if we could obtain help. Ropes were then fixed up round the machine to keep back the interested crowd which had begun to assemble, and Colonel Pattison took us in to Laurie's Hotel, though he

offered to put us up in the mess, but at the same time advised us that we should be more comfortable in the hotel.

We could do no more that day so we rested, and in the evening dined with him at the Club, after which we witnessed a performance by the Russian Ballet in the Club theatre. It surprised me tremendously to see such a performance in the heart of India. The dancing was wonderful and I was informed afterwards that good performances were arranged by the Committee at intervals, great trouble being gone to in order to provide these entertainments.

The following morning Major Adams, the Superintendent of Police, called for us in his Humber car in order to take us out to Bharatpur. The drive was particularly interesting, being through green wooded country which he said was alive with game; countless peafowl flew about in the woods, crossing the roads, parading up and down with tails outspread, screeching horribly the while. In many places these birds are sacred and are therefore immune from shooting.

On arriving at Bharatpur we first called on the Political Agent, Colonel St John, who confirmed the information that there were aeroplanes at Bharatpur, though he did not believe that there were any of the D.H.9 type. He, however, took us to the Palace to introduce us to the Maharajah.

Our arrival was rather amusing. Needless to say by this time, particularly after our experiences at

Delhi in the rain, our clothes were filthy, bedraggled and very much the worse for wear. They were stained with oil and grease from the machine and faded by the sun. Our topees, after the rain at Delhi, had lost their shape, whilst mine had a big dent in the crown, where it had been hit by the propeller once while starting up. Indeed, the helmet on that occasion quite probably saved my life, and I came off with only a lump on my crown and a bad head. Altogether we looked like tramps, and though we had done the best we could to make ourselves presentable, we were not fit to be seen. Colonel St John and Major Adams were at once escorted into the presence of the Maharajah, but when we were about to follow I was gently but firmly taken by the arm by a tremendous bushy-bearded Indian officer and quietly led round to a verandah, where we were told to wait. A second later he returned apologising profusely and ushered us in to the Maharajah also. Apparently misled by our appearance he thought we were the Colonel's servants or mechanics to his car, and did not realise that we also were visitors.

The Maharajah of Bharatpur is a young man of about twenty-four who speaks perfect English, and indeed, was educated in England at Wellington. When he received us he was dressed in Indian robes, and on my telling him my trouble he at once offered us all the help in his power, saying that he had some D.H.9 machines and Siddeley "Puma" engines which had never been out of their cases.

After giving us refreshments he ordered a car to take us down to the aerodrome.

He drove his own Rolls-Royce wonderfully well, and within an hour and a half of our arrival in Bharatpur, a lorry carrying a new engine, mechanics, and tools with a new propeller, had been despatched to Agra. The Maharajah then asked us if we would like to see Bharatpur and drove us all over his city himself, through the fort which had figured largely in British history in India and through the bazaars. It was an interesting experience to be driven by him through his city with all the crowds rising and salaaming to the ground with loud shouts of " Salaam Sahib."

We lunched with Colonel St John and in the afternoon the Maharajah called for us again, this time dressed in European polo kit, in order to take us down to see his cars before going off to play polo. He has a wonderful fleet of motors of almost every type from a Rolls-Royce to a Ford. On my asking him how many he possessed he said that he did not quite know, but somewhere between seventy and eighty of which eight or nine were Rolls-Royces. He, himself is a clever engineer and has designed a large number of gadgets for the cars. On one of them he has fitted in the body an ice cream machine, a washing basin, and hot water apparatus worked from the exhaust, whilst another limousine has a freezing apparatus for cooling down the interior of the car during the hot weather. Others have strengthened chassis and are adapted for cross-country work, for

when the Maharajah goes shooting he likes to drive as much as possible and his cars have to take ditches and climb banks in much the same way that a tank does. When the Prince of Wales visited India he received a magnificent reception at Bharatpur, the Maharajah providing some excellent shooting and getting up a wonderful pageant in his honour.

As we drove away from his cars I saw an elephant and on my remarking that this was the first elephant which I had seen in India, he took us down to see his elephant lines and had the animals perform for us. Some crawled on their knees, others walked on their hind legs, and one made a genuine attempt to climb a tree! Their final effort was to trot round and round in a circle, each elephant holding on with his trunk to the tail of the beast in front of him. They were wonderfully trained and seemed to understand every word addressed to them by their mahouts. One brute was chained up because it was too savage. Malins, of course, wanted to take its photograph from the best possible spot. For a moment the brute stood still and then made a sudden dash at him, thrusting out his trunk in an endeavour to catch him and bring him in and trample him to death. Malins was well out of reach but the sudden dash of the elephant naturally upset him, and he dashed for the wall surrounding the enclosure in record time! Personally I did not blame him, as to be trampled to death by an elephant would be an unpleasant ending to an attempt to fly round the world. Some of these elephants had fought during

the Mutiny. As we left they all saluted the Maharajah by raising their trunks and trumpeting loudly.

We then went down to watch the polo and saw an exhibition of wonderful horsemanship on the part of the Maharajah and his officers. Afterwards we motored home in the twilight.

Whilst we were in the Palace during the morning the Maharajah raised the question of civil air routes in India. He said the greatest objection to their introduction in the eyes of the people was the possible violation of the purdah laws. He himself stated, however, that airmen could not recognise a woman's face from any reasonable altitude, so that he did not think there would be any breaking of these laws through aviation. In any case he suggested that a minimum flying height would meet the case. Coming from one of the highest caste Hindus, I though this a remarkably broad and sensible view to take, though unfortunately it is not common in India.

Whilst we were talking to him a tame leopard cub strolled in and wandered around much as a cat would in England. It appeared fairly tame, though it snarled and spat at me when I offered to stroke it.

Watching the polo was a man with a parasol, to the ferrule of which he had tied a large bunch of flowers, presumably to increase the decorative effect.

On the way home in the twilight we saw many wild animals, including black buck, hares, foxes,

jackals, a mongoose, wild pigs, and many peacocks and parroquets.

Altogether it was an unique day and one which I would not have missed for worlds, whilst in addition we had got which we so urgently needed—a new engine.

CHAPTER XV

AGRA—CALCUTTA

AGRA is quite the most interesting city which we visited in India, the beautiful Taj Mahal and the almost equally beautiful fort with the Pearl Mosque being objects of world-wide renown.

