

A Pilot's Story

GEORGE STEAD DFC

A Pilot's Story INTRODUCTION

Encouraged by Richard Riding, editor of Aeroplane Monthly, my father wrote his memoirs during the 1970's when he and my mother were touring Europe in their car and caravan. He sent it to several publishers and although well received, was turned down because they felt it would be a limited market. When he returned to New Zealand in 1979, he left me a copy together with a suitcase full of his papers, all of which have languished under various beds since then.

When my brother went to live in New Zealand, he passed on to me dad's photograph album together with his log books and I began looking through the photos matching them to his story with a view to making a documented photo album for family members. Eventually this led me to decide to privately publish my father's book as he had so wished.

Scanning and digitising the poor quality carbon copy failed to produce anything useable so a complete re-type was needed, which I completed in late 2018. My daughter Charlotte then spent long hours correcting my father's grammar, punctuation and spelling together with the mistakes introduced during the re-typing. Now, a year later the book is finished and my father's hopes realised.

Richard Stead December 2019

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Published in Great Britain 2020

Publisher: Richard Stead Web: www.cdarts.co.uk Tel: (+44) 01626 367 865

ISBN: 978-1-5272-5865-5

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FOREWORD

CAPTAIN GEORGE GATONBY STEAD DFC 1911 - 1985

Captain George Gatonby Stead was born on a sheep station in Hawkes Bay, New Zealand on September 8, 1911. He was educated at Christ's College, Christchurch from the age of 14 and soon became interested in mechanical things. A relative, who happened to be the Commanding Officer of Wigram Air Force Base, introduced George to aviation by giving him his first flight. Aviation, coupled with a love for all things mechanical lured George away from college and he learnt to fly at a newly-formed flying club at Hastings. He soloed after only eight hours dual, but had to wait until his 17th birthday before he could take his flying test. At the time he was the youngest pilot in New Zealand.

Desperately wanting a career in the RAF, George sailed to England aboard the Mataroa in 1929. He was accepted into the RAF but first took his "B" licence (commercial pilot's licence) at the London Aeroplane Club at Stag Lane in north London, home of the embryo De Havilland Aircraft Company. Whilst there he assisted Amy Johnson with her navigation studies, not long before her epic flight to Australia.

George joined the Royal Air Force in June 1930 and began pilot training, though without informing the authorities that he had already amassed more than 100 hours solo flying experience. The result was that George went through six months training in two days. He was posted to No 7 (Bomber) Squadron to fly Vickers Virginias, the RAF's largest bomber of the period. It was during this time that he and a number of RAF pals purchased an old Fokker F.III airliner, for £35, and used it for a weekend runabout. Because the large aircraft was unlicenced it was an embarrassment to the RAF and George's CO told him to get rid of the Fokker.

It was during this time that George became friendly with a young millionaire, Richard Ormonde Shuttleworth who had recently inherited £2 million and had a consuming interest in aviation and all things

mechanical. George not only helped Richard with his flying but also acted as part-time mechanic when he raced at Brooklands and elsewhere.

In May 1932, George was posted to 18 Squadron to fly Hawker Harts. During the winter of 1932-33 he took a long leave in order to fly a tiny single seat Comper Swift to India and back in company with Richard Shuttleworth, who flew a similar machine. In 1933 George was posted to Amman and in July 1934 he left the RAF to embark on a 30 year career in civil aviation.

George's first civil flying job was with Indian National Airways, based at Calcutta, where he was to meet Marjory, whom he married in September 1935. There followed a move to England, where George joined Imperial Airways, the forerunner of BOAC and today's British Airways. But after a very short period George switched to a smaller but better paid job with British Continental Airways, based at Croydon Aerodrome. The flying was varied and on several occasions George was entrusted with flying gold bullion across to the Continent. In 1937 the Steads returned to New Zealand where George joined Cook Strait Airways at Nelson. Following an argument over safety standards George returned to England and flew for a small charter company called Wrightways, based at Croydon. This job carried on until the early months of the war when, in April 1940, George rejoined the RAF as a Flying Officer.

Initially Flying Officer Stead flew top brass around on communications flights, but was soon transferred to 204 Squadron where he began a long association with flying boats, first on Short Sunderlands flying long sea patrols of 11 hours and more over the North Atlantic, looking for U-boats.

In January 1941 he was given his own Sunderland command and later he was promoted to Wing Commander and became chief instructor at an Operational Training Unit, teaching young pilots to fly Sunderlands operationally.

Later George was awarded the Distinguished Flying Cross for "completing more than 6000 hours of flying, of which 800 were operations".

Eventually George was seconded to the Royal New Zealand Air Force to command a Catalina squadron, based on the island of Fiji. Later he was seconded to BOAC to fly Sunderlands from Poole harbour for the last months of the war until the late forties, flying on Far East routes. In 1949 after 8,000 hours flying off water, George was put on to the four engined Handley Page Hermes airliner. In 1954 he was granted his Master Pilot's Certificate. Later he was put on to Boeing Stratocruisers, flying the North Atlantic and in 1957 he moved on to Bristol Britannias. In 1959 George was selected to fly HRH The Duke of Edinburgh from Nassau to Bermuda and on to London.

In 1962 George entered the final phase of his flying career and became one of BOAC's first Boeing 707 Captains. In September the following year, he took early retirement from the Corporation and left with a total of 17,000 hours in his flying logbooks, the equivalent time of nearly two years spent in the air!

George and Marjory retired to Poole, a stone's throw from where George had been based as a BOAC flying boat skipper. He now had plenty of time to take up his consuming interests of sailing, model making and fishing. But George was restless for New Zealand and finally in 1979 George and Marjory returned to the old country for the last time. In February 1985, George lost his battle with cancer and died in the land of his birthplace.

Richard Riding Editor - Aeroplane Monthly

TIMELINE

1911	Sept	Born at Te Whana, Maraekakaho, Hastings New Zealan			
1928	Sept	Received pilot's licence at Hawke's Bay Aero Club			
1929		Sailed on the Mataroa to England			
1930	June	Joined RAF at Uxbridge for Officers Training			
	July	Posted to No. 2 Flight Training School at Digby			
1931	January	Posted to No. 7 Squadron at Worthy Down			
1932	January	Air Pilotage School at Andover			
	May	No. 18 Squadron Worthy Down			
1933	Jan-Mar	India Flight for Viceroy's Air Race			
	May	Posted to No. 14 Squadron Amman			
1934 July		Resigned RAF commission			
	Sept	Joined Indian National Airways			
	December	Met Marjory Ansell at New Years Eve Party			
1935 April Stayed with An		Stayed with Ansells at Tung, Darjeeling			
	Sept	Married Marjory			
	December	Returned to England			
1936	January	Joined British Continental Airways (BCA)			
	December	Resigned form BCA			
1937	January	Sailed on RMS Rangitiki for New Zealand			
	February	Joined Cook Strait Airways and moved to Nelson			
1938	April	Resigned Cook Strait Airways			
	June	Returned to England and joined Wrightways			
1939	Sept	Seconded to RAF			
1940	April	Recalled to RAF			

1941	July	Posted to 204 Squadron - Schetland, Sullom Voe,		
		Iceland, Gibraltar and Gambia West Africa		
	Sept	Promoted to Squadron Leader		
	December	Promoted to Wing Commander and posted to Operation Training Unit at Invergordon		
1942	May	Awarded DFC		
	December	Posted to RNZAF Catalina Squadron		
1943	November	Returned to England		
	December	BOAC Flying Boats. UK - Karachi and South East Asia		
1946	February	Lord Winster's Flight for the Pacific Civil Aviation Conference in Wellington,NZ		
1947		BOAC Flying Boats. UK - Far East Routes		
1949		BOAC Flying Boats. UK - South Africa and Middle East		
1950		BOAC transfer to North Atlantic Routes on Constellation and Stratocruiser aircraft		
1958		BOAC transfer to Britannia turboprob aircraft		
1959		BOAC HRH Prince Philip flight		
1961		BOAC transfer to Boeing 707		
1963		Retired from BOAC		
1979		Returned to New Zealand		

Chapter 1 IN THE BEGINNING

"Speedbird 510 down at 10:15 cleared to ground control."

So it was all over and that was the last time the big bird would obey my command and the last time too that I would sit in the captain's seat of a Boeing 707. Mixed thoughts went through my mind as I taxied the aircraft in to the terminal at London, for I realised with more than a little emotion that this was the end of a career which had started some thirty-eight years ago in New Zealand when I began flying a World War I aircraft and was now ending after spending almost two years in the air and flown over four million miles.

I was born in Hawke's Bay, New Zealand, in September 1911, on a sheep station owned by my father, Wilfred Gatonby Stead. In addition to breeding sheep and cattle he also owned a large horse racing stud which he had inherited from his father. At the time of my birth we lived on the home station which lay about five miles out of Hastings, but we always spent part of the year in Sydney, where my father took the young horses to the yearling sales.







My earliest recollection is of an incident which happened when I was about three years old, and I can clearly remember a group of men cutting down a large tree near the house and my father joining them to deliver the news that we were at war with Germany. I distinctly remember the men putting down their axes and saying, "Let's go and join up," and after they had gone, father trying to explain to me what it was about.



By this time we had moved in from the country to a property at Flaxmere nearer to the town of Hastings.

At this time the motor car had just arrived in New Zealand and we had one of the original Cadillacs with four cylinders and a copper water jacket. In order to start the motor it was necessary to open the priming cocks and pour in the petrol often resulting in a disaster. We also had a model T-Ford considered the most modern car of the time.



My father owned a further 80,000 acres of land between Taupo and Rotorua called Reporoa which after the first world war was purchased by the government and split into small farms for the returned soldiers. The journey to Reporoa from Hastings was either by stage coach or car. In the stage coach, if the weather was fine, it took two days, whereas by car, although the journey took no longer, the chances of arrival were less.

I remember travelling by coach from Taupo to Napier, a distance of about 100 miles. In those days Taupo consisted of a hotel, a store and by the side of the lake a Police Station. The coach left in the morning with five horses covering the first twenty-five miles over the Taupo plains to the staging post on the Rangitaiki River, where the only building was a small wooden hotel with a tin roof, built in the style of the time.

The Taupo plains are a vast expanse of bare pumice land which in those days only sprouted coarse tussock grass. The whole area is about 1,000 feet above sea level and the roads were mere tracks in the pumice, liable to disappear after the rain as the soil washed away, or, to be more exact, "floated" away.

At the Rangitaiki hotel the horses were changed and the passengers, the coach held six, were refreshed before setting off again towards the ranges. It was at this stage that the first river crossing was made and since there were no bridges then the weather played an important part in the trip. On the other side of the river the ground started to rise into the mountains.



There were five of us in the coach, father, mother, an uncle, myself and the family nurse. A large red setter dog sat rather dolefully between father and mother. At the start of the mountain climb the poor animal decided to be sick, which wasn't exactly an encouraging start to the arduous journey! There was no stopping-place and as we rose higher and higher the horses started slipping and the coach stuck in deep ruts and we were splattered with the driving rain which blew fiercely into the coach and I remember feeling very cold and miserable. The next stop was at Tarawera, half way up, where the coach stopped for the night. The hotel's amenities were very primitive and I have heard that it has burned down and been rebuilt several times since then. The hotel at Rangitaiki on the other hand, was only closed in 1969 which speaks well for its construction and the native

timbers used or perhaps it was the spillage from the bar that preserved the wood.



The second day was considered to be a comparatively easy one as there was only one large river to cross. This was spanned by a wooden bridge and the journey continued up the mountain through the native forest to 2,500 feet where it levelled and we started downhill to a horse change at Te Pohue then on down the Esk Valley, along the shoreline of Hawke's Bay to Napier, where we were met by one of the family cars. It was a most uncomfortable trip and thereafter we always went in the "Old Grey Car" as the Cadillac was called, and this was some adventure. The car had a detachable canvas hood and a side screen but there were no windscreen wipers but the top half of the windscreen opened and, unless it was raining too hard, soap was rubbed on in the hope of increasing visibility. Four wooden cases would be tied on the running-boards, each containing two four gallon cans of petrol. There was no such things as petrol pumps and petrol was either purchased in cans or in 40 gallon drums. There would be at least two spare wheels which consisted of rims

and tyres only and these were fixed on the back. The car wheels were made of metal rims with wooden spokes and were inclined to "groan" in dry weather. The passengers, food for a few days plus the requirements of the station at Reporoa completed the load.



If the telephone line between Napier and Taupo was in working order, it was usual to call the coach operator to find out the condition of the roads and fords.

The road over the mountain took all day to cover and if there had been rainy weather beforehand it was chaos all the way and I remember once outpacing the car on foot. If the vehicle got stuck, out would come the axe and then pieces of scrub called Tea Tree would be cut and put under the wheels. On one trip we arrived at a ford and since it was too deep to cross we camped until a horse-drawn timber wagon arrived and pulled us through. When travelling down the long hills it was my job to sit on the floor in the front of the car, switching the engine on and off as father directed. On the way to Taupo, the last hill down onto the plains was a very long and steep drive and at the bottom there was a double ford which always helped to douse the smoke from the brakes. From this point onwards to the station was, apart from the customary washouts on the road, fairly easy going. If the trip was an uneventful one we would reach the house after two days and 130 miles.

The whole area between Taupo and Rotorua is in the geothermal belt and outside our back door was a hot bath measuring 12 by 15 feet and 4 feet deep. The temperature was controlled by letting in either hot or cold water, both of which ran on the surface side by side. During the winter months, when the frosts could be -12°F, the bath could prove a wonderful start to the day. There was no central heating at that time and we burned wood fires indoors. Cooking was done on wood fuelled stoves and paraffin lamps or candles were the only lighting.

All this happened prior to my schooldays and I well remember on one of our visits to Taupo being taken by my mother and father to a well known trout river which flowed into the lake.





My maternal grandfather John Roberts was Scottish and came originally from Selkirk. He lived in Dunedin, and the family were amongst the early settlers who arrived there by sailing ship. In later years, grandfather Roberts was knighted for his work as president of the New Zealand and South Seas Exhibition of 1925. His son was also knighted as a result of supervising the New Zealand Pavilion at the Wembley Exhibition in 1924.

I was the fourth in a family of five and followed the only girl, Marie, who today has the distinction of being the best fly fisher in the country and the flies she ties are sought by many overseas and local fishermen.

My eldest brother Alec has been a farmer all his life and he married into a farming family. He was for many years President of the New Zealand Sheep Dog Trials, a well known polo referee and an excellent shot.

My other brother Bob took over the family stud and together with a little farming has made this his life's work. Both brothers married sisters. This was to happen once again in the family, when years later, my own two sons also married sisters.



I had a somewhat varied education, starting off with a governess and then, subsequently, being sent to a boarding Preparatory School which I disliked intensely. After running away twice my parents decided to send me to a local day school in Hastings, which meant rising early each morning and saddling a horse before breakfast. I would then ride the few miles to school where the horse was tethered in the playground for the day, since this was the only grass field around. When returned home after school, the horse had to be groomed and fed.

I was six when father enlarged the old original wooden house by building a large new section in brick and installing his own electrical plant driven by an exceptionally temperamental 40 hp paraffin engine and providing this was in good humour and the batteries were in working order, all was well. Lamps were kept in store in case of emergencies.



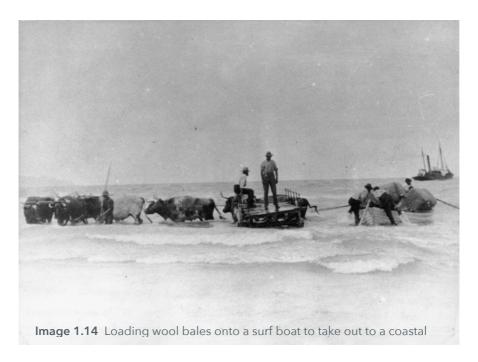


The whole of this family house was wrecked in the big earthquake of 1931 and as no insurance is payable in the event of a natural disaster of this kind, my father consequently suffered a crippling blow by the damage caused. He died shortly afterwards.

When I was ten my father, much to my joy, purchased another station forty miles up the coast from Napier called Ridgemount and it was our custom to go there for long periods. The house lay in a valley and the only means of access were on horseback or alternatively, by taking a boat from Napier and landing on the beach. During the fine weather it was great fun. Even if it rained I used to enjoy helping to transfer the contents of the over-loaded car into suitable packing cases and bags and on to the pack horses in readiness for this journey, and then riding over the hills with father and a line of pack horses in front. This was quite an impressive sight. The ride took about one and a half hours and a particular incident which sticks out in my mind was when an eight foot flat-bottomed dinghy was loaded onto a horse. It was very exciting because I knew that I would then be allowed to row down the small river to the sea before we came to the beach. Fishing from the rocks on either side of the perfect sandy beach was a great pastime and a resourceful one since crayfish were plentiful and easily caught. The catch would be taken back to the house and boiled in the old wash-house copper. These fish were just food to us, unlike the exotic and expensive dish they are today.

In the valley there was a shearing shed which was used by the two stations which looked upon the river as their common boundary and after all the shearing was done a small coaster would come up from Napier to collect the bales of wool. This arrangement required a certain amount of good timing and a lot of luck, as the loading could only take place after a few days of offshore wind which killed the surf.

The practice was for the boat to anchor as near to the beach as possible and then to launch a surf boat which would come in through the surf to meet the wagon which had been driven into the sea. Transferring a heavy bail of wool was no mean feat when one considers the wagon was up to the deck in the water and the bale had to be hoisted onto the surf boat. Sometimes this method of transport was not possible and the wool had to be taken by packhorse instead. In later years the sheep were driven out to a shearing shed at the start of the road.



I developed an interest in radio and made a crystal set with the usual "cat's whisker". I remember the thrill I got when I first tried it out and heard the Argyle and Southern Highlanders Band playing Colonel Bogey at the Exhibition in Dunedin.

At the age of fourteen I was sent to Christ's College in Christchurch, in a final effort to try and teach me something. This school is the equivalent of an English Public School and was no doubt top rated academically. Unfortunately I was not over-enthusiastic over the rigidly disciplined sports nor did the idea of boxing, which was compulsory, appeal to me.

My only pleasure at school was on Sundays when we were allowed out after church and I would spend the day with my Uncle Edgar Stead who lived in a beautiful house in the country.

Uncle Edgar was a naturalist and some years before he had found the body of a whale which had been washed up on the beach and removed all the bones, buried them in the sand to clean them, retuning a year later to collect every bone. He and three others worked on the whale for four weeks using knives, slashers, axes and saws and eventually assembled the skeleton in the Christchurch Museum, where as a result of his work he





was made curator. The museum was next door to the college and I spent a great deal of time there studying insect species and the native birds and animals.