Though this is the description of an attempt to fly round the world, and not a book of travel, it may not appear out of place to say a few words about the Taj. It was erected by the Emperor Shah Jehan to the memory of his Mohammedan wife Arjumand Bano Begum, who afterwards had the title of Mumtaz Mahal conferred upon her. Shah Jehan had two other wives, one Hindu, and one Christian, for each of which he built a separate city, one of them being Fatehpur Sikri and the other Sikandra.

On the death of his wife the Emperor caused the Taj Mahal to be built as her tomb, intending to build a similar mausoleum of black marble on the opposite bank of the river, in which his own body should be placed after his death. The Taj is built of white marble from Jaipur and jewels and semi-precious stones from various parts of India and Persia. The

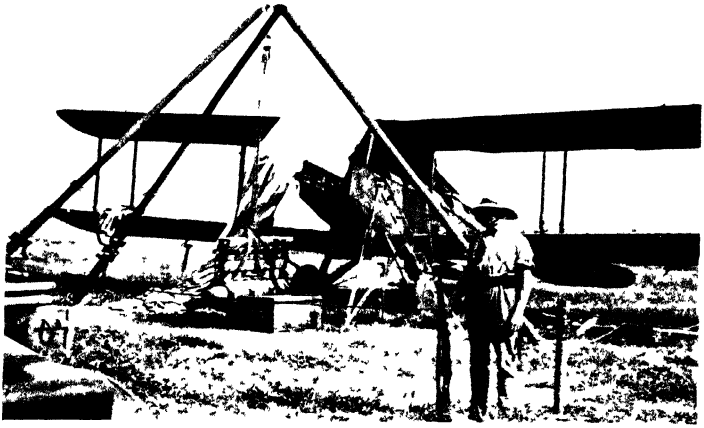
architect, it is said, was an Italian. The erection of the tomb occupied seventeen years, it being completed at the end of 1648, and during this time twenty thousand workmen were employed upon it daily, and the amount spent in building the Taj is stated to have been more than £2,000,000 at the current rate of exchange.

The Taj is surpassingly beautiful both in proportion and in outline; and the effect of seeing it under the bright Indian moon is almost overwhelming.

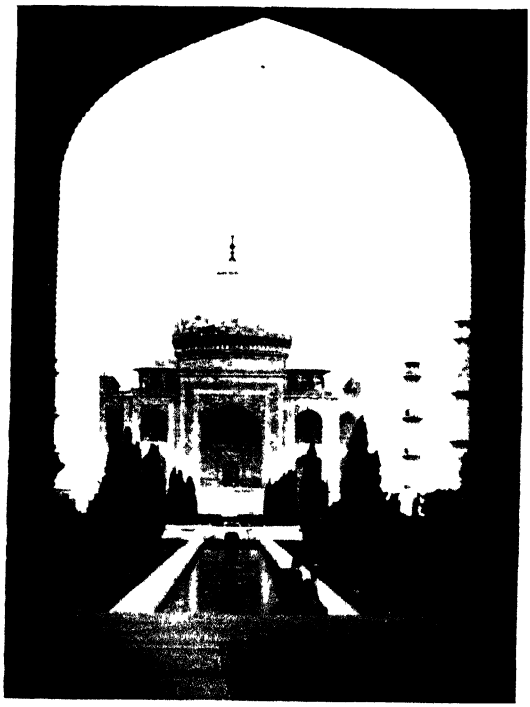
Agra Fort was formerly one of the strongest in India and contains many wonderful and beautiful buildings. Among these the Moti Masjid, or Pearl Mosque, is perhaps the most beautiful, yielding only to the Taj Mahal. It is built throughout of the finest white marble, and was constructed by Shah Jehan during the period shortly after the completion of the Taj Mahal. The Diwan-i-am, a marvellous building of red sandstone, was built previous to this date, and its wonderful pillared arches give one a good idea of the tremendous state which the old Indian Emperors used to maintain. The Jasmine Tower, the Hall of Mirrors, and the very fine series of baths all through the Fort, make the whole place one of the most remarkable sights in India.

We took it in turns to visit these places while the other two superintended the work on the machine which was being carried out by the Maharajah of Bharatpur's mechanics.

Owing to an oversight the new propeller which



Putting in the new engine at Agra



The Taj Mahal

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had also been sent from Bharatpur was placed on the ground in a tent during the night, and in the morning when I picked it up I found it partly eaten by white ants and so damaged as to be useless. We thereupon set to work to patch up the old airscrew by filling in the holes with sealing wax and re-covering the whole with fabric.

It was on the 9th August that the flight finally came to an end as far as I was concerned. I woke up in the early morning with a terrible pain in my abdomen, absolutely tied in knots with what I at once guessed to be an attack of appendicitis. My neighbour in the next room sent down to the military hospital for the M.O., and shortly afterwards I was collected and carried into hospital. They suggested operating upon me straight away, but naturally I was anxious to continue with the flight and not to finish up in hospital. Consequently two days later, after signing various documents saying that I accepted all responsibility for the result of my actions and was leaving hospital against medical advice, I was taken in the ambulance to the station to board a train for Calcutta, having decided to go on and chance matters, hoping that by the time the machine got to Calcutta, I should be sufficiently recovered to carry on.

On reaching Calcutta I at first felt a good deal better and at once began to make arrangements with regard to the Fairey seaplane which was to carry us on from Calcutta to Vancouver.

Hearing that Macmillan and Malins had got away

from Agra the day after I left on my two days' journey to Calcutta, I went down to Dum Dum aerodrome in order to be there when they arrived, but it was not until the evening that they turned up, considerably overdue, and after Colonel Minchin had taken me up in his Avro to fly along part of the route to Gaya to look for them.

It appeared that on leaving Agra they had made good time in very fair weather as far as Cawnpore, where, as the engine was beginning to run a little bit rough, they landed in order to look it over and clean the filters. They then continued through showers to Allahabad, not landing on the aerodrome or on the alternative landing place which had been selected for them, but on the military parade ground, which they stated was a much better place. After a short delay they set off again, intending to reach Gaya that night, but the weather became so bad and rain storms so frequent that they could not recognise the landing here and so descended upon the Churchyard Lawn, which was so soft that the machine promptly stuck in the mud and fell forward on her nose. Luckily Macmillan had switched off the engine, and though the propeller was buried up to her hub in mud, nothing broke. Malins, however, had a narrow escape, a soda water bottle in the back locker being thrown out as the machine jerked forward, whizzing by his head, piercing the fabric of the left lower plane and lodging itself firmly in the ribs of the machine. The bottle was still in position when they arrived at Calcutta.

The following day they did not dare attempt to get off over the soft ground, but local help was provided and sheets of corrugated iron were placed down over the mud so that the machine could be wheeled to the race-course where immense crowds had congregated. Macmillan estimated that there were fully ten thousand people present to witness their departure, kept back by three hundred and seventy police. They then took the air and began dodging storms which they encountered all the way along the route to Calcutta. Indeed, they probably flew a good hundred miles out of their course in order to avoid these terrible monsoon rains, which, as we had found, are capable of destroying a propeller in the air.

When they eventually arrived at Calcutta, after we had received several wires informing us of their departure at various differing times, the only people on the aerodrome to welcome them were Colonel Minchin, two strangers, and myself—rather a poor welcome at the end of the first stage of the journey round the world, though had the machine arrived earlier large numbers of people would have been there to receive it; but all through India we were nearly always behind schedule, and though people turned out to greet us on the first or second days on which we said we would arrive, they began to get tired of false alarms, so that when we did finally turn up, we did not expect to encounter large crowds!

That evening I received a visit from one of the

M.O.'s to inform me that he had been advised from Agra that I was not fit to proceed with the flight and should be in hospital. He thereupon invited me to "come inside," but as I was feeling much better I refused to do this and endeavoured to carry on with the job.

In order to give everyone in Calcutta an opportunity of seeing our machine, which I had to sell by auction to the highest bidder, I obtained permission from the Commissioner of Police for us to fly the machine from Dum Dum aerodrome to the Maidan in the heart of Calcutta. Large crowds, both Europeans and Indians, collected there and we had an extremely enthusiastic reception on this, our "official" arrival in Calcutta. By this time every available inch of the wings and fuselage was covered with signatures and good wishes, whilst over seventy mascots had been tied to various parts of the machine.

That evening by the courtesy of Mr Marks I was allowed to give a short lecture on our flight at the Empire Theatre after which I auctioned the machine which was bought by Mr Hales for one thousand seven hundred rupees.

The previous evening I had been more or less forcibly taken to see one of the military specialists in Calcutta, who stated that I was undoubtedly still suffering from appendicitis and advised an immediate operation. He stated that if I would go into hospital at once I could be operated upon and put on board a ship as soon as my stitches were removed

and make the journey to Japan in the ship's hospital under the Doctor's care, then tranship for Vancouver and pick up the expedition again there.

That night we again auctioned the D.H.9; Mr Hales having given it back as he stated that he thought we would be able to get a better offer. It was then bought on behalf of Mr Birla, the proprietor of the *Empire Mail* for two thousand rupees, but subsequently, whilst I was in hospital I received an offer of two thousand five hundred rupees from a firm in Ceylon, and this getting to the ears of Mr Birla, he at once sent me a cheque for an additional five hundred rupees, saying he did not wish me to lose through having to refuse an offer higher than his own. A most sporting action on his part. He also declared his intention of presenting the machine to the Hindu University of Benares, so that there is a hope that the first machine to attempt the world flight will be preserved for some years to come.

My diary entry for the 16th of August seems full of hospital—" The whole day seems to have been spent with doctors. First the Port Doctor, Dr Elmes, told me that he was responsible that no unfit person should leave the Port, from which we intended starting in the Fairey seaplane, and that in his opinion I was unfit to go. He told me that he had made arrangements to get me off to Canada in ten days' time if I would be operated upon to-morrow. Eventually it was arranged that Colonel Conner, I.M.S., another doctor and also

the Medical Officer to the Air Board, should examine me in the afternoon, which they did, advising an instant operation, saying that it was not fair to my wife to go on as I was. I therefore arranged to go into hospital on the understanding that I should be shipped on a boat leaving on the 26th or 27th, if things took their normal course. That would get me to Vancouver about the 27th September in time to rejoin the machine there, by changing boats at Yokohama. In the evening I was moved to the Woodburn Ward of the Presidency General Hospital, in order to be operated upon the following day."

During the time I had been in Calcutta I at first felt fairly well after my attack at Agra, but gradually got weaker, until during the last two days I had almost continual attacks of pain, with periods of sickness. When weighed on entering hospital I found that I had lost over a stone and a half since leaving England.

As things turned out I was not operated upon the next day, but the following day Lieutenant-Colonel Waters, I.M.S., in command of the hospital, took out my appendix, which was afterwards presented to me in a Bovril bottle!

Whilst in the operating theatre prior to giving me the anæsthetic the Colonel suddenly demanded the whereabouts of our black cat mascot "Mike," and at once sent a nurse to my ward in search of the animal which was then fixed up in front of the operating table.

I am told that my remarks under the anæsthetic were few but to the point. I made some remarks about "when we get to Delhi," and then relapsed into silence; then after a slight pause a very hearty "damn," followed by what the nurse described as the most appalling string of language she has ever listened to! The sister in charge left the operating theatre at once, but I certainly think the events of our flight, culminating as they did for me in hospital, were ample excuse for anything that I might have said either under the influence of an anæsthetic or without it.

I was afterwards presented with a certificate which stated that the trouble was due to exposure and insufficient and unsuitable food during the flight.

The following morning early I heard the hum of the Fairey seaplane as Macmillan and Malins set off on the next stage of the journey.

During the time that we had been crossing India, Major Kemp, helped by Flight-Sergeant Butcher, Corporal Clarke, and an engine mechanic of the R.A.F., had, by the courtesy of Air Commodore Webb-Bowen, erected the Fairey seaplane for us, so that when we arrived there was comparatively little to do except test the machine and get off. Unfortunately one of the floats sprang a leak and subsequently various minor alterations were made in the rigging to suit Macmillan's requirements, though later Flight-Sergeant Butcher stated that the rigging had been altered back to what it was

when Major Kemp had finished. Compasses had to be swung, navigational instruments fitted, and other details attended to.

Several attempts were made to take off on a trial flight before the actual departure of the machine, but owing to the fact that the machine had to be launched at full tide and also the crowded state of the Hooghly, it was difficult to work these trials in, and eventually Macmillan and Malins left without having actually tested the machine in the air, intending to cruise round over Calcutta when they got off and if all was well to depart on their journey. I had emphasised to Macmillan when handing over the command of the expedition to him, that it was essential that he made all possible speed to get on. Colonel Broome was waiting in Japan and the weather conditions would get worse with every day's delay. I not only urged him to hurry on in every possible way but told him that in case of necessity risks must be taken, though naturally as he was in command, he would use his own judgment.

Though actual tests in the air were not made before leaving, the engine was thoroughly tested on at least three occasions, and the machine was taxied about on the water on at least two occasions, so that Macmillan was perfectly justified in taking off with the machine as she was, and he found her perfectly good once she got into the air. It was only after they had left that I heard that by an oversight the machine did not contain the emergency rations of Bovril and chocolate which we had always carried.