In The Press in 1908 he wrote:

"At the end of the twelfth consecutive day's work, favoured by fine weather and calm seas, we reached the base of the skull. During our evenings in camp our discussions had been largely about the difficulties we might expect to meet in the handling of this huge bone. Ten feet in width, eleven in length and four and a half in depth, the whole mass must have weighed something about two tons. Before starting work on clearing away the large folds of flesh from it, we threw up a good sea wall all around the sea-side of our pit." Edgar F Stead.

Whenever possible I loved to go trout fishing with Uncle Edgar. He was familiar with every fish in the surrounding rivers. He would say, "Under that Willow tree at 3:30 a fish will start rising and if I can hook it will weigh four pounds," and sure enough the fish always obliged and if caught it would be returned to the water. Very seldom did he keep a fish. To him the joy was in outwitting the crafty trout.

I did not go home for half-term because the journey was by train, ferry boat and then another train. Instead I was taken to a large river to fish for salmon. We were going to camp for the night by the river and fish early next morning. On our arrival at the river we scraped two large holes out of the stones in the bank and lit fires in them. When bedtime came we scraped out the embers and lay down in our sleeping bags in the holes. This is the hottest bed I've ever slept in and a sure guard against the cold! Next morning we were up at dawn and off to the river. It was a fast flowing section of water with wide stony banks to allow for flooding. Uncle hooked a fish which immediately took off down river. I was then sent down river with the rod after the fish. Providing the fish was more tired than myself, I would manage to beach and gaff it. It was an exciting but exhausting holiday.



One of Uncle Edgar's delights was his azaleas which he had travelled all over the world to collect. They were world famous and visitors came from America and Europe just to see them. In the days when sea travel was the only means of getting to New Zealand this was quite something.

It was while I was at college that I got to know a relative who was commanding officer of the Air Force Base at Wigram near Uncle Edgar's home. Wing Commander Findley was his name and he was the first person to show me an aeroplane. In fact he took me round and showed me a World War I DH4, some Bristol Fighters and Mono Avro's which had the old Gnome Le Rhone rotary engines. Then one day I was taken up in the Avro and that was the day which sealed my future. We got into the cockpit and I was conscious of that lovely castor oil smell. A mechanic pulled the propeller round and the whole engine rotated as it was only the crankshaft that was attached to the aeroplane. An extra sharp pull started the engine and amid a cloud of smoke we took off. After take off and when we were at a safe height, through the speaking tube I was told to hold the stick and then the rudder. Boy was I thrilled. I was the envy of the whole school when I returned.

Up until now it had been engines for me and I would take everything I could lay my hands on to bits at home, including the cars! This was not

always a popular move as my methods of putting them together again were questionable but now there was only one thing that filled my mind, and that was the air.



School held no pleasures for me and I detested the idea of boarding. There was a ruling in the school that, for the first year, pupils studied all the subjects on the curriculum. These were Latin, French, Maths, Chemistry and Physics, and woodwork, plus the usual Geography and History. The idea being to ensure that, at the end of the year, one had some experience of all subjects and the future could be decided depending on one's ability. Out of 300 maximum marks for Latin I was awarded "Nil" and my French marks were not much better! The following year I was to take Maths, English, Science and Woodwork which suited me as I liked these subjects, but life, despite the trips to see Uncle Edgar and my visits to the aerodrome for odd flights, held no joy for me. Then one day towards the end of my third year there, everything became unbearable and in a moment of desperation, I took off for home on the boat and train. After a long discussion at home it was decided not to send me back again.

Chapter 2

HAWKE'S BAY AERO CLUB

In 1927 a few of the locals in Hastings decided to start an Aero Club, as the first of the De Havilland Moths had just arrived in New Zealand with John Smith a representative from the factory. John was to become a good friend of ours and stayed with us for some time trying to sell the Moth to the locals, which he eventually did, and an ex-wartime pilot, Captain White, better known as "Tiny" was appointed as instructor. I was one of his first pupils and spent all day and every day at the aerodrome. This was a grass field with a garage erected on it into which the Moth would fit with its wings folded. Petrol was stored in an old Ford van with the top cut off which allowed a 40 gallon drum fitted with a pump to fit inside. The Moth was the original service type and was powered by a 75/80 hp Cirrus engine which give a cruising speed of 75/80 mph.



I was considered by Tiny to be a natural pilot and after eight hours dual flying he said I was fit for a solo. We took no risks with the plane because there was no replacement if it was broken. It was a great day when Tiny and I did a circuit and upon landing he said, "Go round again." As I took off he held the joystick from the front cockpit up in the air for me to see, and he had the strength of mind to keep it there until we

landed. He jumped out and said, "Just one circuit," and left me to it. I was perspiring with nerves and excitement as I taxied up to the fir trees at one end of the field and turned to face the electricity wires along the road. I had been told that, in the event of the engine failing and I could not get over the wires, then I must try to get under them and land in the next field. Had this ever happened it would have been an interesting sight to see! I completed the circuit successfully and taxied in, puffed up like a turkey cock, proud of the fact I was the first person in the club to go solo and had received less hours training then anyone else.

Apart from being used for instruction, the Moth was also used to take people from Hawke's Bay to the various towns around, for this was, in theory a lot faster than by road or rail, but this was often a false notion.

Two other flyers were, at this time, working together - Hewitt and Chichester, who were agents for Avro. They imported the Spartan, an aircraft which was roughly the same size as the Moth, but with a double combined wing which was interchangeable. Chichester (later to become Sir Francis Chichester) tried to sell one to the Club but it was some time before he did so. It was an unsatisfactory machine in so far as the double camber had a much poorer lift wing than the Moth.

Tiny and I went on our first cross country flight when we visited the newly formed Auckland Aero Club which possessed two Moths of the later and more powerful type built by De Havilland and incorporating an engine called the Gipsy I. This was considered to be a very superior beast with a cruising speed of 80/85 mph. The instruments in the Moths were, in comparison to todays standards, very basic and consisted of RPM Counter, altimeter (in which about three quarter inches was equal to 1,000 feet, and there was no setting for pressure), a small compass, a fore and aft level, an oil pressure gauge and spring air speed indicator (ASI) on a wing strut. The petrol gauge was a glass tube on the back of the tank which was in the centre section between the upper wings and could be seen by the occupant of the rear cockpit. In the front cockpit, where the instructor sat, there were no instruments whatsoever, unless these had been fitted as extras. The instruments supplied were actually adequate, as on all cross country flying it was customary to follow road, river, railway lines etc., and to avoid any cloud.

On our return from Auckland we were flying over the Taupo Plain, following the road to Napier, when the clouds started to come down and Tiny decided to land at once. We flew around until we found a patch of dried pumice some distance away from the road and several miles from the Rangitaiki hotel, so down we went. One advantage of the Moth was that it had a very slow stalling speed due to the patent slots that came out of the leading edges of the upper wing when the wind pressures reached around 45 mph, so that one could land and stop within a few yards as the tail skid acted as a brake. We landed and stopped in good order and got out. By now the clouds were scudding overhead and lying low and it started to drizzle. It was late afternoon so there was no chance of going on that day and as if to add to our difficulties, a number of wild horses suddenly appeared on the scene. It was obvious that we could not leave the Moth, as the horses could quite easily have damaged it, so Tiny made off for the Rangitaiki Hotel to telephone the information that we were OK. I sat under the wing watching the antics of the horses. If I remained motionless they would approach very slowly, flicking their straggly manes and nosing their way close to the plane, but immediately if there was movement, off they would go at a gallop. By dusk Tiny had not returned so I settled down in the cockpit for the night. I finished the remaining sandwiches and then slept on but more off until dawn as the night was wet and cold. I watched the dawn rising on the horizon and then Tiny appeared full of apologies and explaining that by the time he had contacted someone on the telephone it was too dark to return. By mid-morning the weather improved and we were able to take off and head for home, flying up the valleys with the road as a guide in some parts. This was usual when blind flying and radio was unheard of.

The Hawke's Bay Aero Club was born in 1927 when I was fifteen and by my sixteenth birthday I was prepared to enter all the tests for a Private Pilot's Licence but on application I was told that the minimum age was seventeen and so there was nothing I could do but wait. I carried on working at the aerodrome during that year, getting in as much flying as possible.



One day, Tiny phoned from some fifty miles south to say that he had forced landed and broken the machine. He was having it put on a lorry and brought back. The problem was where it could be repaired and who would do the work since it would require the skills of an experienced and licenced engineer in airframes. When the machine arrived, along with other members of the club, I took one look at the sorry sight on the lorry. The fuselage was broken in two at the front cockpit and the two lower wings were in a bad way. Dudley Newbigin, one of the club members and owner of the local brewery, said there was a big shed in the brewery which could take the plane, so it was off-loaded there. It was essential that no broken parts of the fuselage were lost as it was made of wood with a thin 3 ply skin and this would have to be pieced together in order to make a pattern.

Bob Johnston, an engineer, was found in Auckland who could do the work and he arrived to inspect the bits and to see if the job could be done. After a long hard think he said that it could, providing enough spruce for the frames could be found and plenty of unbleached linen to re-cover the wings. He also said he would need a "mate" and when the job was offered to me I jumped at the chance.

We started by stripping the remains of the body and laying them out piece by piece and then making the jigs to rebuild. Bob was a superb engineer, carpenter and craftsman. We worked on the job for about two months and I learned things that were to be very helpful to me over the years. This must be the one and only time that an aeroplane has been rebuilt in a brewery and I must say that the products therein were very much appreciated during the hot summer days!



At last the great day arrived. The engine had been overhauled while the airframe was being rebuilt and as this was such a simple piece of machinery it only required the services of a local mechanic. The carburettor was so elementary that when cold one could soak a rag in petrol, push it into the intake and "suck in" by turning the propeller, then out came the rag and on contact it usually started. The tail was put onto a lorry with a low back, tied with ropes and the plane driven to the field three miles away. Frequent stops were necessary to grease the wheel bearings on the under carriage as these were not designed for prolonged running.

On arrival at Longlands, the name of the field, Tiny was waiting to test the object of our labour and with a "Hope you boys have got it right," he taxied out and took off. He flew around performing the usual aerobatics, loops, stall turns and spins, and then touched down. "It's as good as new," he said. "Why not build one from scratch?"

I took the exams on my seventeenth birthday, the 8th September 1928, and the Director of Civil Aviation came up to Hastings to put me through the tests. By now I had gained considerably more knowledge about the aircraft and engine. Then came the flying test when he, brave man,

preferred to remain on terra firma telling me to take off, climb to 2,000 feet, do a loop, a stall turn and ultimately climb to 3,000 feet where I was to do four turns of a spin and than return over the field at 2,000 feet, close the throttle and do a forced landing on the field, stopping within a few yards of the white circle, which in those days denoted the centre of an aerodrome. Everything went well and I was presented with my licence afterwards in the hangar. This was a particularly proud moment for me, for I was the youngest pilot in New Zealand.



The family were by now satisfied that I was not cut out for the land or the horse racing world. I would drive my father to race meetings all over the country and after dropping him off, I would go in search for something mechanical, arriving back in time to collect him. I have only been to two meetings in my life and both of these were enforced because I was too young to be left when everyone else in the family were going. I did not even go to see father's horse Sasanof win the Melbourne Cup in 1916, known as the Derby of the Southern Hemisphere.

And so the question arose, "What to do with Jim?" Eventually it was decided that if I was going to make flying my career, I would have to go to England and join the RAF, on a short service commission. I was sent to a tutor in Hastings in order to reach the academic standards required and it was arranged that mother would take me to England. Before leaving New Zealand I attended the highlight of the year which was a dinner given by Mrs Richmond, the only woman in the club to qualify as a pilot. It was quite a dinner and also a farewell for me as we were sailing shortly afterwards. The menu was somewhat original:

THE SOLOISTS DINNER
Cocktail Take off
Side-Slip Soup
Roast pheasant & quail pie
(All game caught stalling W.R.)
Tiny Lamb
Geoff's Spin-itch
Low Flying Asparagus
Full Out Potatoes

Pats Half Roll Longlands Pancakes Gliding Cream Hold-off Jelly Heretonga Fruit

Well Landed Coffee

Chapter 3 TO ENGLAND

There were no jets to hop on and so in 1929 we sailed on a frozen meat boat, the Mataroa. The trip to England was great fun for there were a number of young people on board and the Captain allowed me to receive instruction in navigation from the second officer and by the time we arrived in England I could at least reassure myself that we were in the right ocean.





After leaving Wellington we went up the Pacific to Pitcairn Island, where the inhabitants came out in their surf boats and boarded us selling anything they could to the passengers. I was inveigled into buying a whole bunch of bananas which I hung in my cabin and boy was I sick of bananas, so much so that I bequeathed a goodly portion to the deep in mid Atlantic where, no doubt they lie still as a warning to passing fish! From Pitcairn we went direct to Panama passing through the Canal. Everyone went ashore at Balboa and I still have the spoon I acquired, somehow or other, from the Tivoli Hotel which was the first night club I had ever

visited. The entertainment included a full-blooded cabaret and did my eyes pop! In New Zealand, in the town of Napier, about ten miles from Hastings, it was a very different kettle of fish. The establishment there called a "night club" was affected by the drinking laws which did not allow the drinking of alcoholic beverages after 6 pm and was thus "dry". On every table was a tea pot and cups, the idea being that one took one's own bottle and gave it to Mrs B the proprietress, who would then bring the "tea".

From Panama we went to Curacao where we refuelled and then on, nonstop, to London where we arrived exactly six weeks after leaving New Zealand. It was just before Christmas I remember when mother and I

moved into the Palace Hotel in London where we paid, believe it or not, 8/6d for bed and breakfast.

I had a series of interviews with the RAF and passed the medical test but at that time they did not want to accept any new candidates and it was only because of the intervention of the High Commissioner for New Zealand that I was eventually selected, but even then I was told that I would not be required until June 1930.

To fill in time we visited all our relatives in Scotland and, upon our return to London, I started flying at the London Aeroplane Club at Stag Lane, which was also the aerodrome that was used by De Havilland. I did sufficient flying to obtain a "B" licence (Commercial Licence) and started doing joy riding for them.

I spent a lot of time in the De Havilland factory and got to know the founder, Sir Geoffrey and also his son Geoffrey, who was killed so tragically after the war when probing the Sound barrier of which so little was known at that time. The factory was developing their first monoplane, the Puss Moth, powered by a new Gipsy III engine. This was a new conception of design, being an inverted four cylinder engine developing about 105 hp. It was a magnificent little plane and the pilot and two passengers sat in a cabin with the wings attached to the top. No more helmets, ear-phones and wind. The Puss Moth became a popular type and was later succeeded by the Leopard Moth with a more highly developed engine, the Gipsy Major, and a different wing span which gave increased speed.

A young woman turned up at the club one day and asked if anyone knew anything about navigation. She had her own Moth and not to be outdone, I said I did. "Will you teach me?" she asked. I said I would be pleased to and we started off. This was to lead to many flights all over the country together. We even devised a system of drift lines on the wing so that it was possible to watch an object go under a mark on the leading edge and from noting where it came cut, could deduce the degree of drift. One day the girl, whose name was Amy Johnson, said "I think I am now ready to do a solo flight to Australia." Amy was a very fine brave person, but she was not a superior pilot or navigator and it was in my opinion, sheer guts alone that got her there.



As June 1930 approached, mother and I decided to fly to Paris for the weekend as a last outing before she returned to New Zealand and I entered the RAF. We flew from Croydon in the very latest airliner, the large Armstrong Whitworth Argosy. It was powered by three radial engines and the passengers sat in the cabin in wicker chairs and were served by a stewardess. The two pilots sat up front in the same old open cockpit. It was terribly exciting and I remember saying to mother, "One day I will fly something like that."



At the beginning of June I was taken to buy my uniform and what a performance that was. For all parades and formal duties it was necessary for those below the rank of squadron leader to wear britches and putties. Squadron leaders and higher ranks wore riding boots. A walking stick of standard pattern was carried at all times.

Then the mess kit, two ordinary uniforms and PT kit, shoes, boots, etc., two caps (one for best) and, last but not least, brown gloves. These were carried on every occasion and when on parade or special duty, one dare not, in fear of his life be found without them. White gloves and stiff butterfly collars were worn at dances and always with mess dress. With britches and putties, a white, stiff, round-tipped collar was always worn. There was no such thing as battle dress. For working, one wore tunic and slacks with polished buttons.

Chapter 4

IN THE RAF

In mid June I was told to report to the RAF Depot at Uxbridge for an initial period on basic officers training. The first thing I did was report to the Adjutant and from there I was sent to the Mess where an officer gave a lecture on "How To Conduct Oneself As An Officer And A Gentleman". In addition to myself there were about twenty-five other pilot officers on probation. Our quarters were allocated and each was given a batman. These batmen were very experienced having had many pilot officers pass through their hands. They certainly knew the ropes and also how to get the best out of these overawed young men, most of whom had never had a steward to attend to their needs before. The batman's chores included cleaning buttons and shoes, cleaning and tidying rooms and making beds; putting out the appropriate uniform to be worn. On mess nights mess kit was normally worn otherwise dinner jacket, with the exception of Saturday and Sunday evenings when a lounge suit could be worn.

On the second morning we were told to parade in britches and putties at 09:00 hours. To all those who have had to put on putties for the first time and as the end must be in line with the side of the leg, I need not say what a frustrating job this was. I think the batman earned many a bob showing how to do this. The whole success of the operation lies in the starting point and the thickness of the leg as each turn of the material had to be equally spaced. Anyway, a few minutes later and we became aware of how little we knew. He soon put the "original shower" in the picture. We were arranged in rows two deep with the tallest to the right in traditional style and started marching up and down, and I wondered if perhaps I had joined the army by mistake. After one week of this we reported to armoury and were issued with a .303 rifle and arms training commenced. Slope arms, order arms, present arms. We looked like a regiment of little Fred Karno's army to begin with. When not carrying the rifle one had one's stick and we were all thankful it was not a hot summer. By the end of the day my one desire was to put my feet up as high as they would go. Wednesday afternoon was the time for organised sport of which I remember very little. The greatest torture was PT. At 7am each morning we had this for half an hour, then a wash up, breakfast and be on parade again at 9am for colour hoisting.

During the drill session we would be called out singly to give the commands to the other twenty-five on the course. To start with, the others by dint of trying to harass the poor fellow, could in no time at all be at the other end of the parade ground and in a rather undisciplined group and the unfortunate one was left with the Sergeant Major telling him what he thought of him. Under no circumstances would the others ever assist and it was only the roar of the Sergeant Major's voice which stopped the squad finishing up in Uxbridge.

By the end of the month I had been accepted, although quite a few failed to make the grade. The ones who did were posted to one of the Flying Training Schools, of which I believe there were three in the country. In July I was posted to No. 2 Flying Training School at Digby, a few miles outside Lincoln, and was issued with a railway travelling warrant and expenses. This was the first time I had ever travelled first class as "an officer and a gentleman". Mother and I had always travelled either second or third class, depending on finances.



Digby camp had been built during the First World War and consisted of wooden huts heated by coal fires and as a result the rooms held little comfort on cold Lincolnshire mornings. The hangars were old and constructed entirely of wood and the aircraft used were of the Avro Biplane vintage, similar to the old Mono Avro's except for the new Lynx Radial engines. They still had the "tooth pick", a pair of long wooden members resembling skis which were attached to the undercarriage so that if one tried to tip the plane on its nose, they would slide along the ground and prevent it.

These were the initial training aircraft and the first six months of the year were spent in them. The second half of the year was spent on either Bristol Fighters, D.H.9's, or else a Vickers Vimy depending on the RAF's requirements for officers.

Upon my arrival at Digby I had flown the total of 124 hours solo which, in those days, was quite a number of hours. No other pilot had at this time joined the RAF as a qualified pilot, but I kept this fact to myself.



This was perhaps a bit devious of me for I was put into the front seat of an Avro by a Sergeant Macmillan, told not to touch anything and according to item 10 of the training schedule, was given an "observation flight". After flying around for a while being "instructed" about the joy stick, for instance, "Pull it back and you see the nose rise" or "Push the rudder to the left and the nose will go to the left", and to all these remarks I just said "Yes." I was then told to hold the stick and try a few gentle movements,

then the rudder and finally both controls. At the end of ten minutes we landed again and I really think that poor old McMillan thought he had found a genius. As we left the plane he asked me if I had flown before and I was forced to "spill the beans" whereupon I was immediately taken before the Chief Flying Instructor, Squadron Leader Lloyd, and given one hell of a dressing down for not informing them of my past experience.

On the following day I was down to fly with Lloyd and in sixty-five minutes I was put to the test to see just how much I knew about flying. From my log book I note that we did climbing, gliding, stalling, take off into wind, landing and judging distance. Turns up to 45° on the level, gliding turns, turns over 45° with and without engine, forced landing, action in the event of fire, loops, stall turns, etc. I must have performed satisfactorily for Lloyd got out and told me to do one circuit and landing on my own.

My knowledge of the subject created a problem for it was discovered on the second day of term, that I had reached the standard required after six months training and it was a matter of what to do with the "odd type". The Air Ministry was consulted. My first flight took place on the 15th July and by the 25th of that month I had been transferred to the Senior term and into the Vimy Flight. During the short time I was flying the Avro, every dual flight I made was with the chief flying instructor, who although a master of discipline, was a very good friend. I was to meet him again in 1941 when he was Air Officer Commanding in Malta and I was flying a Sunderland in at night during the height of the blitz. Life was not all flying, far from it. There was if the weather allowed PT every morning outside and when rainy in the hangar. Drill and still more drill, always with bayonets.

On one occasion I committed a 'blooper' of the first magnitude. The CO, a very fastidious and precise fellow who shall be nameless sent for me. We had been drilling with rifles and I can remember going into his office and giving a very smart salute with my left hand to the cap with the rifle slung over the right shoulder. His exact words fail me but they were to the effect that I might be a good pilot but I was a "bloody awful officer." My request for a week-end pass was cancelled forthwith and I was given extra Orderly Officer Duties for the weekend instead. Incidentally this CO I was to meet in Iceland in 1940 and there flew with me round the island.

One of the instructors at the FTS, was a small Flight Lieutenant called Frank Whittle who taught navigation. Later I had this world famous inventor as a passenger in an aircraft I was flying. It was powered by his brain child and I asked him whether, at that time, he had thought of the jet and he replied that a crude form of this was in his mind.

The social side of life was not too bad. Although the maximum allowed mess bill for drink for a Pilot Officer was £5 a month, this was not too restrictive as drink was really cheap. Whisky cost 6d a tot and 3d for gin. If I remember correctly my pay, at this time, was £20 or £25 per month and out of this had to be paid a messing charge. We lived well and dinner in the evening always consisted of 4 or 5 courses followed by the customary port. Game and salmon were often on the menu and the service was excellent. The mess silver down the centre of the long tables was very handsome. At intervals, cocktail parties and dances were given for the local landed gentry. These did not have any real advantage for the pupils although we paid our share towards them for they benefited the staff who were entertained around the district. Dance nights were always enjoyed and never ended before dawn when we finished up tucking in to sausages, eggs and bacon. Some of us would invite the local shop girls from Lincoln, but this was frowned upon and heaven help anyone if the girl misbehaved!

After being in the wilds of Lincolnshire for some time, it was obvious that if one was to indulge in the fleshpots of the vicinity one must have transport. Decent cars were beyond our pockets and so garaged in the transport hangar was the most motley selection of odd machines and bangers one could ever hope to see. Today they would be considered collector's pieces but in those days they merely got us there and back. I bought a motorcycle in Lincoln and was lucky enough to make it back to camp. The local shopkeepers frowned upon the idea of giving the "lads from Digby" any credit but they accepted my word that my uncle in Scotland, Sir John Roberts, would be guarantor. I did not think they would check up on this but, according to a letter I received from him, they obviously had.

The first weekend I had the machine I decided to go to London, so off I set wearing a flying suit. After a few miles I came to a sharp bend in the road and took off through a hedge, across a ditch and back on to the road

again without falling off! I stopped and took stock of the situation and decided to return to camp having learned that there was more to riding a motorcycle than I had imagined. My association with this machine was short lived because I was forced to return the bike to the shop after my uncle wrote to them stating that he refused to be guarantor, which upon reflection was perhaps just as well for me and my body, so back it went.

In the transport hangar there was a two-seat Belsize which belonged to someone who had already passed out and gone to a squadron. I approached the owner and bought the car for £5. I had no idea how old the car was but there was spare parts. After considerable difficulty I managed to start the engine and went for a spin, only to discover that all the bearings in the front wheels were worn and it took a lot of skill to keep it on the proper side of the road. The lights didn't work so if I happened to be out for the evening three torches had to be kept handy for the return journey. Two of those were tied on to the front of the car and with the aid of some red paper, the other was fixed on the back. The questions of tax or insurance never arose.

The local police constable, who was considered a bit of a fool, was always appearing in camp bearing a handful of summonses for the boys for various offences. We had a very good grapevine and the only way he could get hold of the culprit was to wait outside the flight offices until the "offender" came in from a flight. The practice was to keep the constable occupied at the front of the office while someone stole round the back to where he had left his bike, and strip it nut by nut leaving an old sack beside his handiwork. Time after time the silly man would leave the camp with his bike in a sack until one day the penny dropped and he started leaving it outside the Guard Room at the gate.

One memorable night I was returning to camp with a friend in his car when this PC tried to stop us because of some offence or other. We drove gaily on and on with the diligent fellow pedalling behind up like a rat on a treadmill as we entered the camp gates and stopped dead. In came the constable, puffing and blowing, and my driver Dick Makgill (he was killed in a Dakota crash in New Zealand after the war) said to the guard, "Arrest that man unless he has a permit to be on crown property." The PC had to admit that he did not have a permit, so Dick said, "Lock him up." Without much ado he was soon under lock and key in the Guard Room

cell. We wondered what would happen now. The orderly officer was called and the station duty officer, who was one of the regular staff. No one could find any regulation permitting the PC to be released and Makgill, apparently had been quite within his rights to have acted the way he did. It was now almost midnight and in order to get the position sorted out, the CO was telephoned. He could do very little though, because he said he had no authority. Anyway the whole thing developed into a private war between the RAF and the Police Authorities in Lincoln, with neither giving an inch and each side standing on their principles. The fact that the PC was disliked by the station staff also, did not help his case and it was not until nine o'clock the following morning that after many telephone calls between the Chief Constable and CO at the camp and on the intervention of Flying Training Command, that this unpopular fellow was allowed to go home. Makgill was sent for by the CO and told that, although his actions were according to the book and in order, he must never do such a thing again. For some time after that we all kept well away from gentlemen in dark blue!

Although I was in the Senior Team for flying, I had to catch up on class-room work which was a bit of a bind. This included the theory of flight, signals, armaments etc. and despite my having to make the grade on the theoretical side, I could still strip and reassemble a Lewis gun in record time. Drill and PT still held no appeal for me and I sought every excuse to avoid them.

The Vickers Vimy was in those days a large machine powered by two Napier Lion engines. Normally, on a good run, the cruising speed was 75/80 mph and often when flying up the long straight roads of Lincolnshire, against a good head wind, we could be overtaken by cars below our usual height of 1,000 feet or lower. In its original form the front cockpit in the nose was for the gunner/bomb aimer, then behind him the pilot. Then there was a duck walk along the top of the fuselage over the petrol tanks to a rear cockpit behind the wings for another gunner. For school use the forward cockpit was fitted with dual controls and the standard instruments of air speed, altimeter, fore and aft level and compass. The rpm, air pressure and water temperature were mounted on the side of the engine and providing there was not too much oil about,

could be seen. This aircraft was similar to the one in which Alcock and Brown flew the Atlantic, the only difference being the type of engine.

To start the engine a mechanic fitted a handle into the side of the nacelle (the streamlined casing on the outside of the aircraft housing the engine) and began turning, then the pilot switched on, turned the hand starting magneto and if the mixture was correct, it started. One had to make sure that the throttle was closed in time to avoid blowing the starter off the wing. Pupils had to carry out all these tasks, including the cleaning of aircraft engines and the actual plane itself.

This plane also had a tooth pick out in front to prevent nosing over. On my first flight in it I felt this was super, for the size was very much larger than anything I had then flown. Upon taxiing out it merely waddled along on its four wheels, two under each engine, and tail skid. The undercarriages in those days were just V struts from the wings and a cross axle lashed on to the struts by turns of shock cord of the type we use today for tying things down on the car roof. On take off there was very little noise since the engines were behind the pilots, the speed about 45 mph and once in the air, it simply lumbered about the sky taking its time. The question of flying on one engine was doubtful unless one had enough height to go slightly down hill.

I did one hour fifty minutes dual in this beast before going solo. I see from my log book that the circuit and landing I was instructed to do took five minutes. Talking of log books, I was always in trouble over mine. There were, in my opinion, silly little rules one had to adhere to, such as filling in the number of the details "As set out in appendix A". This attachment to the back of the log book contained thirty-three items, and one had to write not only a reference number, e.g. "7" but the description as well, "7 Landing and judging distance". My lack of compliance usually resulted in red ink comments appearing in my log book, such as "A very untidy and carelessly kept log" and "Put this right and bring log for me to see.". I was not allowed to include my civil time in the book, which I believed was out of spite, but in the end, when returned from hospital just prior to passing out at the end of term, although I had passed all the flying tests, there was a lack of the required total flying hours. So very resentfully my civil time was entered "Certified that times for types 3, 4, and 5, (Spartan, Bristol Fighter, DH Moth), are correctly transferred from

Civil Log Book" and duly signed by the powers that be. Still, at the end of it all I was assessed as "Above Average" with "Any special faults in flying noted" as "Nil".

My stay in hospital deserves a mention for it all started as the result of a rather "strenuous" weekend off the camp. On the Monday morning I could not face PT which meant I had to report sick. It would not have been tactful to tell the MO that it was merely the after effects of "excessive" living and so I said that I had a nasty pain in my right side, under the belief that he would then tell me to take the day off. But alas, before I could say "Ouch," I was in an ambulance en route to see the surgeon at the RAF hospital at Cranwell, about twenty miles away. I was unaware that this surgeon had a great reputation as a lover of appendix operations. After examination and although I vowed that the pain was much better I was admitted, ending up a very reluctant patient on the operating table! Imagine my disgust after it was all over, when "knifeman" told me I had had a very bad appendix. In those days the operation was not the simple "nick" it is today and I still bear the nasty scar to remind me of the folly of my ways. The only happy feature about the whole episode was the fact that I was allowed five weeks absence from drill and PT. I was also barred from flying, but the three weeks in hospital with the sister made up for quite a lot.

Attached to the front of my log book is another reminder. An official document headed "The Good Pilot's Ten Commandments" which I think, are worth quoting:

- (1) Taxi with great care and, if in difficulty, stop everything.
- (2) Do not treat your throttle like a spade; open your engine gently.
- (3) Never turn back on take off if an engine fails remember Lot's wife?
- (4) The eagle has slotted wings. If your aircraft has, copy the eagle's landing, he lands slowly.
 - (5) Forget not your Daily Inspection lest you be no more seen.
- (6) Before waving "Chocks away" always test your controls. It is too late in the air and, besides, wreaths are expensive.
- (7) Don't step out without your parachute. When you least expect it you will need it. Be prepared for the high jump.

- (8) Remember your Riggers and Fitters are human too. The welfare of your aircraft and likewise your own is in their hands...look after them.
 - (9) When you fly a borrowed aircraft treat it as your own, play fair.
- (10) When in doubt about anything ask your Flight Commander. If he does not know, ask the Flight Sergeant he's bound to know.

Before leaving Digby I must tell you the story of a Sergeant Instructor we had on Vimys. I used to fly with my friend, Dick Makgill, and the procedure was that the Instructor sat in the nose, next came the pupil and the other guy was in the rear cockpit. Mak and I were always sure that this poor Sergeant never let go of the controls when we were meant to be flying the machine. One day, near the end of the course, Mak was meant to be at the controls but he got out of his seat and walked back to the rear cockpit with me. I was wearing head phones and I could hear the instructor saying how well he was flying. We did a complete circuit like this and by the time the aircraft landed, Mak was just striding back into his rightful seat when, over the head phones came the words "a very good landing." We never did enlighten the poor chap but, after the passing out parade, we did tell the Flight Commander who was not amused.

We were all very pleased to get away from the "Penal Settlement" as No. 2 FTS was called. Relieved that the petty restrictions on our lives were at an end, no more signing in at the Guard Room before it shut at midnight when we had been out, and no more alibis to the Chief Guard Instructor if we were late.

Chapter 5

WORTHY DOWN

The posting lists were put up and I found I was to go to No. 7 Squadron at Worthy Down, near Winchester. This squadron was equipped with the successor to the Vickers Vimy, the Virginia. We were all given a month's leave and I spent mine with Dick Makgill and some friends of his who lived in the Cotswolds. Reporting to Worthy Down at Christmas 1930, I found on my arrival that the whole station was shut up for Christmas and the New Year. I had to spend my time doing the junior lads orderly officer's duty which included visiting the men's cookhouse during every meal and asking in a loud clear voice, "Are there any complaints?" The men's food in those days was really very basic and nothing like the standard it has reached today. Should there be any complaints they had to be written on the report together with the cook's comments which were more often than not, very impolite. While the station was closed I also had to take Colour Hoisting Parade, Lowering the Flag, mounting and dismounting the guards and visiting the sentries, along with being responsible for the safety of the camp. The Station Duty Officer, to whom the report was taken, was only approached when this was absolutely necessary. The station resumed work on the 12 January 1931.

As a war time station Worthy Down was not the best of aerodromes. It was situated on the crest of a hill and most of the time take off and landing was along the crest of the hill, but if the wind was too far off one had to land up the hill and stop before reaching the summit, otherwise the plane would trundle down the other side either onto the road or into the trees. The aeroplanes had of course no brakes, and could only be turned by using an engine and rudder, and the tail skin made this rather difficult. The question of a broken undercarriage did not present any great problem as the construction was so simple that repairs were easy. The secret to successfully flying in one of these machines was the slow landing speed. In fact, at times this could be awkward because in order to keep the

aircraft on the ground, men had to manhandle the wind tips to turn it round and stop the wind from tipping it up when facing across the wind.



The Virginia aircraft was a great improvement on the Vimy as the two pilots sat side by side and could, providing their throats were in good condition, talk without the use of phones. It also had all the engine instruments in the cockpit and there was a little cubby hole behind the pilots in which sat a radio operator with a primitive set which worked, over a few miles, with the station in morse code. In the nose was the gunner and bomb aimer. We had to learn to operate the radio set up to a standard of eight words a minute. After doing 10 flights dual, I was sent solo in the big beast to do circuit and landings along the hill but with the firm instructions that on no account was I to try landing "over the top".

Not long after I joined the squadron another pilot coming in to land undershot and hit the headquarters building, which was only a wooden hut, wrecking it and killing the two pilots in the plane. This was the first time in my life that I had seen dead bodies and served as a warning of an

aeroplane's capabilities when not treated with respect. There was a full military funeral and I remember marching for several miles beside the gun carriage.





Behind its' two large rudders, the Virginia had double elevators and the tail plane had a cockpit for the rear gunner. I don't know how these chaps survived the ride for the shaking and swaying and the bumping up and down was tremendous. Still, it was considered a safe place to be. In the accident described in the previous paragraph the gunner climbed down a very long ladder, unhurt. In the rear position he was alone with no means of communication with the pilots, as sound would not travel that distance through the "pipes".

The squadron Navigation Officer, Flight Lieutenant Barlow, was to become a very good friend of mine. He was a genius at developing new ideas for "getting about" and at this time there happened to be a new type of beacon under development for ships. One merely counted the morse dots and dashes and based on a 60 second cycle, one could work out a position line. It was in fact the original Consol system and still used today. The system was called "Position Lining by use of a Rotating Beacon". Beacons and D/F Loops came in a later era. Barlow and I spent a lot of time working on this beacon system for as according to "Bradshaw's" the main navigation in cross country flying at this time was, "following roads, railways and other landmarks, and never lose sight of the ground".

I did a lot of flying with Barlow to and from the Royal Aircraft Establishment at Farnborough, where he was working on a navigation system with one of the boffins. I later read in a paper in 1971, about the great future of an "Air Born Bearing" which produced a frictionless bearing. In 1931, at Farnborough, I had held in my hand just such a bearing, so perfect that I was unable to hold it level enough to stop the shaft falling out...such is progress!

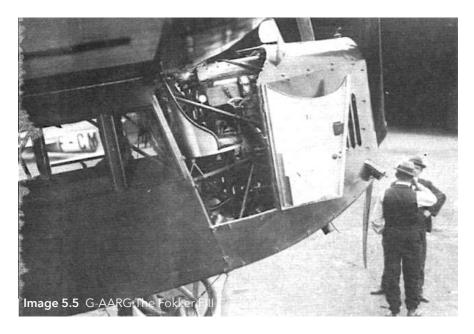
In the squadron I was first introduced to Night Flying by flares. Six paraffin flares in a line along the ground, with one flare to the right at the top of the runway, outlined the landing path. On the bottom of the wings at either side were two magnesium flares, which were fired by pressing a button as the plane approached the flare path. These wing flares burned for about a minute and produced an excellent fire in the event of a crash, the wings and body being covered with linen which burnt happily.