I was not present during the trials of the machine and filling up of the tanks with petrol, neither did I witness the departure. I naturally was unable, myself, to see in what condition the machine actually was when she left. All I know is that the sound of the engine as she passed over the hospital the day after my operation was perfectly steady and regular, the real note of the "Eagle VIII."

CHAPTER XVI

THE BAY OF BENGAL

I CANNOT do better than reproduce Captain Macmillan's own story which he cabled to the *Daily News* from Chittagong in order to describe the events which happened after the machine left Calcutta.

CHITTAGONG.
Saturday.

" We cured the float trouble at Calcutta on Friday, 18th August, caulking up a small hole in the step compartment. The machine was left in the water overnight, and the float had not taken any appreciable water by Saturday morning.

" Then we discovered the starboard float bulkheads interleaked, and to make an absolutely sound job of this would have meant weeks of work and virtually a new interior. We considered it was all right for harbour work, and to avoid delay, decided to take off and try the ' bus ' in the air with a fifteen minutes' test flight round Calcutta, and then, if she was O.K. to proceed direct to Akyab.

" Weather conditions were bad—heavy monsoon

storms, torrential rain—but by flying at five hundred feet we avoided detached storms and kept the course, reaching the sea exactly on the compass line for Akyab.

" This gave the opportunity to check speed, and we found we were only making sixty miles an hour. Weather was unsuitable for flying above the clouds. A rapid calculation showed us that petrol supply was just enough to allow us to reach Akyab, provided we could keep on a direct course and head wind did not increase.

" The conditions ahead, however, baulked us of a straight course, and we turned over the mouth of the Bungarah River for Chittagong, so as to keep touch with the islands. While flying at four hundred feet engine stopped, apparently owing to an air lock in the petrol system. The emergency gravity tank failed to cure defect, and we landed in a rough sea. At once we cast out a sea anchor to keep her head to the wind, and proceeded to examine the engine with seas breaking over us.

" One huge sea swept us from stem to stern, and smashed one rib of the elevator.

" In a few minutes we managed to start the engine up. Malins balanced himself on one wing to help turn the machine out of the wind, and we taxied back in the direction of Lukhidia Char.

" The sea was too big to do more than taxi slowly, but with the wind behind us we rode the ' jabble ' more easily.

" Near Lukhidia heavy sea ceased, and on a shoal

about one mile from the island the floats rested on the mud bottom in about three feet of water.

"We looked round, and surveyed the wide expanse of water, and the low island of Lukhidia a mile away to the north. We saw two native huts built on piles jutting out of the water near the island, with large herds of buffaloes around them. We waded around the 'bus,' examined the engine thoroughly, and confirmed the theory of airlock, as we found no mechanical defect, and the engine had been running splendidly until the instant failure.

"The floats were resting on the mud with the tail high in the air and difficult to reach. Malins, sitting on my shoulders, and his wet feet plastering me with mud, drilled two holes through the elevator and bolted two strips of three-ply wood at top and bottom over the broken rib.

"This operation took time, as frequent rests were necessary. Malins is no bantam weight.

"We covered the engine and cockpits with fabric and an umbrella—the last exactly fitting rear cockpit—for heavy rain came down at intervals. The tide was ebbing, and when finished we were on land. There was grass everywhere, and the 'bus' was sitting squarely in a slight depression. The grass gave the impression of solid land, but all the time we were splashing about in a foot of sticky mud.

"The natives avoided us scrupulously. Apparently we were unsafe 'devils.' They watched us, but would not come near the machine.

"Our supplies were two gallons of drinking water, one tin of toffee,[1] one tin of cigarettes, a little tobacco, box of cigars and three boxes of matches. Each morning at Calcutta we were up so early and back so late that we were unable to purchase provisions. We left Calcutta too early for breakfast, having only tea and toast.

"Just before dark two natives ventured over, carrying a small wooden jar of milk. We gave them cigars and carried on a conversation in English and the native language—all quite unintelligible on either side.

"A storm then blew up and we 'rigged' our umbrella. The natives went away.

"Night fell and the rising tide began to lap the floats. We didn't know whether we should drift or not, so kept watch between rainstorms. Then we found the bus didn't float by about one inch, so we lay down side by side in the rear cockpit, my head resting on the periodic compass, and Malins' on one of the sheets. Our legs were entwined around the bracing wires. The umbrella was secured by a pair of trouser braces.

"We slept uncomfortably. Rain slashed down and penetrated seams in the fuselage and the umbrella. We were up at dawn. The day passed in storms of wind, and rain. Did odd jobs on the machine between storms.

[1] This had been given me at Allahabad, when I passed through by train, to carry to Princess Ma Lat of Limbin at Rangoon.—W. T. B.

" About midday the natives came out in sampans with milk for each.

" That night we unshipped the rear seat and tied it to the top bracing of the fuselage, and slept a little more comfortably, although torrential rain was almost continuous and the cockpit was flooded.

" On Monday the rain continued and the wind was blowing at sixty miles an hour. We had only one opportunity of getting off each day and this was for one hour at high tide.

" About noon on Monday an English-speaking native came in a sampan from the village, sixteen miles away, and through him we despatched a cable to Calcutta advising our position. The telegraph was twenty-five miles away.

" For the third time we examined the floats. The port float was quite sound, but the starboard float was quite water-logged. All compartments leaked. We pumped and baled and worked until dark, and got the water down an inch in each compartment. We white-leaded all fuselage seams where rain came through, removed stays of the centre seat and swung it up, removed the compass and packed all kit up in the fuselage. At last we lay down on our already sore hip bones and fell asleep, after tightening another hole in our belts.

" The third night at Lukhidia passed. In the morning, after the night tide, we examined the starboard float and found that it had not taken in much more water. The three days' south-easterly gale had blown itself out and the only irritant was that

we were forced to await the tide before we could get off for Chittagong and our first square meal since Friday night.

"We had more than ample petrol to make Chittagong, so hitched another hole in our belts, laughed at each other's unshaven faces, wound up the engine joyfully and took off at twelve-ten with Malins photographing the little known spot with its knot of natives sitting in sampans or standing knee deep in water—the last of a priceless kinematograph record of one of the little known spots of India. Like the others, we fear it has gone or will be unuseable.[1]

"We took off into the wind, the Fairey rising like a bird between the herds of buffaloes, the engine pulling well as we rose on to our direct course for Chittagong, leaving Sandwip away to north-north-west.