I continued to keep in touch with my civilian friends and occasionally saw Sir Nigel Norman who owned the Airwork Limited at Heston near where Heathrow now is. In those days it was Airwork's own aerodrome. One day while at Heston, parked beside a hedge stood a rather old and interesting aircraft. I was told that it had been bought for scrap by a chap called Coley. It turned out that this was the original Fokker F.III with which KLM had begun their London to Amsterdam service. I was told that if I wanted to buy it I could have it for £35. Back to Worthy Down I went and arranged, with two others, to put up the "capital" and I returned to Heston with the money to collect my "purchase".



This old plane was fitted with a six cylinder Siddeley Puma, inline water cooled engine of wartime make, similar to the one in the DH9. The pilot sat beside the engine with his head in a "hole" where the leading edge of the wing had been cut away. The wing was made entirely of wood and the fuselage was bolted on to this. On the other side of the bulkhead behind the pilot was a cabin for four people, comprising of wicker chairs and a toilet. Sitting alongside the engine the pilot had no instruments before him, it was novel to say the least! In the wing to his left were the rpm, fuel, oil and water temperature gauges and on his right the airspeed and altimeter. It was just possible to see the air speed indicator out of the corner of the right eye and to more or less see straight at the same time. Another unusual feature was that if one grabbed the throttle and missed, one touched a sparking plug. This was an error which was never repeated! Nobody at the aerodrome knew anything about this plane and thought me completely mad to try and fly it. This opinion was like a red rag to a bull. I put some petrol in until it showed half way up the glass tube. I could see the usual hand starter magneto but the prop was too tight to actually "swing". I looked up the air intake, which was under the

engine, and saw two small pipes which appeared to be drains for the carburettor. I had once heard of how to start the Puma, by blowing up the pipes and flood the carburettor, then put the prop onto compression, a few turns to "suck in", switch on, turn the hand starter, and if all was well, the plugs would fire and the engine start. No one would help me so I tried this and lo and behold it worked.



The exhaust pipe was fitted so that it went over the top of the wing by the left ear and about two feet in front of the pilot's face was the radiator with a fitted cap, lightly spring loaded, and between pilot and this, a small windscreen with an open top. What were the revolutions the engine should give? No one knew. What was the correct oil pressure? Again, no one knew. Well, I warmed it up and with chocks in front of the wheels, opened it up to maximum 1,200 rpm. This seemed a bit low, but the engine sounded good to me so I thought I would try a part taxi, just to see the results. The acceleration was good and the tail came up, off came the power and I taxied back to the downwind end again. As all the airport staff were out, it was now or never. I opened the throttle, pushed the stick forward, up came the tail and I eased back on the stick. With no time to

look at the airspeed indicator (ASI), I was in the air. I climbed round the field in circles to 2,000 feet and then throttled back to 1,000 rpm, and on looking at the ASI, noticed we were doing 85 mph. Boy was I thrilled and relieved. Then suddenly the engine boiled out of the filler cap, over the windscreen and into my face. I opened the radiator fully and realised that boiling water does not cool much in two feet. Still we settled down and with the oil pressure half-way up the dial, it looked good. Water was behaving itself, the sun was shining and I was on my way to Worthy Down. I wondered what the CO would have to say since we had not asked permission to take it there.

The journey was an easy one; just fly south to the Waterloo to Southampton railway line as a guide route and then it was simply a matter of following the twin tracks to where they passed behind the aerodrome. I arrived overhead and as it was a Saturday, everything was relatively quiet, so I landed and taxied up between the hangars. The Duty Pilot whose job it was to record all take offs and landings, approached at "break-neck" speed on his bicycle to investigate this monstrosity, and when GGS appeared from the cockpit, the flabbergasted expression on his face was really worth seeing. For some reason or other this aircraft bore the British Registration G-AARG and became known as "GAARG the Fokker". I phoned Heston to inform them of my arrival, whereupon they told me that they had been convinced I would not make it.

Upon arrival my two partners were quite impressed with their investment and it was decided to have a run along the south coast on the following day. The Mess put up a cold lunch for us and the bar provided the rest. The fact that this was a civil aircraft on an RAF station put the Duty Pilot in a quandary because as such it should have been charged, but the good man did not force the issue. There still appeared to be enough petrol for all we intended to do, so it was decided that we should go to Brighton and land in a field behind the town and off we went. Once again I was the pilot and in fact I don't believe anyone else ever flew GAARG.

We flew low along the coast from Southampton looking at all the people on the beaches. The only connection with the cabin was by a small porthole on the left-hand side, behind the "driver". Through this could be passed notes, sandwiches, a glass, etc. A good field was sighted at the back of the city (very much smaller than it is today) and we alighted all in

one piece. It was the general opinion that we had attracted enough attention on our travels, so we decided to sit in the cabin and have lunch. It was a rare sight for a plane of these proportions to land in a field and before long the public started to arrive. We could have done very nicely out of joy riding but we thought that this would be pushing our luck a bit too far. As a compromise, after making dates with some of the fair sex for the following weekend, we returned that evening thinking that we had a distinct advantage over the owners of sports cars!



The CO was duly impressed and said that, providing we did nothing silly, the plane could be kept on the station. We assured him that we would take every care and offered him a flight, an invitation which he declined as did most other people.

The normal weekend procedure was to depart on a Saturday afternoon, find a likely resort and stop until Sunday. We made it the habit of taking a couple of mattresses and by removing the chairs, could sleep in the cabin. Among other advantages it was a savings in our weekend expenses. Our petrol cost the vast sum of 1/6d. per gallon and that was for aviation fuel but having to put in 30 to 40 gallons every weekend was a severe financial strain. At that time the cheapest petrol for cars was 11d. per gallon and it came from Russia.

A few weeks after we acquired the "beast", Dick Barlow, who was friendly with the son of the Dame of Sark, suggested that we go there for the day as he had been told that there was a field large enough to accommodate the plane. This would be an epic flight over the sea for about 80 miles and would require some organisation. We arranged with the W/T Section to borrow a set and got them to install an aerial from the wing tips to the tail. But what would happen if we force-landed in the sea? "Mae Wests" were unheard of and so we borrowed eight 2-gallon petrol cans from the M/T Section and tied them in pairs, the idea being that we could float on them should the necessity arise. Barlow was to navigate and I to fly.

The Sunday arrived bright and clear, and after bribing the W/T Section to keep a watch for us in the event of trouble, we set course over the Needles and I can remember looking at the sea and wondering if the wooden wings would keep us afloat and if so for how long? Would the undercarriage tip us on our back, and in this event how would I get out? We tried to contact the W/T section but could not get through. I took careful note of every ship I could see and passed notes back to the navigator. After about an hour and feeling like explorers, we arrived over Sark and I looked for the alleged field, but the biggest to be seen seemed to be filled up with four cows. We went and had a look at Guernsey and Jersey but they were no better. By now we were a bit short of fuel to get home so decided we would go to France. Flying east we crossed the coast and I saw quite a long area, beside what looked like a chateau, so down we went and I remember, as the engine stopped, I could hear a bell tolling in the buildings. It was 9am. Out we all got and from out of a gate in the wall surrounding the establishment came a monk dressed in a brown habit. Visions of a good breakfast in a chateaux receded as the monk approached. We were fortunate in that Dick Barlow spoke French and very soon discovered we were beside a Trappist Monastery and would we come in. The Abbot welcomed us and gave dispensation to allow the monks to speak during our visit. A very good breakfast was produced and then came the question of petrol. A local taxi was produced and off went Barlow to find "essence". He returned some time later with the back of the car filled with what looked like milk churns containing "Auto" petrol. We put this into the tank and I wondered if we would get the power out of it but, as there was a slope down the field, did not worry too much. Hands were shaken all round and in we got, the engine started and we taxied to the top of the hill, turned, and I opened the throttle watching the rpm's we got our ground revs. Down the hill and up into the air with no trouble at all. Course was set for home and we arrived, without any difficulty, in the late afternoon. Customs in France and England never heard of this!

The trouble started the following morning when one of the papers had a headline, "Three RAF Officers Force Land In France." The CO sent for us, we told him the story and he was a good sport but said he thought the Air Ministry would not be too happy, so we had better not fly GAARG again for the time being. The Air Ministry were not pleased and all kinds of letters of apology had to be written and an undertaking given never to leave the shores of England again.

Not long after this the Civil Air Ministry started taking an interest in GAARG and had the nerve to write and ask if we had a certificate of airworthiness which of course we did not. They then said that the aircraft was obsolete and must not be flown. Poor old GAARG. What was to happen to it? Some friends, who lived near Cheltenham, wanted us to come and see them in it before giving up, so Makgill and I flew up one Sunday and landed near the house. I think the old girl knew of her doom because when we went to leave, she would not start. It was the first time she had ever given trouble and was the last. We tried on another weekend, but both magnetos seemed to be dead.

Years later I was sent a sketch of old "GAARG the Fokker" with one wing drooping down; she was being used as a chicken shed. These chickens must be the only ones ever to perch and lay in an aircraft all of their own.

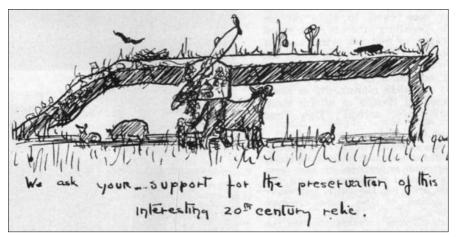


Image 5.7 GAARG The Fokker's last resting place!

Chapter 6

A SUMMER SAIL

At the beginning of September the squadron closed down for the annual four weeks holiday. Dick Barlow had organised eight of us to charter with him the 62 ton Brixham Trawler "Defender" for a cruise down the French coast. This boat had been only basically converted below decks with a double cabin aft, the engine to port and a loo to starboard, a saloon with two berths then two single cabins, and two further berths forward. By today's standards it would be very primitive, but in 1931 not too bad. On deck the working floor was still as it was when she was a working trawler and there were no winches at all except a great capstan for the anchor chain. The anchor was lifted onboard by a cat davit and stored along the bulwark. We took delivery in Chichester on the day leave started and sailed her round to Portsmouth for stores, both bonded and food. The engine was a Kelvin Petrol/Paraffin type, but we soon discovered that it only ran on the petrol side of the system. Everything was loaded in Portsmouth where a second girl, who was a friend of Dick Makgill and Barlow joined us.



Departure was made that morning. In those days there was no shipping forecast and in fact the depression was only just being really understood. I have a book, written in 1930 by a Swede, titled, "The Theory of the Depression". We cleared the Needles about dark with a strong breeze from the south-west. Of the crew of eight only two of us had done any sailing, Barlow and myself. Before midnight we were in heavy seas with increasing wind and most of the crew were being very sick. Barlow and I decided to get all sail off except for the mizen and storm jib. This was a hard job as the sails were of old fishing weight canvas and our hands were not those of a fisherman. Still while the others were busy being sick, three of us got them off. The steering was by a tiller about 6 feet long with a tackle to windward to hold the weather helm. As the night wore on the wind increased to a full gale. All one could do was to keep steerage way on and head roughly south. Next morning we could see the Cherbourg peninsula so tacked with the help of the engine in very big seas and set a course a bit west of north. All that day the wind was very strong and the sea short and steep. Dick Barlow and myself were by now the only two standing and we were wet through and cold, and apart from an odd hot drink laced with rum had had very little to eat. That night we saw the light of Portland Bill and laid a course to keep us to the east of the race and into the shelter of the land. As usual with the land, the wind went down a little and we finally dropped anchor in the naval harbour just before dawn. I think sleep for me was the most welcome thing, and then food.

By the time we had all come to, it was afternoon. Also anchored in the harbour was a large motor yacht called 'Aldic', which I saw in Poole Harbour again after the last war. Aboard her appeared to be a collection of good looking girls so we sent one of the crew over to make contact and he returned with an invitation to us all for cocktails. Life was looking up! Everyone put on best shore-going dress for the occasion. Before the voyage started it had been decided the dress for shore use was to be red and white football jerseys, grey trousers and bowler hats but, in view of this special occasion, we left off the bowler hats and put on shirts. We were welcomed on board the Aldic by a beautiful girl who introduced us to the owner, Sir Richard Cooper. The girl who met us was the "Miss Craven A" and she and the other girls were doing a series of advertising

pictures. It was quite a party and finished up with some of us staying to dinner and some of the girls coming across to our boat for I am sure, a far less lavish meal.

As the Aldic was sailing to Dartmouth the next morning, it was arranged that we should also sail heading for the Bay of Biscay with Bordeaux as the destination. By now the weather appeared good, but just before sailing we heard from a naval officer that during the gale a German sail training ship had been lost with all hands in the Channel. So perhaps we were not such a bad bunch of amateurs after all.

At dawn the next morning we sailed with many a glance at "our youth and beauty" of the night before. The idea was to cross to Ushant and, if all



was well, through the inside passage of the Chenal du Four and then the Raz de Sein, across the Bay to the Gironde River and up to Bordeaux. The voyage was good and we entered the Chenal with a good tide under us, as it runs very hard through here. The passage is about 30 miles long and is flanked by outcrops of rocks over most of its distance. We were about half way through when without warning down came the fog and the wind fell very light. To put it mildly, an embarrassing position to be in. "Start the engine," said the captain and I as engineer dived below, but as usual with so many marine engines of that period it would not start.

"It won't b.... well start," I called up. The reply is unprintable.

"I am going to turn to the east as we can very likely make a beach between the reefs if the tide is not too strong and the wind holds out," said Dick.

Two lookouts were put in the bow to report any sound of waves breaking and someone on the lead line. I was still struggling with the machinery but to no avail. Later I was able to master it by taking the plugs out and pouring in some petrol. How we live and learn!

"Breaking water to starboard," called a lookout and a large black rock slid past that side. Then, "Two fathoms," from the lead man. The anchor had been got ready. "Let go and all sail off." Down went the anchor and the mainsail together, and we came up all standing. Everyone was very pleased to be anchored even if not knowing where, as visibility was down to about 30 yards. Drinks were passed all round and we waited for the weather to lift. Fog in this part of France comes and goes very quickly as I was to find out in later years when I cruised the coast annually and got to know it and the habits of the weather very well.

By early afternoon we were in sunshine again and as the fog lifted found ourselves tucked up at the very end of a beach near the rocks. The tide was now low so the afternoon was spent on the beach and I mastered the engine. We sailed at high water on the turn of the tide at dusk. With a light breeze made good time out and through the Raz de Sein which took us into the Bay of Biscay. It was a glorious sail lasting two days across to Royan at the mouth of the Gironde River. No harbour walls and locks as it is today, but only one wall which dried out at low water. The tide was kind and we made the wall without any delay and lay alongside for a day and a night.

The next move was up the river to Bordeaux. Leaving at the start of the flood and using both sail and engine, it was hoped to make the trip on the one tide. All want well until about half-way up when a piece of fishing net got wound round the prop, but we did not know that until later as the only effect was a fair amount of vibration and a small loss of speed which was put down to "that bloody engine again!" As we approached the lock gates at Bordeaux the captain said, "Out of gear." This was relayed to me by someone at the top of the hatch and out of gear we went. "Slow



ahead." I tried to push the lever forward but it would not go.

"It won't b.... well go," I called out. "All hands forward. Fend off her bowsprit and get a line ashore." All this was done in a very seamanlike manner and watched by a number of French seafarers. Here we were, outside the lock with the gates about to shut and no engine.

"Four of you ashore and warp us in." So we warped ourselves into the basin and were told to tie up at a berth outside a Gendarmerie. They came to clear us in and left a long time later in a rather intoxicated state. The bonded whiskey and gin at Portsmouth had cost 7/6d and

5/0d per bottle and we had made sure it would not run out.

Ahead of us in the basin was a British coal boat and as none of us liked the thought of diving in the water to clear the prop because it was a good 5 feet down and the "foreign" bodies in the water, the skipper of the coal boat was asked for help. "Yes," he said, "come alongside and we will pass a heavy line under you, make it fast to the main mast and we will pull up with a winch and careen you over." It was all too easy. What had happened was, that the rope round the prop was OK as long as the gear shift was not moved, but the fact of shifting from ahead to neutral, had allowed the rope to spread along it and stopped the shaft moving forward again and going ahead.

That evening Dick Barlow, his wife and a girl friend went off to dinner while the rest of us dressed in our jerseys and bowler hats took off to see the town. These were the days when "Madam" was still allowed to keep her "House" and eventually we all finished up in one of these excellent establishments. The evening ended by making arrangements for Madam and her girls to come down for a drink the next day before lunch.

In the morning our idea of the night before did not look so good, but we broke the news to the skipper and his wife, who entered into the fun of it. The gendarmes came to see what was going on and their eyes nearly popped out when they saw Madam and about six girls on the quay. Still we had a jolly session and no harm was done.

The trip home was non-stop to Brest and as we had no radio, we did not know that England had gone off the gold standard while we were at sea. The whole crew marched into a local hotel for baths and a good meal, which we had, and when the time came to pay the bill pound notes were produced but the hotel proprietors were not interested. In the end the notes were accepted but at such a high rate of exchange that we were left with only sufficient cash to buy a sack of onions and some bread for the trip home.

Course was set for Penzance, being the nearest port where we could get some more money. We were a few miles off port and alongside a fishing boat buying some fish when the Isles of Scilly boat went past. When we arrived in port the customs not only boarded us but the fishing boat as well. The arm of the law is long.

From there we sailed up the coast, landed in a patch of fog off Portland, went through the race and so back to the boat's home port with one day of leave in hand, but after a lot of fun had been had by all.

Chapter 7

RICHARD SHUTTLEWORTH

Sometime in 1931, I met a Cavalry Officer who was stationed at Tidworth on Salisbury Plain and he was very keen on engines of all kinds, and had quite a fleet of vintage cars. His name was Richard Shuttleworth, whose home was Old Warden Park near Biggleswade.