"After about fifteen minutes the engine began to miss fire. We began to lose height from six hundred feet to three hundred feet.

"Saw a steamer about eight miles away. It was too far. Bursts of throttle in the attempt to cure the apparent symptoms of water in the petrol were useless. We glided down and landed on the sea, making an excellent slow landing.

"No sight of land anywhere. There was steamer smoke going away on the horizon, and a strong tide was beginning to run. We put out the

[1] The kinematograph record from Croydon to Calcutta is, however, complete.—W. T. B.

sea anchor and tried fixing the engine, but the appearance of the starboard float made us decide to attempt to taxi to Chittagong, about sixteen miles away, rather than spend the time on the engine with the likelihood of finding that when ready the float carried too much water to take off.

" These fears were well founded, as it turned out. We started up the engine again and proceeded slowly towards Chittagong with the engine spitting back into the carburetters.

" After an hour the engine picked up once more, and the smoke of another steamer appeared in the distance. We tried to take off to get to her to be towed to Chittagong, but the starboard float was too water-logged. Our only chance was to taxi to Chittagong under our own power.

" A six-knot tide was sweeping southward and with Malins standing out on the port wing to balance her, we were still out of sight of land when the petrol gave out. It was three o'clock and she had a perilous list to starboard.

" I switched off, shut off all cocks to make the tanks watertight and buoyant, and climbed out on the plane beside Malins. We waited and watched.

" It was impossible to bale out the leaking float. We couldn't get out to it without risking turning the bus over. If we weren't picked up we knew we should turn turtle and be left without drinking water, so at intervals I clambered carefully down into the cockpit and brought up the drinking water in a cup and cigarette tin.

" We had one gallon left when the petrol ran out and finished that all but a few drops. Brought all kit and records and logs on to plane, with kinematograph camera and film bag, to assist our weight and to save records if possible.

" We tied a spare shirt on to the topmost strut, rigged a sail of canvas between the struts, and grinned at each other. Saw smoke far away, and thought it was coming up. Gradually faded away.

" The light began to fail, and the starboard lower plane was awash up to inner struts.

" At the last moment we jettisoned everything weighty keeping only records. Night fell—no moon, but fitful starlight between the clouds, and the shimmer of water glowing phosphorescent below our feet. No lights anywhere, no sound, save the wash of running waves and the call of sea-birds.

" Put the remaining matches into a shaving tin with the safety box strikers. I smoked a cigar as we swung above the sea. We had our last drink at a quarter to nine. It was obvious that the old bus couldn't stay upright much longer. The angle at which we sat above the heaving water was ridiculous.

" The tail float was submerged and she was going down by the stern. Then the starboard planes were awash. With each succeeding wave she tilted ominously. I slithered down the wing to the port float and crouched on the nose of it to keep the tail up. Malins remained on the wing tip to preserve the balance.

" Two unsteady heaves and I sang out.

" ' She's going over, old man. Come down here.'

Malins then called out :

" ' Am going to fire our last Very light.'

" As he scrambled down the steepening slope of the rising wing, the distress signal light soared aloft and illuminated a circle of water around the sea-plane. Waves reflected the brilliant light and the horizon became a black wall.

" Then the stars faded, and very slowly the old bus heeled backward and sideways like a sick man twisting himself over on his bed.

" She remained with the port planes projecting vertically out of the water for a few minutes, resting on the sound float and empty petrol tanks.

" We were clinging to the side of the topmost float as the waves washed on it. Stars peeped out again.

" Five minutes later the bus lurched on a wave. Under-tow caught her lower planes. As she turned we clung to her and climbed over the side of the float until she was upside down, and we were sitting on the bottom of the float.

" Half an hour later the stars were blotted out by a monsoon rainstorm which broke over us, soaking us to the skin from head to foot. As the storm cleared we saw a distant lighthouse glimmering faintly. We picked up the North Star and found that the light meant land to the east, and that we were drifting south to the open sea.

" Then the tide began to turn and a heavy

'jabble' arose. It broke over our floats and ourselves and we rocked and swayed to it. The floats gave forth ominous sounds as waves rushed at them. They seemed too fragile to stand the racket.

"More rain, and the distant lighthouse gleam faded. Around us a heaving waste of water ran eight to ten feet high.

"Some trick of the tide caught our uncontrollable craft and our tired eyes picked up land. Slowly it grew larger. We drifted in unable to help or hinder. Below us were sharks; near the land crocodiles. Should we get near enough to ground our inverted top hamper and signal someone ashore or risk swimming for it? Trees stood out distinctly. They were less than an hour ahead of us. Then our hopes were shattered. An undercurrent caught our submerged planes and fuselage, and faster than we neared the land we backed away from it. Quickly it faded, and our hopes sank.

"My last smoke, a somewhat cracked cigar, came out, and was lighted, thanks to the shaving-tin keeping our matches dry.

"In turn we made attempts to get at the sea anchor. Malins' idea was to use it to pull ourselves in to shore. We couldn't get it. Apparently it had gone in the night. We tried to get some of the metal panels from the sides of the fuselage, but could not stay long enough under water to wrench them off.

"The sea anchor and impromptu paddles being unobtainable, we decided on a sail, but all the fabric

we could recover was from the tail of the fuselage—a strip about two feet wide and two yards long. This we kept, but we could not sail, paddle, or pull ourselves ashore. We were utterly helpless, at the mercy of the wind and tide.

"The Indian sun is a treacherous friend. My flying topee and socks were washed overboard in the early morning, and for the first part of the day I sat with my tunic over my head. Later I tied a handkerchief around my hair and trusted to luck. Our feet were already badly burnt, and the only way to keep them cool was to keep plunging them into the sea at frequent intervals—a temporary remedy that meant the trouble growing steadily worse.

"Both were suffering from exhaustion, from lack of food, and our physical efforts. Thirst was beginning to dry our lips and tongues.

"We hoped the evening tide would drift us near enough to the shore to enable us to get off, but suddenly we noticed an alteration in the trim of our craft. She was swinging round in circles. Round and round we plunged, water pouring over us, hanging on tooth and nail, and soaked by the repeated wash that broke completely over us. Evidently we were in a tide whirl.

"We saw the tail float come up with details of wood, wire and fabric, and we realised that the back of our fuselage was broken. From early morning small pieces of wood had been breaking away from the machine and floating off ominously over the swells.

" Night fell again. Lurid lightning lighted up the sky and ragged clouds and showed us the heaving waters. The distant gleam of lighthouses marked the far off mainland. The seas broke continuously over our gradually disintegrating bus, pounding the floats, and threatening to tear them apart. Our empty petrol tanks below were our salvation as long as they stood up.