I told Richard about flying and took him for a flight in a Moth I had borrowed and from then on it was the air for him. I took him to

Brooklands where he used to race a Bugatti and he bought a Cirrus Moth and asked me to teach him to fly. This suited me as I kept the Cirrus at Worthy Down and used to fly up and land on the polo ground at Tidworth, collect Richard and fly off to his home for the weekends doing circuits and landings in a field. He was a very apt pupil and, in no time he was solo, but he was a bit reckless in his choice of landing places. I went to a mess night in the cavalry mess one occasion late in the evening, Richard appeared riding a charger and rode it into the Mess, up a flight of stairs and down again, because someone had bet him he could not. He was always in trouble with his CO for spending all his time on cars or the aeroplane, and in the end he resigned his commission, but took with him his "Jeeves" who was still with him when he was killed at a Fighter Operational Training Unit at the start of the last war.

Flying at the squadron was pretty routine and once the night flying was mastered, together with cross country flight to other aerodromes, it was rather dull. The squadron did have a break when selected for a demonstration in low level bombing to be given at the then famous annual event - The Hendon Air Display.

Bombing was an interesting sport and the bomb aimer, in this case myself and Barlow in his plane leading the flight, used to lie flat on our stomachs in the nose of the aircraft looking out of a glass window. The bomb-sight was a rather crude affair and on which you set air speed, height and wind speed and direction. The latter was arrived at by flying three courses, assessing the drift on the sight and then by plotting the result on the dial of the sight one had what was hoped, the correct wind setting. A very serious error could be made if the wind was plotted in reverse and this was quite easy to do.

On the final rehearsal at Hendon I did just this and lobbed a practice bomb into the Royal Enclosure. This caused a certain stir amongst the officials but, as was so many things relating to aircraft then, it was accepted. The practice bombs we used weighed 8 pounds and had a tin body filled with stannic chloride liquid which, when they hit the ground and burst, turned into a white smoke. Each year all the squadrons of the RAF used to move up to a practice camp on the east coast where, for a month, we used to drop these bombs and carry out machine gun training.

On the day of the display, His Majesty King George and Queen Mary attended and all went off well, except for the "run-in" because the bombing attack was altered to avoid the Royal Box. The star turn of the day was the aerobatic team of three Moths tied together with lines and little flags on them. They were lead by "Batchy", Richard Atcherley of Schneider Cup fame, who was a wonderful aerobatic pilot. I was to get to know him very well while I was in Amman and he was the flight commander. The little Moths used the system of smoke that we still see today used by the Air Force team.

On looking through my log book I see a couple of interesting entries. The first gives some idea of the aircraft speed: "Cross Country: Yeovil, Oxford, Chichester and Worthy Down - time 4 hours 40 mins" which was about 60 mph. The second reads "Endurance Test - 6 hours 30 mins".

At this time Vickers factory was at Brooklands and as all major overhauls were done by them, we used to spend some time there either delivering or collecting aircraft. This suited me very well as I was a member of the Brooklands Aero Club and had a number of friends there. My log book has an entry for 3rd September 1931, with "Flying in cloud" and after it a question mark in the CO's handwriting, as this was not really allowed.

In the latter half of 1931, I had got to know a farming family who lived near the station and from somewhere or other one of the sons had acquired two broken Moth fuselages, an Anzani engine and two wings, perhaps also from a Moth.

"What are you going to do with this lot?" I asked.

"Build an aeroplane," he replied, and this he just did. No machine ever looked quite like it. He cut the bodies in half and joined their ends and then cut the forward one off by the front cockpit and fitted the engine. The wings were attached as a high wing aeroplane and the tail area was still Moth. The big problem he was faced with was the question of a prop, but not to be thwarted, he found a damaged Gipsy prop and cut it down (which was no problem as they were all wood) and fitted this. By dint of running the engine and taking a "bit off here and there", the vibration was reduced to acceptable limits by the standard of the time when most things shook a bit. The next problem he had was due to the fact he could not fly himself. Who would try out this unique outfit? George Stead was always

willing to have a "go" at anything to do with planes, so I said I would be the test pilot.

We wheeled it up to the top of a slight hill in a field, and I can remember Shuttleworth was there with his Moth and was going to take a photo of me in the air. The engine was started, I opened the throttle and very slowly started to gather speed down the hill. By pushing the stick hard forward I found that the tail would come up, but when I pulled it back the first time, the tail just sat down again. The second time I tried, and by now the hedge was getting closer, we left the ground for a few yards and sank back again. The throttle was closed and we finished up in the hedge. It was the only time that monstrosity ever left the ground and I think it is just as well it did no more or this story night never have been written!

Sometime later the CO was out shooting with the owner of the farm and was told of the epic flight. I was taken aside in the Mess one day and told by the CO that I was a b..... fool. I agreed with him and he bought me a gin.

During this time, Barlow and I were given the job by Farnborough of testing a new-fangled instrument called a "Turn and Bank Indicator", operated by a Vacuum/Air Gyro. This was the original T&B Indicator which became so well known as the Basic Blind Flying Instrument and is still, in a very much more sophisticated form, in use today. We used to fly round with one wearing a pair of eye shields so he could not see and the other flying as safety pilot. This instrument, and the old fore and aft level, enabled us to do some of the early experiments in "cloud flying" and, quite unknown to the powers that be, blind take offs as well. The Venturi tube that produced the "Suck", causing air to be pulled in over the gyros, was fitted into the slipstream of a prop so that the instrument could be run up before starting the take off.

I went on flying about with Shuttleworth and acting as a mechanic for him when he was racing at Brooklands. I was with him, pumping oil as required, when he beat the Mountain Record for the track in 1931. About half-way through the races, the air cushion I was sitting on gave up due to the end of a bolt penetrating it. By the end of the race I had also been penetrated and preferred to stand for some days afterwards.

Those days at Brooklands were wonderful. All the old Masters of the sport were there. The roar of the engines, unlike the scream of today, and the smell of castor oil was fascinating.



Some years later, Shuttleworth went to the South Africa Grand Prix where he crashed into a tree travelling at over 100 mph. He told me the story later and said "I can remember leaving the track, flying through the air for some time, seeing a tree and nothing more until some days later in hospital." He had been concussed and had broken a leg and a few odd ribs. Gangrene set in the leg and the doctors told him that it must come off, but they had reckoned without Richard who said, "It stays on and either I die or we win." For the rest of his life he walked with a slight limp, but was fit enough to pass the medical into the RAF at the start of the war. It was a very great pity that he was killed for I am certain that the Jerryies would have suffered and, apart from that, we lost a great character.

Before the end of 1931, Richard rang me up and said, "I have just purchased from the Bedford Fire Brigade a fire engine which was for sale. Come up and collect it with me." About this time Richard was without a driving licence, which was not uncommon and usually due to speeding. We went to the Fire Station and there was a lovely machine of about 1925 vintage with an outside drive position and a big Leyland engine. It was

complete with hoses and nozzles and fitted to the back was a big pump driven by the engine. Off we went and Richard said, "Get speed up," and started to ring the bell. It was wonderful. The traffic pulled up and we shot through the town being waved across cross roads by surprised looking policemen. The trip was a great success, for us at least, and in the village of Biggleswade the locals all came out to see where the fire was. Needless to say, as soon as we arrived at Old Warden, down to the lake we went to try the pump. For those of you who have never held the brass nozzle of a fire hose when the pump is turned full on, let me tell you of the effect. The suction hoses were put into the lake and connected to the pump.

"Put a length of hose on and a nozzle on the outlet. Reel it out and hold the end," said Richard.

I had seen a fireman holding a hose or, more correctly, there had always been two.

"Are you ready?" called Richard. "If so, I will engage the pump."

He engaged the pump and opened the throttle and the next thing I knew was this large lump of brass was wrenched out of my hands and was thrashing around on the ground and in the air. Richard and I ran before being hit by it. Somewhat shaken, we stood looking at this jet of water squirting everywhere and splashing over the engine and we hoped for a lucky squirt into the engine. Our hopes were answered and the engine stopped. That was the last time a fire hose was held by me!

The engine remained in use at the Park for some years and Richard used to attend all the local fires and assist. The last time it was used we attended a fire in the middle of a cold spell and I forgot that the radiator had been drained. After a few miles the engine stopped, the bonnet opened and we found the cylinder head glowing red. I don't think it ever worked again.

Chapter 8

RAF 1932

At the end of 1931, I was posted to Andover to the Air Pilotage School for a nine week course on navigation. It consisted of flying Tomtits solo and carrying out cross country flights which lasted about two hours, or flying as navigator using the Bigsworth Board Navigator in a Sidestrand, which was a modern twin-engined biplane. Whilst on this course I was still doing a lot of private flying with the result that my knowledge of cross country work was perhaps beyond that of my instructor, but as I had always been very keen on the subject, I was always very attentive.



After this course I went back to No. 7 Squadron but was soon posted as Navigation Officer to No. 18 Squadron. This squadron was just being equipped with the very latest Day Bomber - the Hawker Hart - with the first of that great series of engines, the Merlin. This biplane was a delight

to fly and the power after a life on Vimys and Virginias was most impressive. It gave me about as big a thrill the first time I flew the Hart as it did when I was loaned an Mk IX Spitfire during the war after Flying Boats and also when I first took a Boeing 707 off empty on training.

The Hart was one of Hawker's family, which included the Hind used for Army Co-operation, and the Fury Fighter. They were superb aircraft and were, as we all know, the forerunners of the famous Hurricane.

I reported to No. 18 Squadron in May 1932 and was with them until 12th January 1933. During the year we went to the usual training camps where, as in the Virginias, the bombing exercises were in level flight but the procedures in the Hart with a rear gunner and a radio operator in a cockpit behind you were very different.

Dive bombing was just being introduced and at about 6,000 feet the throttle would be closed, the stick pulled back and having first let the aircraft reach stalling speed, stall and turn into vertical or near vertical dive. Trying to keep the gun sights on the target until about 2,000 feet, we would release a practice bomb and very gently pull out as every wire in the rigging was screaming, as I think the air gunner was as well. This aircraft was the first I had flown with full harness and it was very necessary as we "bunted" into the dive. Part of our training involved aerobatics and although I did not mind the normal gentle ones such as looping, stall turning and spinning, the idea of flying upside down and hanging in straps never appealed to me.

We also spent time doing cloud formation flying. This was good fun, providing the leader could fly blind, for you just sat so close to him that it was like ordinary formation flying. On one flight, the leader who I think was the CO, had five of us in the formation and with the speed and the compass continuously changing, all was not well. We finally came out of the cloud quite low over Gloucester when we should have been near our base at Upper Heyford north of Oxford. We went home, hedge-hopping, and we all told the CO how clever he had been to get us down below the clouds where there were no hills!

The Squadron took part again at Hendon as a dive bomber unit in the year that the R101 flew over the display and "dipped" in a Royal Salute but could not increase height again and so flew back to its base at Cardington in a most unhappy state. What a very tragic ending was to

follow shortly afterwards when she crashed in France on her way to India with such a tragic loss of life.



About the middle of the year Barlow was approached by the owner of Defender asking him if he would deliver the yacht to Lisbon or Gibraltar for him. We all agreed that a free trip was not to be missed so, during the annual holiday, we decided to do it. It was a memorable voyage with the same crew and we went non-stop from Portsmouth to Lisbon in fifteen days, this time outside Ushant. It was an uneventful trip except when we were becalmed in fog off the north-west corner of Spain in the middle of the shipping lane. At times ships' engines could be heard in all directions but only once was one sighted and this so clearly that one could see the beard on the face of an officer who peered at us from the wing of the bridge. We had a pump type fog horn but this proved of little use.

Still, we were equipped on this occasion with a direction finder in the form of a portable radio. As the tide tended to set in on this corner of the coast, we tended to get too near the coast, and by using the radio, we were able to get rather crude bearings from the Finisterre beacon and other

radio stations and plot a position. The engine ran only on petrol which was scarce, so it was only when we got too near the shore it was started and we motored a few miles off the coast.

At Lisbon I was getting short of time to get home again, so decided to try and find a berth back. Ahead of us at the quay was a small, scruffy British coal boat. I asked the captain for a lift and was signed on as second steward. The trip was fun, as I did my watch on the wheel and the speed was about right for tuna fishing. The ship docked at Barry in South Wales and I was duly signed off at the Board of Trade Office along with the rest of the crew.

Chapter 9

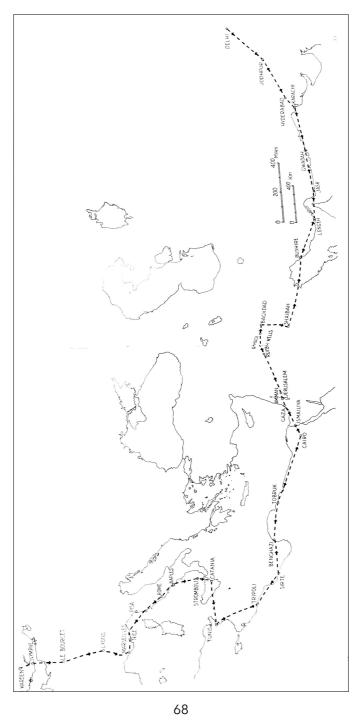
INDIA AND BACK

"To India and Back was written entirely from memory four months after the flight finished so that any errors in the accuracy of certain data must be allowed for but to the best of my knowledge it is mostly correct." G G Stead 1933

Towards the end of 1932 Shuttleworth bought a Comper Swift aeroplane powered with a little seven cylinder radial Pobjoy engine. This little single seat, high winged monoplane was a dream to fly. That same year the King's Cup Race had been won by the Prince of Wales's entry, also a Swift powered with a Gipsy III engine, flown by Air Commodore "Mouse" Fielden who, some years later, was to command the King's Flight. We knew Mouse quite well and his description of the aircraft was that its performance was far better than that of the RAF fighters. It was at this time I was privileged to meet the Prince of Wales, who was also a keen pilot and charming person. He had been taught to fly by the Air Commodore, who was at that time a Wing Commander.



Shuttleworth and I thought it would be fun to buy one of these aircraft and take both Swifts, his with the Pobjoy engine and mine with the Gipsy engine, to India to enter for the Viceroy's Air Race, which started and finished at Delhi. When we visited the designer and builder, Nick Comper at Hooton Park near Birkenhead he was doubtful whether the Gipsy Swift was suitable for a flight to India due to its short range and tendency to be nose heavy on landing. These problems were overcome by fitting extra fuel tanks on the floor at the front of the



pilot's feet and a locker further behind him to carry clothes and spares, which also helped in keeping the tail down. The aircraft was duly ordered from the manufacturers and we were loaned the special Gipsy III which had been fitted to the Prince of Wales's aircraft. Delivery was set for the following January.

I applied for and was granted three months unpaid leave from mid-January. Maps were the biggest problem in preparing for the flight since we required large scale sheets from England to India via the Persian Gulf, with details of all the landing grounds en route as the maximum distance I could fly the aircraft was about 350 miles. We eventually obtained the best set of maps available and laying these out on the billiard table at Old Warden, we drew the track lines on them and then cut about four inches off each side of them, in such a way that the whole strip would wind onto two rolls and so fit into the ends of a small tin box which could be strapped to the right knee. We had bead sight on the edge of the cockpit and drift lines worked on the forward and rear struts below the wing. Into the lockers we put stores, such as magneto, plugs, filters and tools and of course clothes which included "tails", essential for the Horse Show Week in Delhi.

In the first week of January 1933, I went up to Hooton to collect the new racing machine powered with the Gipsy III engine. It was then that the one and only accident of the trip occurred. Shuttleworth was taking his machine down from Hooton to his home at Old Warden near Bedford when the engine cut out and he was forced to land in a small field in very thick weather. Due to the wind currents coming over the hedge he approached during landing, he dropped a wing and the machine stood on its nose. As we were due to leave in two days he very sportingly went back to the works and purchased another aircraft. This was fitted out and ready to leave a week later and as I had been held up with weather we eventually arrived at Old Warden at the same time.

On Wednesday 25th January 1933 late in the morning, we left Old Warden for Lympne which was to be our first stop on the flight. The trip was in moderately good conditions except for the intense cold and strong easterly wind.



On arrival at Lympne we were met with an adverse weather report which said there was fog in the Channel and as it was getting late we decided to remain for the night and start early the following morning.

Thursday dawned very cold and freezing but there was a good weather report and we got off at 06:00 setting a direct course for Paris and across 90 miles of sea. The air was so cold that within half an hour of starting we were both numbed by the cold and to make things worse my lap roller broke and I had to wind it by hand. When we reached the French coast we discovered the whole of France was under snow. We arrived at Le Bourget, the civil aerodrome for Paris, and after a cup of hot chocolate to try and get warm, we got off again and set a course for Lyon, which took us across high hills lying to the south of Paris. To cross this country we had to climb to 5,000 feet and if it had not been so intensely cold we would have enjoyed the wonderful rugged scenery covered by a heavy fall of snow.

Throughout the trip to Lyon we had a slight following wind and after two and three quarter hours we arrived over the aerodrome to find it covered by four inches of snow. By the time we had got petrol and cleared customs it was getting late and as there was signs of fog in the south we decided to stop the night at the hotel on the aerodrome. The hotel can be strongly recommended, except that they only have hot water for baths in the summer.

Friday was another good start and we were in the air at 08:00 setting a course down the Rhone Valley for Marseille, where we were to refuel before going to Nice. This trip was very enjoyable because after leaving Lyon we left the snow behind us and came into the warm sunlight of the south of France. The aerodrome for Marseille is about ten miles north of the town and is very small with rough ground for small aircraft. We were away from there by midday setting a course across the southern end of the Alps. During the flight to Nice, to the left we had an excellent view of the Alps which towered up into the sky and on our right, the deep blue Mediterranean.

On arriving at Nice, the aerodrome could be seen on the edge of the beach and was only a strip about 600 yards long and 50 yards wide. As this was the first aerodrome of a really bad nature that I had had to land my plane on, I was rather frightened as I had been told that it would turn over on any rough ground, but I found that it behaved in the same manner as other machines.

When we left Nice we had intended to go direct to Pisa, but after an hour's flying it was easy to see that due to a strong head wind, a common occurrence along this coast in the afternoon, we should not reach Pisa before dark. So we decided to land at a small Italian Air Force aerodrome on the coast and just over the border at a place called Albenga. The Italians were very surprised to see two British aircraft coming in on their aerodrome as there had never been any there before, but they were very nice to us and did all they could to help including getting us money from the local bank. We had slight trouble leaving Albenga as we had not had permission to land there. They had to wireless to Pisa to get permission for us to proceed but also said that landing at Pisa was prohibited due to heavy rain making it unserviceable. All that was left for us to do then was to set a course direct for Rome which included a sea crossing of 150 miles across the Gulf of Genoa.

The trip across was very enjoyable as the engines of the two aircraft were running perfectly and there was a blue cloudless sky with plenty of shipping below in case one had to force land. The coast was hit about 40

miles north of Rome and as we flew across the Italian Lakes, which are renowned for their beauty, one felt that life was really worth living. We arrived at the aerodrome which was built inside the famous Littorio motor racing track. After a short stop to fill up with petrol and clear customs, we were off again.

As we knew that we could not get further than Naples that night, we decided to go down the coast for the 150 miles to there. Another very enjoyable trip. After about 45 minutes flying we could see, away on the port side, the smoke coming from Vesuvius which lies just to the east of the aerodrome at Naples. As we arrived I saw one of the most wonderful sights I have even seen, the sun setting over the Bay of Naples with Vesuvius in the background. Again, the Italians showed us their hospitality by insisting that we went in and had coffee with them in their mess. Later we went to a hotel in town and after an early dinner we went to bed, as we were both tired after two long days flying.

Next morning we set off at 05:00 for the aerodrome but had slight trouble making the taxi driver understand that we wanted to go to the aerodrome and not to where the flying boats were moored, but after being driven twice round the docks we eventually got to the aerodrome to find that our machines had been got out and were already waiting for us.

By 07:00 we were setting course direct to Catania which takes one right out to sea and the only land crossed before arriving over Sicily is the volcanic island, Stromboli.

Just after passing Stromboli I saw that cloud was lying over Sicily so decided to climb up above it as there was only the one corridor through which you were allowed to pass across the island at the eastern end. At 7,000 feet above the coast we were above the clouds and all that could be seen was the top of Mount Etna another 500 feet above us. As we reached the opposite coast the clouds started to break and we went through a hole coming out over the sea a few miles to the east of Catania. The base of the clouds was very low and just after skimming the tree tops we arrived over the aerodrome. As it had been raining here for the past fortnight and I had heard that two other aircraft on their way to Egypt had both been bogged here, so I was rather dubious about landing, but thanks to the air-wheels (big balloon, low pressure tyres) that we had fitted, we did not experience any trouble at all.

Being Sunday we were delayed for about two hours while the customs people were found and sent out to the aerodrome, but we were off again just after midday and as the cloud was still very low a course had to be taken down the valley that would lead us to the coast some miles to the south-west. As we approached the south-west coast all the cloud dispersed and we eventually set the course for Tunis which was a 100 miles due south west of Cape Feto. There was not a cloud in the sky and it looked as if we were in for an excellent sea crossing but were to be sadly disillusioned when just over half way we ran into patches of fog which continued until we hit the island of Zembra off Tunis.

As we flew up the harbour at Tunis we experienced a wonderful contrast to England's green countryside to see the red and white town on the shores of the blue sea with the brown of the desert in the background. We were pushed for time to get to India so decided to push on to the next stop at a place called Gabès, about 200 miles east of Tunis on the coast. The flight between Tunis and Gabès is across the desert because the coast bends to the east. The track across the desert had no features that are of any use as a guide to our position so I set a course that would bring us out slightly to the east of our destination. The coast was hit ten miles east of the town just as the sun was setting, but when we arrived over the aerodrome I did not recognise it as being one as it looked bad, so I landed on the beach where I was informed that the aerodrome was the patch of ground just off the shore which I had seen but not thought it could possibly be an aerodrome. I took off again and landed on it. The night was spent in the one and only hotel which can be strongly recommended to anyone who should have landed in this small town for the night.

The next morning was so warm that we decided to leave our heavy flying clothes and carry on in just overalls.

We were on our way to Tripoli by 09:00 and after flying for some 250 miles along the coast with nothing to see, except the blue sea and the desert with an occasional native village and an odd fishing boat, we arrived at Tripoli, the capital of the Italian possession of Tripolitania. We landed on an aerodrome which had about two feet of grass covering it.

As this was the only large town along this part of the coast we decided to go into town to get some more money and it looked like a very pleasant place to stop in. We were back at the aerodrome and were promptly off by

1pm as we hoped to get to Benghazi that night after first stopping at Syrte for petrol, but when we arrived there we were not allowed to proceed any further that night because it was too long a sea crossing to take in the late afternoon. Syrte is an Italian Air Force aerodrome on the coast with nothing except a few native shops and a small fishing village. We spent the night in the mess as guests of the Italians who are in my opinion one of the most hospitable races in the world.



Early next morning just as the sun was rising we left for Benghazi which entailed a sea crossing of 250 miles unless one chooses to follow the coast round which increases the distance by another 100 miles. As we did not have sufficient petrol range to do this we had no choice other than to go straight across. After two hours of flying, the coast ahead could be faintly seen on the starboard bow and as we approached closer I observed that we hit it about fifteen miles to the south, so I altered course and after two and a half hours flying we arrived over the aerodrome at Benghazi, also an Italian Air Force base. As we wanted to get to Cairo that night and still had another 750 miles to do, we rushed around, got filled with petrol and cleared customs within an hour. After leaving Benghazi the course was across another strip of land similar to that between Tunis and Gabès, only this time just after leaving it crosses some hills about 1,500 feet high.

The only landmarks on this section of the trip is one small police post on an oasis about half way across. The distance between Benghazi and the next stop at Marsa-Tobruk is about 220 miles and we completed it in just under two hours.

The aerodrome at Tobruk is on a spit of land beside the naval port and is the property of the Italian Navy. Here we were met by naval officers who showed a very great interest in the aircraft as they had never seen anything quite so small before. They wanted us to have coffee with them but after a lot of explaining we informed them that it was getting late and we wanted to get on to Cairo that night. We left there and set a course to a landing ground owned by the Royal Air Force called Marsa-Martha, which is very quickly becoming one of the popular seaside resorts for Egypt.

By this time we were completely fed up having seen nothing but desert and sea for the last 1,750 miles. It was quite a change to hear English spoken again as we had not heard any since we left England six days ago. At the RAF ground the Shell agent who filled us up with petrol told us that we had plenty of time to make Cairo that night, but he had forgotten to allow for the loss of an hour's daylight in the 300 miles we were to do to the east, with the result that we only just arrived at the civil aerodrome at Cairo as the sun was setting. The flight to Cairo is across the desert and the only landmarks are the salt lakes about 75 miles west of the city. Now that we were half way on our flight and well up to the schedule, we decided to have half a day's rest and also have the machines looked over as they had not been touched since leaving England and had done some 30 hours flying.

The machines were put into the hands of Misr Airwork at Almaza aerodrome and we went into Cairo for the night. The next day we arrived at the aerodrome shortly before midday and after supervising the filling up of the two aircraft which we always did ourselves, started off for Amman. After leaving Almaza we flew up the edge of cultivation and passing over Ismailia where the airship mooring mast was built to take the ill fated R101, we set a course across the canal direct for Gaza.



From Gaza we started to climb inland on the course for Amman which meant a height of 5,000 feet to allow for the safe crossing of the very steep and rough mountainous country. Climbing over the slopes we eventually

saw Jerusalem ahead and passing over this we could see ahead on the right and below us the Dead Sea at the southern end of the Jordan Valley and a 1,000 feet above sea level. As we came out across the northern end of the sea, Jericho, another old biblical town lay below us. After crossing the Jordan Valley the ground again rises up to 3,000 feet and carries on at this height for some distance. On all this country it is very nearly impossible to make a forced landing, so when Amman was sighted we both felt rather relieved. We were also rather doubtful about how our aircraft would behave when landing on an aerodrome which is 2,600 feet above sea level, but here again they both behaved perfectly and there was no difficulty experienced in either the landing or taking off the following day.

We had arranged to leave at daylight the next day but due to a strong wind blowing at dawn we did not get away until 5am. We had been told here that the best route to take was the new pipeline track to Rutba and not the old local road which lies some distance to the south and is much harder to follow. We were also kindly given a map of the new pipeline maps which had been produced by an officer of the Amman station. After leaving, the course was set to take us up the chain of landing grounds on to the pipeline about 60 miles distance. As we had a strong following westerly wind we were covering the ground at an astonishingly fast pace

and after flying along the pipeline for an hour and fifty minutes, we arrived at Rutba Wells.



Rutba Wells is situated half way between Amman and Bagdad and consists of a fort owned by the Iraq Government. The aviation facilities here are run by Imperial Airways and I warn all that if they can possibly complete the five hundred miles from Amman to Bagdad without refuelling, to do so, because petrol here cost six shillings and eightpence a gallon and oil nearly twice as much.

The trip from here on is similar to the first half over miles of barren wasteland with not a tree or bush within sight and in fact, the only mark on the surface is the car track to Bagdad which one has to follow. After flying for an 1h 45m we came to signs of civilisation in Ramadi, a small native town 30 miles west of Bagdad. As we passed over the village heading for Bagdad we could see a grey line on the horizon which as we approached nearer turned out to be dust. This became so thick that when within a few miles of Bagdad and at 3,000 feet the ground could not be seen. As we were running short of fuel and I did not like the idea of trying to find an aerodrome in a strange country under these conditions, I decided that we should return to Ramadi where there is a landing ground

belonging to the RAF and where we could await an improvement in the conditions. So we flew back and landed there. On arrival we saw two other aircraft on the ground and they also informed us that they were held up by the dust and like us would wait for an improvement. We refuelled the machines and had lunch at the local rest house which I do not recommend as they have strange ideas about the freshness of their food.



All that afternoon we sat and waited for an improvement in the weather until at last it was too late for us to get through before dark. We resorted to our fate and spent the night in the rest house.

During the night there was a heavy fall of rain and the next morning on going out to the aerodrome we could see that most of it was under water, but by 06:00 we were in the air on our way to Bagdad and with the best visibility I have seen. After 40 minutes of flying we were at the civil Bagdad West Aerodrome which was suffering the effects of the dust storm followed by heavy rain and as we touched down mud flew in all directions. It was so bad that we decided not to taxi the aircraft into the hangar but to refuel on the airstrip. We remained only long enough to fix

up the customs and refuel as we wanted to get through to Bushire (Bushehr) in Persia that night.

The trip down to the next stop at Shaibah, another RAF base, was uneventful except for the time when Shuttleworth had to force land with a blocked jet in his carburettor. This section of the route consisted of crossing and re-crossing the Tigris River and the swamps surrounding it. As we approached Shaibah we ran into rain and when we landed we were informed that it was the heaviest rain they had had for some time. Our idea of getting to Bushire that night was knocked on the head as the previously arranged permission for our flight through Persia had not been wired through to here. The only thing left for us to do was to rush off into town and see the British Consul and see if he could arrange the permits, but he said he could do nothing. The next morning, at great expense, we sent a telegram to the British Liaison Officer at Bushire to ask if he had heard anything about our permits and he replied that they had been granted and they were expecting us that day. As soon as we heard that permission had been granted we got into our aircraft and left on the 200 mile flight to Bushire. This flight takes one across the head of the Persian Gulf and the Persian oil fields. There is nothing of interest on this section of the route as one is over the sea most of the time and the land is only sand.

Bushire is a small town situated on the edge of the Gulf and the aerodrome lies about three miles to the south-east. This aerodrome was an important one up to a few years ago, but today is very seldom used now that Imperial Airways use the other route which takes you down the southern coast of the Gulf, and the German Air Line that operated in Persia no longer exists with the result that the only people using the aerodrome is the French airline operating to India. By the time we cleared customs and had been medically examined, insisted on by the Persians at each airport, it was too late to carry on to Lingeh, now known as Bandar Lingeh, a further 310 miles down the Gulf that night. The Shell agent recommended we should stop in the guest house on the far side of the aerodrome but I am afraid that his idea and mine of comfort differed slightly. Not only was the food bad, but the beds consisted of plain boards with only a thin mattress between them and oneself which did not add to

the comforts of life. We were only too pleased to be off at daylight the next morning.

The trip down the Gulf to our next stop took us over a type of country entirely new to us as it consisted of short and very steep limestone hills about 500 feet high going up to sharp points at the top. These hills line the coast while inland there is a large valley dividing the hills and the high rugged interior of Persia. The only form of habitation along this coast is one or two small fishing villages and a small town on the edge of a salt lake.

When we arrived at Lingeh we had an unnecessary delay due to the inaccuracy of our maps. The maps marked the aerodrome to the east of the town which was the situation of the old, now disused aerodrome where we sat and waited for some two hours while the customs authorities and petrol agent waited for us on the new aerodrome on the west side of the town. As there was only one car in the town it took some considerable time to transfer all the personnel necessary for clearing us, from one aerodrome to the other.



Then we were told that we had to wait for an hour for the doctor to come on his donkey unless we liked to pay for the car to go and collect him. We willingly did this, as by this time we were both so furious at being messed about by the Persians that we would have done anything to have got out of the country as soon as possible. When we eventually did get off on the flight of approximately 180 miles to Jask, we found that we had wasted about three and a half hours of our precious time.



The direct course from Lingeh to Jask takes one across the high country on Cape Jebel which rises vertically out of the sea to over 4,000 feet and I decided it would be quickest to skirt the edge of the cape rather than climb over it. The visibility was wonderful and from Cape Jebel at 2,000 feet we could see the coast near Jask some 70 miles away and after 1h 40m flying, we arrived over a small town and landed on the aerodrome where the ill fated Imperial Airways machine had crashed in 1929 with a large loss of life.

Things did not take quite so long here and we still had the doctor's inspection, but within an hour and a half we were off on our way to Gwadah, a British town in Baluchistan. The Persians at Jask said that we would not have time to make Gwadah before dark but if it was the last thing we ever did we were determined to get out of Persia that night.

They were very nearly right and it was a race with daylight to get there before dark. The trip along the coast was exactly the same as the before and some 40 miles west of Gwadah the sun set. I was very uneasy as to whether we should make it before dark or have to force land on the beach and wait until the next day, but we did get in and by the time we had tied the machines down it was pitch dark.

It was here that we had the biggest surprise of our lives because the aerodrome was situated eight miles inland from the town and all that was there was one small hut where the Imperial Airways watchman lived. I rang up the exchange and was very surprised to find that I was directly connected to the wireless station. I asked the superintendent of the station if he would send a car out for us as we wanted to spend the night at the local hotel. He laughed and said that there weren't any cars there at all and neither was there a hotel, but if we liked to ride in on a camel he would be very pleased to give us dinner and a bed. This was a bit disheartening having flown over 1,000 miles and then to be asked to sit on a camel for two hours made one feel a bit fed up, but as we only had a choice of sleeping in the hut without food or the superintendent's hospitality, we accepted the latter and after some tea with the watchman we mounted our camels and set off for the town.



I have ridden on a few uncomfortable things in my life but sitting on a packing camel for two hours was the worst of them all. When we eventually arrived at the wireless station we were dreading the thought of the return trip in the morning. However, the superintendent and his wife could not have been more charming than they were to us, not only had they kept an excellent dinner for us, but had put themselves to great inconvenience in preparing our two beds. During dinner it was arranged that we should leave two hours before daylight in order to get to the aerodrome at dawn. This meant starting at 4am, so as soon as we had finished dinner we went straight to bed. The next morning we were called at 3:30 to find that breakfast had been prepared for us and the Shell agent was waiting to accompany us and supply us with petrol. The ride out was completed successfully but in great discomfort. We were both anxious to get off as this was out last stop before Karachi, when we would be nearly at our destination.

We got off just as the sun was rising steering a course to the east that would take us along the coast for about half the distance to Karachi, where we had decided to set the course direct across the remaining 100 miles of sea to Karachi. After just under three hours flying we hit the coast a few miles north of Karachi and proceeded inland to the aerodrome which is about seven miles from the town. As we crossed north of the town we could see ahead of us the airship mooring mast that had been erected for the R101. It was quite a pleasure to get to a civilised aerodrome as we had not been on one since leaving Shaibah. Our idea was to try and reach Delhi that night, but due to a mess up in the petrol arrangements later at Hyderabad, we did not get that far. News of our arriving had reached Karachi before we had got there with the result that on arrival we were met by petrol and oil agents all trying to make us use their products for the race, but we told them that we would deal with that question on arrival at Delhi.

We left Karachi an hour and a half later on our way to Hyderabad and arrived an hour later to find that due to a mistake in the petrol arrangements there was none available on the aerodrome. After messing about for some time trying to find the agents, we decided to push on and try and make Uttarlai and take on petrol there. This was a risk as it meant that we had to fly for our full duration to do this. After following the

railway across sand and undulating country for an hour and a half, I saw below a small landing ground near a railway station and decided to land there to see if we could obtain petrol. After having walked for about a mile to the station it was to learn that they had no petrol, but that it could be obtained from Uttarlai by the next day. We went back and after carefully checking the petrol decided to push on to Uttarlai another half hour's flying, where on landing there Shuttleworth's machine started to cut out due to lack of fuel to feed the carburettor.



Due to the delays it was too late for us to go on that night, so after filling the machines with petrol we went about ten miles in a train to a small town to dine with the auditor for the Jodhpur Railways. Dinner was rather an extraordinary meal, it being entirely native but all the same very good. After dinner we went back and slept in the waiting room at the station until midnight when we caught the train back to Uttarlai. On arrival we went to what was called the Rest House consisting of a small room with two beds in it and on the beds two very dirty blankets. On waking next morning I was surprised to see sitting on the end of the bed a mouse and up in the roof sat four pigeons. We decided that the sooner we

got out of this place the better, but ongoing outside it was to see that one of the wheels on Shuttleworth's machine was flat. We tried to get a repair outfit from town, but found that there were no cars there, so the only thing left was for me to fly the wheel to Jodhpur, 130 miles further on. I arrived in Jodhpur in time for breakfast, which I had with the club instructor who was also the private pilot to His Highness the Maharajah of Jodhpur. By the time I had finished breakfast the wheel had been repaired and I set off on the return flight to Uttarlai reaching there in just under an hour.



It only took us about a quarter of an hour to fit the wheel and for us to fill up with petrol and by 10:30 we were both on our way to Jodhpur. We arrived there just after midday with the intention of pushing on to Delhi, but as His Highness the Maharajah wanted to inspect the machines we decided to remain for lunch and go up early in the afternoon. We lunched with the instructor who told us that we had been expected to attend a party the night before which was given in honour of His Highness's eldest son. We replied that if we had had our way, we would have been there. Back at the aerodrome we found that the machines had been cleaned and filled up with petrol for which we were not allowed to pay. By 2.30pm and after promising to stop on our return, we were on the last stage of our flight to Delhi.

The flight from Jodhpur to Delhi seemed the longest of the lot, although it was only two and a half hours flying, but by this time we were completely fed up of following a railway, coast, or road over the desert and when eventually the spires and minarets of Delhi could be seen on the horizon we both felt that we never wanted to get into an aeroplane again. Sixty odd hours of flying in twelve days was enough to make anyone tired. We were met at Delhi by various members of the Aero Club and the agents for the Comper Swift in India. We were too tired that night to do any work on the machines so we put them away with the other machines which had also arrived for the race and went to the hotel in New Delhi. That night we dined with the agent and met the various representatives of petrol and oil companies whom we all told to come to the aerodrome the next day and at a very early hour we were both in bed.