" Suddenly came the gleam of navigation lights. We stood up on our rocking float, and crouching together took pieces of paper from our pockets—letters, anything that was not too wet to burn—and huddling ourselves together as a shelter from the wind, with shivering fingers struck our still lightable matches one at a time, screwing the tin up tightly as each was removed until at last the damp paper caught alight.

" Its feeble torch glowed smokily in the darkness. Our small ·25 calibre automatic pistols cracked out at the same time.

" Malins was almost washed overboard, but by clinging to each other we held on, and he half scrambled and was half pulled back.

" The ship, evidently a wind-jammer tacking against the wind, came up to within three-quarters of a mile of us, and then changed course on the other tack.

" She faded away, grew brighter, then faded completely.

" All our paper had gone, and no method of night signalling was left to us.

" We settled down flat on the floats until daylight, and hung on.

" Wet through and shivering, we massaged ourselves to keep a little warmth in our legs and bodies, and huddled close together. The lights of our island came closer, but never close enough.

" Dawn broke through the wonderful clouds in shafts of blinding light, and we saw the island of Sandwip about four miles off, and the flood tide just coming up to carry us there.

" But again we suffered for our optimism. Another trick of tide carried us away from it, until it was only a blur on the horizon.

" The disintegration down below was still proceeding in the ' jabble ' around us and the floats, rocking against each other, made us wonder how much longer she could hold out.

" Our mouths were parched, our stomachs empty and our bodies soaked.

" The sea calmed a little and a slight shower fell. That past, we dived below and found that the planes were still holding and the fore part of the fuselage still intact, with the petrol tanks still buoyant.

" Very slowly we drifted towards Sandwip. Our rubber bilge pump line came to the surface, and we rescued it. With the metal end and the fabric we made a flag of distress and laid it handy.

" Malins could hear beautiful instrumental music and I the sound of the pipes playing laments in the distance. We did not mention this to each other at the time. We were each afraid that . . .

"Suddenly we saw a sail away down south. Was it coming up? Yes, slowly.

"A wind-jammer. Soon its yards appeared. Gradually it came up. Standing up we could see the hull. It was all we could do to remain upright. We waved our distress flag, signalling the international S.O.S. The brig was coming straight towards us. She must almost run us down. She could not fail to see us.

"Why she was changing her course? Surely not. She was. She turned off not half a mile away and steadily passed us within half a mile, with two men looking at us from the poop.

"God, what inhumanity! Surely it could not be.

"Malins, frantically waving, slipped and fell half overboard, cursing at his hurt, cursing the brig and her crew, and writhing with pain.

"Standing on our rocking float, I waved and halloed and fired pistol shots, while Malins in his pain poured water over my feet. Without this I could not have continued standing upright.

"Steadily she swept past, a native brig. Two men on the poop ran forward as she was abreast of us. They saw us, undoubtedly, and were possibly terrified of ghosts and visions. But in mercy let them never know what we felt like.

"Three miles from Sandwip, the trees standing up close, the tide began to turn and we began to go out again.

"'Not another night,' we prayed. Even if she

did hang together, could we? We doubted it.

" Then we found our planes had stuck on a mud shoal. The tide ran past us and we remained stationary. We decided that if we stuck there until slack tide we would detach one of the floats and paddle ashore with two pieces of wood we had rescued.

" This was no easy job. It meant working under water to detach eight very tightly secured bolts and nuts, and removing four side pieces of metal from below the water line. There was also the risk that this operation might not be successful, but result in the complete submerging, or breaking up of our craft. Fortunately we had slipped some tools into our pockets before we turned over and these we still had—rusty, but serviceable.

" Rapidly the tide ran past us, and we swung slowly to it as though on moorings. Anxiously we eyed the island. The mud, rising to the surface around our floats, told us we were holding, even though bumping on the waves.

" Three weary hours passed while the sun beat down, and we lay each on one float with spray breaking over us and our eyes on the delectable land.

" The main strength of the tide past, we got out our tools to get to work. Stripping off our clothes and removing our cork lifebelts from our aching shoulders, we had just begun when, heavens alive! the miracle happened.

" A river launch was coming up half a mile away. Was he going past, too? Surely not. This was no superstitious-officered native craft.

" Malins waved our flag and I waved my trousers overhead. The launch passed. We could see someone on the bridge above the awning.

" ' Ship ahoy! Ship ahoy! ' we shouted from our parched throats.

" Hurrah! They slowed, swung, and turned towards us. Slowly they came up alongside and knew us for what we were.

" It was the launch *Dorothea*—Lieutenant-Commander Cumming—of Chittagong on the way to Lukhidia to assist us.

" ' How much water is there? ' he shouted from the bridge.

" ' Fifteen feet.'

" ' Can I come alongside? '

" ' No, your under-hamper will foul you.'

" ' Right. I'll send the dinghy.'

" Malins and I shook hands as the dinghy pulled towards us.

" We took our only memento with us—the flag of distress—and in a couple of minutes were pulled up on to the launch.

" Lieutenant-Commander Cumming shook us by the hands.

" ' Thank God I had another look at you,' he said. ' I thought you were fishing stakes and the serang said you were only native fishermen. I kept

you under observation, and saw that you were waving.'

"We staggered below on our bad feet, lay down, had some water and food, and Cumming tried to tow the bus in, but in the night the tow rope parted while Malins and I slept, unconscious of the loss."

CHAPTER XVII

CONCLUSION

I HAD expected to receive news of the arrival of the Fairey seaplane at Akyab or Rangoon on the evening of the 19th August, the day on which she left Calcutta, but no news arrived, and as nothing turned up in the morning I cabled to Rangoon and Akyab for information.

Late in the afternoon I received a cable from Major Kemp who was then in Rangoon, saying :

" Understand Macmillan returned Calcutta after meeting storm Chittagong. No other news Akyab or here."

It was perfectly obvious that the machine had come down in some out of the way spot, and I could only hope for the best.

Mr Nixon, the News Editor of the *Statesman*, who helped me tremendously in many ways in Calcutta, came in to see me that day saying that he had received a letter from an Indian seer who stated that my operation and detention in Calcutta would prove a great blessing for the other two would

meet with a miserable death. This was not a cheering message in the absence of news of the machine.

I had a message sent to Doctor Elmes, the Port Doctor, Captain Harold, the Port Officer, and also Colonel Minchin, all three of whom had done a tremendous lot for us in helping to get Macmillan and Malins off in the Fairey. Indeed, I do not know what we should have done without the help of these three officers and Mr Nixon. It must be remembered that I was incapable of doing anything personally. I had only been operated upon the previous day but one, and was still running a fairly high temperature and was forbidden by the Doctor to receive any visitors. However, under the circumstances, when it became obvious that the machine was lost, he gave me permission to see the four gentlemen whose names I have given, in order that they might keep me advised as to the result of their inquiries, and so that I could give suggestions for their guidance. Personally I could do nothing at all and I wish to emphasise this fact, as in some quarters the blame has been laid on me for not causing a tug to be sent in search of the stranded machine before it actually did go.

All during the 21st no news was received, though I was informed that instructions had been sent out from Calcutta at my request on the 20th both by wireless and cable, asking that vessels should be sent out from Chittagong, Akyab, and Rangoon to search the coasts and inlets.

It was not until 22nd August that I received any news. Colonel Minchin then came to see me about eleven a.m., bringing with him a telegram he had received that morning.

"Down one mile south of Lukhidia Char. 22.15.91.12 engine failure. All O.K. now. Petrol short owing to heavy adverse wind. Advise Chittagong keep look out for us from high tide Tuesday and obtain petrol. Advise all concerned. Living on milk supplied by natives exchange cigars. Cheerio. Mac and Malins."

This was, of course, splendid news, and we all felt immensely relieved. The 22nd August was Tuesday and therefore it was obvious that Macmillan hoped to reach Chittagong that day.

I inquired from the authorities the time of high tide at Chittagong and finding that it was already full tide there, wrote out the following cable to the Port Officer at Chittagong.

"Macmillan, Malins leaving Lukhidia Char to-day for Chittagong. Please obtain petrol and cable me arrival."

This message I handed to Colonel Minchin within a quarter of an hour of his bringing me Macmillan's message and he promised to have it sent off at once. It is a pity that Macmillan did not cable me direct

instead of sending his news to Colonel Minchin, who, though he gave us great help, apart from the friendly interest he took in the affair, was not connected with the organisation of the flight, for had it been sent direct to me it is possible that a certain amount of time might have been saved. Macmillan, however, probably thought I was incapable in hospital. As it was the messages which had been sent out on the 20th had caused the authorities at Chittagong to send out the tug *Gekko* at five a.m. on Tuesday morning to look for the missing machine on the Calcutta-Akyab route. The tug returned without having sighted the Fairey, for it must be remembered that a seaplane is a very small thing to search for in the Bay of Bengal.

In hospital I naturally expected to receive news of the seaplane's arrival at Chittagong on the evening of the 22nd, but no news came through then, or on the 23rd. Meanwhile I was sending messages to the Port Authorities at Calcutta and also at Akyab and Chittagong, urging that everything possible should be done to find the stranded machine, for by this time I knew that Macmillan and Malins would be in a bad state.

On the 24th August I received a cable from the Port Officer at Chittagong to say that the tug was being sent out at one o'clock, and I could then only lie still and wait for news. At last on the 25th August, six days after the Fairey machine had left Calcutta, I received the following cable from Chittagong.

"Picked up at sea off Sandwip Thursday evening after three days and two nights on floats of overturned machine, riding heavy seas without food and water. Machine abandoned total wreck. In hospital suffering from exposure. Full details later. Cheerio. Mac and Malins."

At the same time the *Statesman* received a message from Chittagong from Macmillan giving a few more details.

The *Dorothea*, commanded by Lieutenant-Commander Cumming, picked up the machine on the evening of the 24th, after Macmillan and Malins had been afloat for three days and two nights.

The trouble with water in the petrol would appear to be due to the fact that the last tank was filled direct from the cans and not through a filter, and the majority of petrol tins in the East contain a good quantity of water.

Hearing that the seaplane was a total wreck I realised that owing to the late season of the year we could not get a new machine from England in time to continue the journey before impossible weather conditions set in. I had, therefore, no choice but to temporarily abandon the flight.

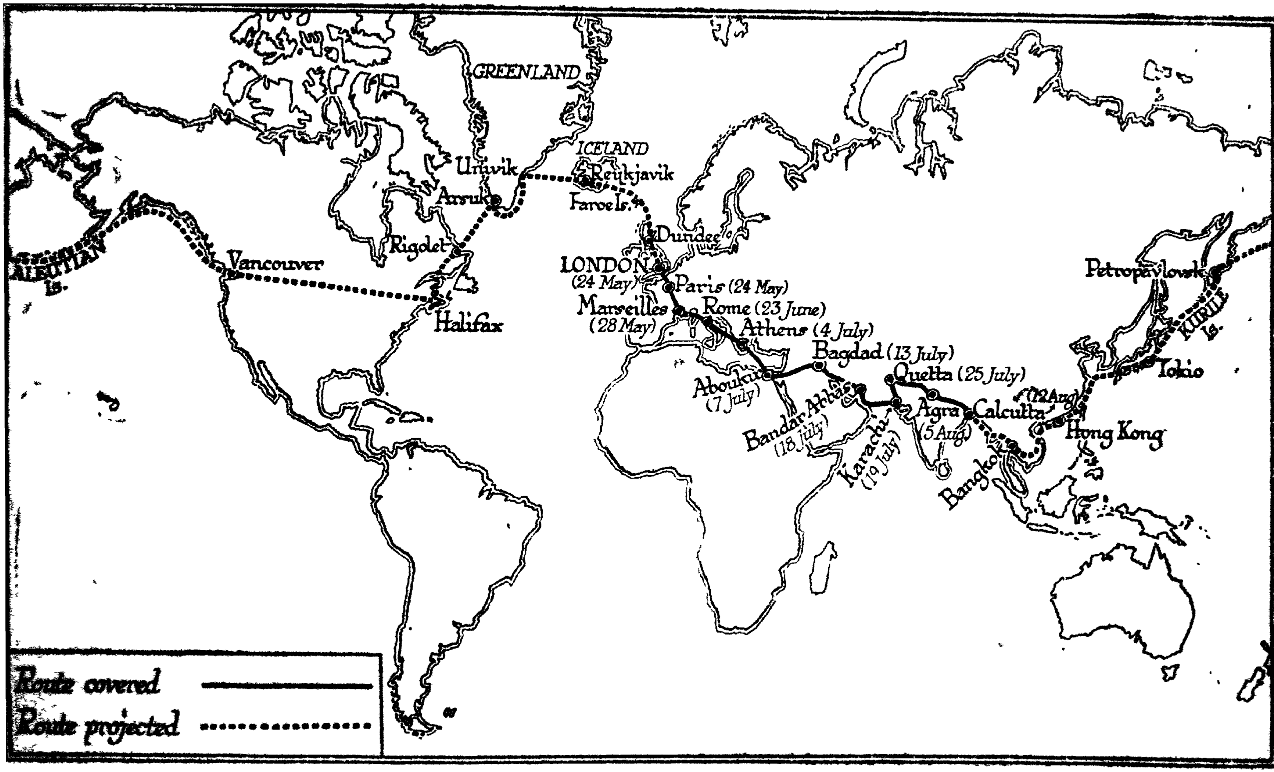
Macmillan and Malins after a couple of days in hospital at Chittagong arrived back in Calcutta on the 30th August, looking comparatively well after the terrible experiences which they had gone through. Both were limping owing to swollen feet, and Malins had both arms bandaged on account of

ulcerated insect bites. They were perfectly cheerful and quite willing to try again if we could raise the money for a further attempt.