The next day being two days before the race we got out to the aerodrome as early as possible to start the work on overhauling the machines prior to the race, as the only time they had been looked at since leaving England was Cairo. On looking over the Gipsy Swift the only work that was found necessary was just the normal maintenance such as checking the tappets, magnetos, plugs etc. and by tea time I had finished my machine and she was ready for a test. I gave her the test flight and was very pleased with the results, as it was the first time I had flown her in racing trim. After the test I went to see how Shuttleworth was getting on and found that as usual he had been doing more talking than work, but as we still had another clear day we decided to work on his machine the following day. We dined that night with the Director of Civil Aviation in India.

Thursday, the day before the race, was spent working entirely on the engine of Richard's Pobjoy, as it was not giving full revs and also throwing out an excessive amount of oil. After trying everything possible we finally decided to remove the cylinders that had weak compression and grind in the valves. The job was eventually finished about midnight, but the engine was still down on its usual performance and as there was no time to do anything else, we decided to race the machine as it was. We packed up and went back to the hotel.

Friday 10th of February 1933, the day of the race was, except for a moderately strong northerly wind, a beautiful day. The first machine got off at 07:00 and as I was not due to start for another two and half hours and after seeing Shuttleworth away, I decided to have breakfast and swing my compass. At 09:30 I took off on the first leg of the race. It was a hop of

120 miles dead into the wind to a place called Bareilly, where I arrived fifty minutes later having flown the whole way across country that had very few landmarks. At each control point there was a compulsory stop of 45 minutes to allow for refuelling.



The next section of the race was to Lucknow which is approximately 160 miles south of Bareilly, but it is a comparatively easy section of the race as one more or less follows the river. At Lucknow we were given lunch by members of the aero club and 45 minutes after landing I was in the air again setting a course for Agra, two hundred miles north-west of Lucknow. The only three landmarks on this section of the race is the crossing of two railways, one of which is marked on the map, and a river. By the time I got to Agra it was easy to see I could not win, as the first three machines were very much above their handicap speed. I was met by Shuttleworth who had retired at Bareilly due to a lack of power and had decided to go direct to Agra to see me arrive there, but en route he had force landed in a village street with a broken oil pipe which he mended. We got away from Agra about three o'clock and set a course for Rampur, which took me an hour and was into a strong wind which had now gone round to the north-east. I had a slight difficulty in locating the aerodrome as it is only a parade ground surrounded by trees. Here the Prince who owns the state had organised a very excellent tea for the competitors.

When I left Rampur on the last leg of the race back to Delhi, I had worked out that if all went well I would get in fourth, as I was three miles an hour above my handicap speed and the first three machines were fifteen above theirs. After 35 minutes flying I could just see Delhi over the tree tops and as I came in sight of the aerodrome I could see that a large crowd of people had arrived to witness the end of the race. As I dived across the aerodrome I could see that the three other machines were in and that my forecast of fourth place had been correct. Later, I went over to the control and enquired what my average speed had been over the 700 miles and was told that it had been 153.4 miles an hour.

Hour.	Aeroplane Type and No.	Pilot	Passenger(s)	Time	Height	Course · . REMARKS
1-2-33	G-ACBY	Sere	_	2.05		RUTBAH - REMADI
3- 7: 33	,	4	_	. 40	4	REMADI - BAGHDAD
3 - 2 - 33			-	2.35		BAGHDAD - BASRA
4-2-33			-	2.06		BASRA - BUSHIRE
6:2:33	q	41	-	2.40		BUSHIRE - LINGEH
5-2-33	4	,	~	1.30	1	LINGEH - JASK
5.2.33		4	-	2.05		JASK - GWADAR
(-2-33	4	1	-	1.50		GWADAR - KARACHI
6-2-33	9	1	-	1.05		KARACHI - HYDERAHABAD
. 2. 33	9	4	-	1.25		HYDER AHABAD - GADRA ROAD
6-2-33	1		-	25		GADRA ROAD - UTERALI
7-2-33	r ₄	4	_	.55		VTERALI - JODHPUR
7-2-23	4	1 1	-	.55		JODHPUR - UTERALI
7-2-33	4	14	-	1.00		UTEKALI - JODHPUR
7-2-73	4	1	-	2.25		JODHPUR - DELHI
8.2.33		**	-	15-		TEST
7-2-13	•	,	_	.20		TOST
0-2-35			-	- 50		DELHI- BARELLY VICEROY CHALLANGE CUP"
012-33	4		-	.50	4 90	BARELLY - LUCKNOW AVERAGE SPEED 153 MPA
0 . 2 . 33	44	e	_	1-15	1	LUCKNOW - AGRA FOR YOU MILES RACE
0:2:3)	4.	46		1.00		RAMPUR - DELHI TIME 4 Mg 43 - 15 Ser.

Image 9.13 My Log Book entries for the Race.

As I got out of the machine, the Director of Civil Aviation came over and said that His Excellency the Viceroy and Lady Willingdon wanted to see me. They came over and inspected the machine in which they were very interested and at the same time asked Shuttleworth and myself to dinner that night. After the race was over we went to a cocktail party given by the Director of Civil Aviation and from there went back to the hotel and tried to make ourselves clean before going to the Viceroy's house for dinner. The dinner party was a great success but we were both too tired to really appreciate it.

The next day was the day of the civil air display and after an early lunch we went out to the aerodrome to get the Gipsy Swift ready for the display as I was in the flypast and giving a demonstration at the end of the programme. His Excellency and Lady Willingdon arrived at 3pm in time to see the flypast, after which I had been asked to give a demonstration of aerobatics in a Pobjoy Swift owned by an Indian. This went off very well, except that the landing was one of the worst I had ever made.

After the display was over Lady Willingdon presented the prizes for the race and I was lucky enough to secure two. The first was fourth prize which consisted of a pair of goggles. The second, for the fastest speed, was the Wakefield Trophy, a large silver globe with a map of India and a silver plane flying down the side, together with a cheque for £45.





After the presentation of prizes we went to the hotel where nearly all the members of the aero club had gathered and a large, noisy cocktail party was in progress. We decided to give a dinner party that night for our friends and after dinner we went to the "Hog Hunters Ball" as guests of Lady Willingdon.

AIR RACE IN INDIA WON AT 116 m.p.h. CALCUTTA, Saturday.-Capt. the chief instructor of the Delhi Flying Club. won the Vicerov's Trophy in the annual air race today. Flying a Moth plane, he completed the course 18 minutes ahead of his nearest rival, with an average speed of 116 miles an hour. Twelve planes started. Two were forced The highest speed was attained by Flight.-Lieut. Stead in a Comper Swift monoplane, with an average speed of 153 miles an hour.

Image 9.16 Press cutting.

The next day we were asked to leave the hotel as our rooms had been booked for the Horse Show week, but as we had been asked by Colonel and Mrs Duncan to go and stop in their camp, which they had on the race course, we did not worry in the slightest and after lunch we packed all our clothes in the back of the car that the French Motor Company had lent us for our stay in Delhi and proceeded to the camp. On arrival we were allotted a very large and spacious tent complete with spring beds and a bath room attached. In the camp there were about 25 people and it was one of the brightest parties that one could wish to join. That night after

dinner there was a massed picture party to the one and only cinema in Delhi and which was only an apology for one.

There was one other person who had competed in the race stopping in the camp and that was Mrs Horsman, who had done so much for the aero club in Delhi during its early days and who had even gone so far as to present her own machine to them. She put up a really stout effort in the race as she was held up for an hour at the first stop with magneto trouble, but even when she knew that she did not have a chance of being placed, carried on and completed the course for which she won the cup for the first lady home. Sadly she died when an Imperial Airways plane crashed at Alexandria in Dec 1935.

On Monday morning I went to Ambala to see some friends of mine and to show Lieutenant Atcherley the Gipsy Swift, as he was interested in buying one. He flew this machine but on landing struck rather a large lump on the aerodrome which broke one of the compression taps in the fuselage. I spent the night in Ambala and as the damage was going to take some time to repair, I arranged to return to Delhi the next day in a Westland Wapiti and arrived back to camp in the early afternoon and went off to the Horse Show with the rest of the people for the afternoon.

As most of us were going to The Ball, which was being given at Viceroy House that night, we dined in camp. The Ball was a wonderful affair, but there was such a large crowd of some 1,500 people it was impossible to dance.

On Wednesday morning we went to discuss with the Director of Civil Aviation the subject of me doing a demonstration flight from Karachi to Madras with the mail, as up till then they had not had a machine that was sufficiently fast enough to go right through in one day, but on going into it the question of weight and bulk it would be impossible for me to get the required load into the machine. We went and lunched at the New Delhi Club with the deputy director and his wife and in the afternoon went out to the aerodrome and did some flying in the Pobjoy Swift. That night we went to a dinner party in the hotel and afterwards to the Hunt Ball, which was held at the New Delhi Club and was a very bright party.

The next day we did nothing all morning, but in the afternoon we went to the Horse Show and to the Polo Ball at night. We were so lazy by now that it was an effort to do anything at all.



Friday morning was spent at the aerodrome flying and in the afternoon went to the final day of the Horse Show. We had sent the Pobjoy Swift to the French Motor Company's stand at the show and there was a very great interest taken and a large quantity of questions asked. That night we dined in the camp and then went to the Horse Show Ball, which was the final big ball held during Horse Show week and was the best party of the lot, except that things got rather broken up towards the finish and the next day the club looked as if a hurricane had passed through it.

On Saturday Atcherley brought the Gipsy Swift down from Ambala and came and stopped in the camp for the weekend. That night there was a party somewhere, but I cannot remember where, but the result of it was that we were all asked to attend a cocktail party at the Royal Air Force mess at lunch time on Sunday. The next day Mrs Horsman and I flew over to the RAF aerodrome to the party and came back to the camp for lunch. The afternoon was spent at the aerodrome and various people flew the Pobjoy Swift and Captain Riley flew the Gipsy Swift. I had been asked to go over by air the next day to Cawnpore with Mrs Horsman and stop with them for a few days. As Shuttleworth was returning to England by

Imperial Airways on the Tuesday and I was going to return home by myself, I accepted this kind invitation and went off by air the next day.

We did not have sufficient petrol to go from Delhi to Cawnpore, so made arrangements for the petrol to be brought to the landing ground at Agra, which is more or less on the track. We arrived at Cawnpore about 4pm and were met at the aerodrome by Mr Horsman and we went to their beautiful home in Cawnpore.



That night was the first quiet one that I had since arriving in Delhi twelve days before. On Tuesday morning I was flown around the district in the vicinity of Cawnpore and shown the sights, returning home to lunch and was thoroughly lazy all afternoon. In the evening I went riding for a short time and spent the remainder at home playing bridge.

On Wednesday having no energy at all I did nothing all day except ride again in the afternoon out to the aerodrome and watched the club instructor giving dual lessons to various pupils from Cawnpore. It was after riding I noticed that my knee on which I had fallen in Delhi was starting to give trouble, so I got a doctor to look at it with the result that I was told to rest it for three days. On Thursday I did nothing except to lunch with the Army and sleep all afternoon. The next day I flew the

club's Moth out to a forced landing of another privately owned machine and as I returned encountered a very severe thunderstorm and just as I landed at the aerodrome the storm broke with such violence that with the wind and rain combined it was impossible to see across the aerodrome, but in 45 minutes it had passed and except for leaving everything soaking wet it was a wonderful evening. On Saturday morning I did some shopping and was taken round the native quarter where the streets were so narrow that it was only just possible to get a car through. That night I attended the Bachelor's Ball which is the big ball of the year in Cawnpore. Preceding the ball was a very excellent dinner party given at the house and as the ball was fancy dress and everyone in excellent form, I think it was the best party that I had attended since arriving in India, even though it was very late finishing.

The next day I had decided to return to Delhi and after an early lunch I set off in the aeroplane to return via Agra. I had a very nice trip as it was a perfect afternoon and even though I did not feel very well when I left, I was full of spirits on arrival at Delhi. That night I went back to the camp, which was still in progress and started to pack my clothes. I had decided to leave on Tuesday for Jodhpur on my way home to England in company with an Indian named Ali Alban who owned a Pobjoy Swift, the same as Shuttleworth's plane. Monday was spent in giving the machine a general overhaul and going round saying goodbye to all the people I had met and had been so wonderfully kind to me whilst staying at Delhi. That night I went to a mild party at the Gymkhana Club.

The next morning I did not get off at the same time as Ali, as I had one or two jobs to do in Delhi before leaving, but after lunch I packed everything into the machine and left for Jodhpur arriving there at 5:15 in the afternoon only to find that there was a large gathering of people at the aerodrome. They had heard that the Gipsy Swift was coming through and that I was going to demonstrate it that evening, so just as the sun was setting I took the machine out to demonstrate it. I think that as a result of this demonstration His Highness would have bought one of these aircraft if he had been allowed by his club instructor, but I'm afraid he thought that they were too dangerous for him to fly. After the demonstration we were asked if we would like to stop as His Highness's guests for a week of celebrations that had just started. This we accepted, but pointed out that

we could only stop for two days. We stayed at the State Hotel and that night a large party consisting of all the white people in Jodhpur numbering about twenty was being held and which we joined.

The following day we saw the sights of the town which included a visit to the fort, which was built out of the solid rock and in which His Highness kept his jewels estimated to be valued at £3,000,000 and which due to the customs of the state, he only sees once in a lifetime as each Prince has new jewels when he inherits the state. As we had been given a car whilst staying there we decided to go out that afternoon and do some sailing on the artificial lake which is used as one of the reservoirs for the town. I returned to the aerodrome again at dusk to find another large

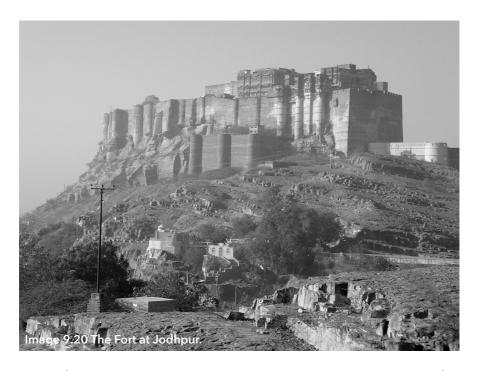


collection of people had arrived and expected me to demonstrate the machine again and seeing that I was asked personally by His Highness, I found it impossible not to do so. So I gave a short demonstration, which included two landings on the polo ground at the side of the aerodrome. That night we dined with the club instructor at his house and afterwards went to a picture show given by His Highness in his private theatre.

The next morning we had been invited to join a shoot and at 9am we were collected in one of His Highness's Rolls and driven out to the shoot, which was taking place on

the three artificial lakes about six miles away. The shooting was good and the total bag for the morning for the eight guns amounted to 120 birds. When the shoot had finished we all went to a central meeting place where there were iced drinks and a marvellous array of food to eat. We got back to the hotel in time for a late lunch and in the afternoon decided to go out and see His Highness's Summer Palace, which is situated about 15 miles outside Jodhpur and on another artificial lake which he built especially. The gardens are a wonderful sight, as there is an area of about a square

mile of the most wonderful flowers and green lawns with a terraced waterfall about sixty feet high made out of marble.



We had received an official invitation to attend a state banquet that was being given that night. We arrived at the palace shortly before 8pm and were shown into a large room in which there were already about 100 people gathered. There were masses of cocktails of various types and by the time His Highness arrived there were about 150 people gathered. We went into dinner about 8.30pm and I think that it was the most spectacular dinner party that one could attend, as all the Indians were in their state dress, all the plates were made of gold, so were the cruets and vases that were on the table, while outside the state band was playing. But what surprised me most was the fact that we were served a seven course English dinner. After dinner everyone attended another talkie picture show.

On Friday we got off about lunch time and set a course down the railway for Hyderabad, where we were stopping for petrol before carrying on to Karachi. We arrived at Hyderabad about the middle of the afternoon and after filling up with petrol we left again for Karachi, where we arrived in time for tea. We went and spent the night in a hotel in Karachi, where we were cleared by the doctor and customs.

The next morning at 3am we left for the aerodrome, which took us about half an hour to reach and by the time we had packed all the stuff in the machines and we were ready to leave it was about 04:30. As the Madras Mail had just left and it was still dark, we would be taking off by floodlight, setting a course direct for Gwadar and as we were leaving in the dark we decided to go independently. We had no lights in the cockpits and I used a torch to see the instruments.



After flying for about two hours I noticed ahead what appeared to be fog, so I altered course inshore and when within 60 miles of Gwadar, I passed over a fog bank and all that I could see was the tops of the hills sticking out above it. I flew on above the fog for about 20 minutes, but as it was so thick it was impossible to see the ground and I decided to return to a small landing ground called Pasni, which was about where the fog started. I landed here and after about half an hour I noticed that the fog appeared to be clearing, so I set off for Gwadar again. I arrived at the aerodrome to find Ali had come on over the fog and had been flying around for over an hour waiting for it to clear. We filled up with petrol and set off for Jask, which we reached two and a half hours later. Along this section of the route we experienced a following wind, but the visibility was bad.

At Jask we had the same trouble over customs and the doctor as we had when going out, but after about an hour we managed to get off again and set a course for Lingeh. The flight from Jask to Lingeh was quite enjoyable as the weather had cleared and after flying for two hours, we arrived over the aerodrome. I had worked out during the flight that it would be cutting things a bit fine to try and get on to Bushire that night, so when we landed it was decided to stop for the night and carry on the next morning as early as possible. After picketing the machines down, we went into the town in the one and only car and as there was no rest house in the town went to the petrol agent's place. I think it was the worst night that one could ever wish to spend, as we slept in a small and very dirty room and were given the most extraordinary food to eat, which made us both feel ill for the next two days.

The next morning when we got up to go, all the arrangements had been messed up due to the fact that the taxi driver had decided that 3:30 was too early for him to start work and he eventually arrived an hour late by which time we were both in furious tempers and felt like murdering all concerned. We eventually got off at 05:30 in excellent conditions with a slight following wind, but this did not last long because after we had been going for about an hour, I noticed that the wind had gone round to the north-west and clouds were appearing ahead. A quarter of an hour later we ran into heavy rain, low cloud and a strong head wind. We flew for two hours through this rain and wind before we reached Bushire and as we had been three and a quarter hours in the air, I was getting rather

nervous as to how much longer my petrol was going to last and on landing I found that I only had three gallons left.