We arranged to travel home as soon as possible in order to put the film of the flight on the market, hoping that the profits would be sufficiently large for another expedition to be equipped. Macmillan and Malins accordingly sailed from Calcutta in the s.s. *Nellore* which should have sailed some little time before I left hospital, as they wished to have the long sea voyage right round to London in order to see Ceylon and return to England thoroughly recovered from the effects of the flight. For my part I hate the sea and left Calcutta for Bombay on the 7th September in order to catch the s.s. *Plassy* which sailed for Marseilles on the 9th. I left hospital twenty days after my operation.

It is no good regretting that the flight did not prove successful, for no one can say what element of luck may be against him; and I think that our disasters may fairly be attributed to sheer bad luck rather than to any fault in the organisation of the flight. We travelled nearly eleven thousand miles by air, flying through the Sahara and Arabian Deserts and along the Persian Gulf and through India at the hottest part of the year. We crossed India during the height of the heaviest monsoon known, despite the fact that this was considered impossible. It was a wonderful experience which has brought with it knowledge which will be of use to us should we be enabled to start again; and as

none of us are deterred by the hardships we endured, we all hope that we may be able to have a second attempt in order that a British machine with a British crew may be the first to get round the world.


GREENLAND
ICELAND
Reikjavik
Faroe Is.
Angmagssalik
Ivigtut
Cartwright
Halifax
Vancouver
ALEUTIAN Is.
Dundee
LONDON (24 May)
Paris (24 May)
Marseilles (28 May)
Rome (23 June)
Athens (4 July)
Aboukir (7 July)
Bagdad (13 July)
Bandar Abbas (18 July)
Karachi (19 July)
Quetta (25 July)
Agra (5 Aug)
Calcutta (12 Aug)
Bangkok
Hong Kong
Tokio
KURILE Is.
Petropavlovsk
Route covered
Route projected

APPENDIX I

DETAILED ITINERARY OF PROPOSED FLIGHT

STAGE I

Croydon			Kasr Azrak .	54	miles
Paris . .	250	miles	Ramadie . .	393	,,
Lyons . .	243	,,	Baghdad .	62	,,
Turin			Basra		
(Mirafiori) .	147	,,	(Shaibah) .	281	,,
Rome			Bushire . .	208	,,
(Centocelle)	327	,,	Bunder Abbas	355	,,
Naples			Charbar . .	300	,,
(Capodichino)	118	,,	Karachi . .	402	,,
Brindisi			Nasirabad .	475	,,
(Marmorelle)	170	,,	Delhi . .	225	,,
Athens			Allahabad .	364	,,
(Tatoi) .	380	,,	Gaya . .	200	,,
Suda Bay .	172	,,	Calcutta		
Sollum . .	280	,,	(Dumdum) .	275	,,
Aboukir . .	291	,,			
Ismailia . .	150	,,	Total	6,352	miles
Amman . .	230	,,			

STAGE II

Akyab	334 miles	Simusir	
Rangoon	322 ,,	(Kurile Isles)	394 miles
Bangkok	357 ,,	Petropavlovsk	510 ,,
Pnom-Penh	332 ,,	Komandorski Isles	
Saigon	130 ,,	(Bering Isles)	346 ,,
Fu-yen	245 ,,	Attu	288 ,,
Hue	246 ,,	Tanaga	392 ,,
Hai Fong	307 ,,	Dutch Harbour	
Kwang Chau	237 ,,	(Unalaska)	512 ,,
Hong Kong	254 ,,	Unga	255 ,,
Amoy	292 ,,	Karluk	
Fu Chau	136 ,,	(Kadiak)	294 ,,
Hang Chau	290 ,,	Wrangel Isle*	865 ,,
Shanghai	104 ,,	Bellabella	345 ,,
Nagasaki	507 ,,	Vancouver	298 ,,
Kobe	337 ,,		
Tokio	272 ,,	Total	9,899 miles
Kamaishi	274 ,,		
Nemuro	334 ,,		

* One or two intermediate landings to be arranged by Broome.

STAGE III

Fernie . .	362 miles	Detroit . .	233 miles
Calgary (High River)	112 ,,	Hamilton .	174 ,,
Regina . .	418 ,,	New York .	355 ,,
Winnipeg (Victoria Beach)	336 ,,	Montreal .	342 ,,
Kenora . .	120 ,,	Ottawa . .	105 ,,
Port Arthur .	378 ,,	Quebec . .	238 ,,
Chicago . .	445 ,,	Total	3,618 miles

STAGE IV

Dalhousie	245 miles	Faröe Isles	490 miles
Natashkwan	255 ,,	Orkney Isles	
Rigolet	315 ,,	(Kirkwall)	260 ,,
Arzuk	622 ,,	Dundee	176 ,,
Fredriksdal	152 ,,	London	365 ,,
Univik			
(Upernarsuak)	317 ,,	Total	3,820 miles
Reykjavik	623 ,,		

Stage I.	6,352 miles
,, II.	9,899 ,,
,, III.	3,618 ,,
,, IV.	3,820 ,,
Grand total	23,689 miles

APPENDIX II

The following articles were supplied for use during the trip by the following firms:

Aircraft and engines	Aircraft Disposal Co., Ltd.
Wireless & Navigational Instruments	The Air Ministry.
Compasses	S. Smith & Sons, Ltd.
Maps	Geographia, Ltd.
Chronometers	James R. Ogden & Sons, Ltd.
Bovril	Bovril, Ltd.
Chocolate	Cadbury Bros., Ltd.
Fishing Tackle	Hardy Brothers, Ltd.
Shoes	Bolsom Brothers, Ltd.
Waterman Fountain Pens	L. G. Sloan & Co.
Pipes	Weingott & Son.

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