After clearing customs it was still raining and blowing hard and we seriously thought of delaying our departure until the weather should clear, but the thought of spending another night in Persia was too much for us to endure, so we decided to push on to Shaibah. About twenty minutes after leaving Bushire the weather started to clear and by the time we reached the estuary of the Tigris, the clouds had dispersed and except for a strong wind, flying conditions were good. Shaibah was reached about lunch time and after a quick meal in the mess we left for Bagdad, but luck was against us because about fifty miles north of Shaibah we ran into dust, which by the time we reached Ur, on the south bank of the Euphrates was so thick that at 100 feet the railway line became invisible. As it was getting late in the afternoon I decided to land on the landing ground and continue the next day. We tied the machines down securely and then went to the rest house, where we had a very excellent dinner and very comfortable beds, although the cost was rather exorbitant.

We got off just after dawn the next morning with good visibility and set a course direct for Bagdad, where we arrived about 9:30am. We stayed only long enough to refuel and clear customs and by 10:30 we were on our way to Rutba. We set a compass course that would take us on to the Rutba track just pass the two Bitumen Lakes, which are very prominent land marks and are about 75 miles from Bagdad. We had a excellent trip, except that as we approached Rutba a strong westerly wind sprang up which made our ground speed rather slow. At Rutba we had another setback as we discovered that Ali's Pobjoy had broken a magneto coupling and a tappet screw. By the time I had fitted a new coupling and made a new screw in the Imperial Airways workshops, it was too late to proceed any further that night. This was a nuisance as it meant the loss of half a day.

On Tuesday morning we got off just before sunrise and started off along the pipeline for Zerka. After flying for about an hour, I saw Ali making a forced landing and as it was good country I went down and landed as well. He said that his engine had just died and on looking for the trouble, it was discovered that he had no petrol in his gravity tank. I pointed this out to him and he said that his gauge had still registered the tank as being one quarter full. I think he learnt his lesson and will not

trust the gauge again. After pumping up from the main tank we took off again. By this time a strong westerly wind was blowing, which meant that I was only just going to have sufficient fuel to reach Zerka. We arrived at Zerka three and a quarter hours later and after filling up with petrol and lunching with Colonel Shute, we left for Cairo. Just after passing Jerusalem I lost sight of Ali and went back to look for him, but was unable to find him so I carried on to Cairo.



I arrived at Cairo at about 3pm and on landing discovered that I had a broken tail skid as well as a number of holes in the underside of my tailplane. This damage must have been done taking off at Zerka, so I gave the machine to Misr Airwork and told them I wanted it repaired and generally looked over ready to leave at daylight the next morning. I had no news of Ali, so I assumed he must have forced landed somewhere en route, but as I was pushed for time to get back to England I was not going to wait for him to turn up. I spent a quiet night and as I hoped to do a long day's flying the next day was in bed early.

The next morning, just as I was leaving I received a telephone call from Heliopolis to say that they had received word from Ali to say that he had forced landed with engine trouble near Ramleh and required some

new parts. I handed the matter over to Airwork to deal with and by 05:15 I was in the air setting course for Marsa-Matruh. I had a bad trip over this section of the route as there were low clouds and bad visibility the whole way, but by 08:15 I had landed, filled up with petrol and left for Tobruk after having passed through a very thorough customs examination in which they made me open up all the inspection holes to see that I was not carrying drugs out of the country. The trip along the coast was very enjoyable, except that a westerly wind which had prevailed since leaving Bagdad was still blowing hard with the result that it took much longer than I had anticipated to complete the trip. I was at Tobruk by 10:15 and had filled up with petrol and left again by 11:00, on a moderately short flight across to Benghazi.

This flight across the interior was uneventful, except that as I approached Benghazi it became incredibly bumpy and it took me all my time to keep myself and all my maps in the machine at the same time. I also noticed on this part of the flight that my petrol hand pump was not functioning properly, so on arrival I took the pump off and dismantled it to find that the small steel rings on the piston had become worn, so I expanded them slightly and on replacing the pump I found that it worked perfectly. I got away from here by 1pm and set off on the long sea crossing to Syrte.

The beginning of this trip was very nice, but when about 150 miles off the shore the wind went round to the south-west and clouds started to form. By the time I arrived it was blowing about 40mph on the aerodrome and the dust was just starting to rise. I put the machine away and as the Italian Air Force had been so kind as to offer to put me up until conditions improved, I went to the mess where I was given a large meal of spaghetti and having had nothing to eat all day it was very good. By late afternoon it was blowing a gale and one could not see 50 yards for the dust. I was very lucky to have arrived before this started. That night for dinner we dined also on spaghetti and in fact every meal I had during my stay of two and a half days consisted of the same diet.

The next morning dawned the same as the evening before and after breakfast I went up to the post office to send a cablegram to Shuttleworth to say that I was being delayed due to storms but hoped to arrive on the 15th. That day it blew a gale all day and continued until sunset when the wind dropped and we had a rainstorm which lasted about two hours. This gave me hopes of it being fine the next day, unless it rained too hard and the aerodrome became flooded as these aerodromes do very quickly.

By 10am the next morning the aerodrome had dried sufficiently for me to take off and after thanking everybody for being so kind I left for Tripoli. I must say that the Italians are very hospitable people, but ones does get rather tired of living on spaghetti. After leaving Syrte I had more bad weather running into low clouds and rain and the good old west wind. These conditions continued the whole way to Tripoli and was so bad by the time I arrived there that I decided to await an improvement. I met on the aerodrome an army officer who was flying a moth out to India and who was also held up on account of the weather. So we took a car and went into town, which is about six miles away. A large distance of the road was under water due to the heavy rain and most of the streets were running like rivers. As the weather showed no signs of improving we decided to stay the night. That night we had rather a large party as it was the day of the Carnival, which is the big festivity of the year and I'm afraid that all the sleep I had that night was about an hour and a half before we left for the the aerodrome at 4am.

When we arrived at the aerodrome and had got the machines out we still found that it was impossible to get away, as the officer who signed our papers had been to a party the night before and was not starting work until 7am. To fill in the time we went to the local cafe and had breakfast. It was 08:00 by the time we both got off, one going east and the other going west. I had a very enjoyable trip, as it was a delightful morning without a cloud in the sky and a slight southerly wind, which made it pleasantly warm. I arrived at Gabès about mid morning where I refuelled and collected the heavy flying clothes that we had left on the way out and by 11:00 had left for Tunis. The weather was good over the flat plain which is covered in orange groves and looked very pretty, but as I approached the hills, which are about 3,000 feet high, it started to rain. The clouds became so low that it was impossible to go over the tops of the hills and I had to fly down the side until I found a valley that I could get through. I did not want to go above the clouds across here as my engine was losing revs.

Tunis was reached shortly before lunch and I was collected by the Shell agent who took me into town for a meal. I went back to the aerodrome after lunch to try and see why I had been losing revs. The fault was discovered to be one magneto not working, so I took it off and dismantled it to find that it was full of oil and very dirty. I cleaned it and replaced it, but still the engine was missing slightly, but this time on the other magneto. The fault this time was not the magneto but the plug leads which were shorting. It was too late to replace these that night, as they had no cable at the aerodrome and as it was Sunday all the shops were closed. I dined that night with the director of the Shell company in Tunis who was very interested in the flight and asked whether I had experienced any trouble with the Shell service. I told him that with the exception of the trouble in Hyderabad the organisation had been excellent.

I had the machine finished by 11:00 the next morning and by midday had left for Catania. Shortly after leaving the coast I ran into the same fog that we had had going out and when I reached the coast of Sicily the fog had turned into rain together with low cloud. The clouds were too low to allow me to cross the high interior, so I had to follow the coast right round and go over the low hills which lie just to the south of Catania. When I landed on the aerodrome I was surprised to find I could not keep the engine going and on looking into the trouble discovered that the carburettor was flooding, so I put the machine away and I started to take the carburettor off, as it was obvious that the trouble was a sticking needle valve. I could not finish cleaning the carburettor that afternoon and I could not use the hangar unless the staff were there, so I went into town and booked a room at the British Hotel. That evening having nothing better to do I went to the cinema which was without exception the worse I had ever been in.

The next morning I got out to the aerodrome shortly before 7am and got the carburettor completely dismantled to find that it was completely full of sand. This had obviously got blown in during the dust storms at Syrte. It took me until 11am to finish the carburettor and then I had to get my papers signed up, so it was nearly 11:30 before I left. The weather was not too good, as it was still raining and blowing quite hard from the north. This made it impossible for me to take the western route and the prohibited area meant that I had to make a long detour round to the east and across the bottom end of Italy. By the time I had crossed the foot of Italy the weather was clearing and after going for an hour the clouds

dispersed and I had an excellent trip up to Naples, where I arrived shortly after 1pm. I refuelled as quickly as possible and by 2pm I left for either Rome or Pisa. I had decided that if all went well I could reach Pisa without having to stop and refuel at Rome. This section of the flight is very interesting due to the scenery, which is always changing, getting more rugged as one goes north and between Rome and Pisa the flight is across the lakes which are surrounded by hills covered with fir trees. I got to Pisa at 3.30pm and refuelled the machine that night as I wanted to make an early start and try and reach England the following day. I spent the night at a hotel in the town.

Just before dawn the next day I left for the aerodrome, but due to the Italian's idea of there being no reason to hurry, it was 07:30 before I got away to do the sea crossing to Nice. About half way across I ran into fog, so I decided to alter course for the shore and followed the coast round. As I reached Nice the fog cleared and the town looked very peaceful in the bright sunlight with the backing of green countryside. I stayed at Nice only long enough to refuel and an hour after landing I was on my way to Lyon. I had hoped to set a course straight across the Alps instead of having to make a detour round by Marseilles, but when at 8,000 feet over the foothills I came over clouds which stretched as far as the eye could see, I decided that the safest thing to do was to go back and come up the Rhone Valley. It was just as well that I did decide to do this because halfway to Lyon I ran into more fog and by the time I arrived over the aerodrome, the visibility was about three quarters of a mile. I had a quick lunch, but the aerodrome authorities tried to stop me going on as they said that there was thick fog north. However, I thought that if I followed the railway up the Rhone Valley, if it became too thick I could always force land at one of the many landing grounds situated along it.

The fog did not get really thick except round Dijon and there the visibility was about half a mile, but if one stuck to the railway it was not really too bad, excepting for one section in the hills which lie to the northeast of Dijon where the railway goes through a tunnel about a mile and a quarter long and the ground rises very steeply over it. It was about 2.30pm when I got to Paris and after refuelling quickly I left again for Lympne. Excepting for the bad visibility I had quite a reasonable trip across France, but as soon as I started to cross the Channel the fog came

down again and I flew pretty well blind the whole way to Lympne. I arrived and refuelled and was off again by 4.30pm and as there were signs of more fog inland, I wanted to get up to Old Warden before it got too late. The last part of the flight was not too bad as the visibility improved, except round the north of London where the wind was blowing the smoke up and I must say that as I flew across the Thames and north London I felt pleased to be back. At 5.30pm I landed on Shuttleworth's private landing ground having completed 1,500 miles in just 130 hours flying time.



As a result of this flight I have seen parts of the world that I would never have seen otherwise and have gained a terrific amount of experience in flying in all kinds of weather, from dust storms to snow storms. In conclusion I should like to say that I think that I was very lucky to be asked to fly such a pleasant aircraft as the Comper Swift on such a long flight and compete in a challenging air race.

Chapter 10

AMMAN

Before leaving Delhi I was tipped off that there was a signal from the RAF, ordering me to report to Amman and not to return to England, but I kept ahead of this message officially until I got home and was very "surprised" upon reporting back to 18 Squadron, to be told that I ought to be in Amman. The Air Ministry Postings were contacted and told that I had never seen the signal which was of course correct, but I incurred their displeasure just the same!

The only way the RAF went abroad at this time was by P&O and I was put on the first ship bound for Port Said. This was really no hardship, as I travelled first class with an allowance. In retrospect, the voyage is rather vague and on my arrival at Port Said I was put onto the local express to Cairo, where a 14 Squadron aircraft had been sent down to collect me.

Heliopolis was then the main RAF station in the Middle East and was situated in a suburb of Cairo and considered to be a plum posting to a very gay city.



When I arrived in Amman the squadron was just changing over from the Fairy IIIF to the Fairy Gordon, a biggish biplane with two cockpits, the rear one of which could seat two people. The old Napier Lion water cooled engine was replaced by a more powerful air cooled nine cylinder radial engine giving more power and was one of the early supercharged engines. When we visited the landing grounds around the Dead Sea, which is 1,100 feet below sea level with the increased atmospheric pressure, care had to be taken not to open the throttle too far and over boost the engine on take off.

Life in Amman in 1933 was quite good fun if you liked the outdoor life. The station was based on the top of a very steep wadi or valley with more or less vertical sides for about 200 feet into which the road to the camp had been cut. In addition to the squadron there was based in the camp the remains of an RAF armoured car company who used WWI Rolls-Royce cars. What this was still doing there remained a mystery, as the original role of reconnaissance was now carried out by aircraft. Still, these cars gave us a lot of fun as we drove out into the desert in them, their engines were as silent as any modern Rolls, as we chased gazelle and turkey bustard with .303 rifles for the mess, as meat was not too plentiful and had to be brought in from Jerusalem.



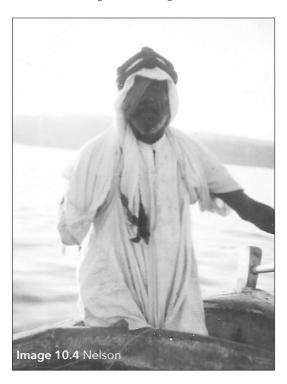
In those days, Amman was not the city it is today. There was one small hotel used by tourists who were brave enough to risk the car ride from Jerusalem on a poor road to see the world famous amphi-theatre. The King of Transjordan was then the famous wartime leader the Emir Abdullah and the equally famous Colonel Peak Pasha was commanding the Arab Legion. What a body of men they were and at this time were just starting to go from camels to mechanically propelled vehicles. To see a company of the Legion riding out into the desert on their camels, or to see them making camp, was a sight never to be forgotten. The long flowing robes and head-dress and the gaily coloured harness was wonderful, but for all this they were a force not to be tampered with, as they would easily cut an offender's throat without thinking twice. I have had many a meal, sitting on my haunches, with them offering round a big pot of rice and roast goat and of course eating with fingers, tearing pieces of meat off the carcass.



Image 10.3 Historic town of Amman capital of Transjordan..

I was sent to represent the RAF at a feast in the desert given by the Sheik of some bedouins herdsmen who wandered the desert with their goats, sheep and camels. The seat of honour was mine and a sheep, a luxury, had been killed and cooked for the occasion. The local Sheik took the head and with his fingers gouged out the eyes, handing me one and keeping the other for himself. He bowed and swallowed and in order to cause no offence I must do the same! Down it went and I remember thinking of cisterns and trying not to be sick.

Life was very free and easy and we had, at the head of the Gulf of Aqaba, a hut on the beach and a small landing strip about 1,000 yards by 50 yards and each weekend some of us would fly down and spend the time swimming and fishing.



The term "fishing" is perhaps a little inapt, as the only boat was owned by an old Arab with one arm and one eye. He was, obviously, nicknamed "Nelson". He used to take us out into the Gulf and would then stand at the bow as we drifted down wind with a home-made bomb in hand and a smoking taper in the other. When a shoal of fish were seen, the taper was put to the fuse and the bomb thrown ahead of the boat. This was alright if the fuse was long enough for it to sink well. If not, it would explode under the boat and

how the bottom withstood this punishment I can't think. But we did get the fish, which were excellent, as I have said before fresh food was difficult. Old Nelson had lost his arm and eye when he accidentally touched the fuse with the end of the taper and did not know it. He should have been killed, but possibly the layers of clothes he always wore took the shock.



Aqaba at that time was little more than a few Arab huts and a trading post, whereas today it is a considerably sized port. The railway ended at Amman, south of which could still be seen a wrecked train still in position, a relic of Lawrence of Arabia's activities during the war. Further south lies the historical town of Petra, a ruined town carved out of the limestone cliffs in a deep basin. Only access is through a deep gorge just wide enough for a donkey. Although the whole area of Petra is in ruins, the buildings are extremely well preserved and all visiting "Brass" would expect to be taken there. We would fly to a frontier post at Maan and then proceed by car to the start of the gorge and on from there by donkey. I never tired of visiting this extraordinary place.

There is a large area in the south called the Wadi Rum and it consists of a plateau of sand with large outcrops of rocks, which rise from its midst for about 1,000 feet. Under the pretext of Desert Reconnaissance we would go on a flight and play "follow-the-leader" round the rocks, landing on the hard sand in the shade of the rocks for a meal. The whole of Transjordan, as it was then called, is over 1,000 feet and in the winter it is very cold with equally hot temperatures in summer. We all had Hebrew sheepskin coats for winter use and these beautiful garments cost £5.



One of the jobs of the Squadron was the weekly mail run to Baghdad. This was always anticipated with pleasure because of being allowed a night there. Whoever went on this trip always brought back fresh black Caspian caviar. This could be bought in Baghdad for the princely sum of 10/- per pound. In fact, if one went into a bar there and ordered a beer and sandwich, caviar would be served with this unless something else was specifically ordered. It was customary for the mail to be flown from Cairo to Baghdad by a Cairo Squadron, but then we took over that delivery. At that time the Iraq Petroleum Company had newly completed the pipe-line from Kirkuk to Haifa and at the pumping stations, small landing strips had been made and given the code L1, L2, upwards with Rutba Wells in the middle. There were only two tracks across the desert and we always had to follow either the pipe line or the motor track on which the Nairn brothers ran their buses twice a week from Damascus to Baghdad. The reason for the rule, was that in the event of forced landing, you would be found instead of either freezing or roasting to death.



One of the Flight Commanders was Atcherley, whom I knew, and he and I considered laying a series of automatic beacons for a night flight to Rutba. About a dozen alarm clocks were purchased along with batteries and landing flares. The mad idea was that by setting given times on the alarm which operated contacts to the battery the flares could be fired. The day of the experiment arrived and I was to fly across landing at odd numbered L stops setting up one of these beacons and then stop at Rutba. Atcherley was to leave after dark at a given time and the flares should light up ahead of him. That night a sudden storm arose and he was unable to take off. I flew back the next day and collected the remains as they had all gone off. Any wandering Bedouin who saw the display must have thought Allah was after him. Atcherley was a great aerobatic pilot and had with him a little low wing monoplane with a carburettor which allowed him to fly inverted. Often we could hear him approaching, but could see nothing and then he would appear over the side of the wadi on his back, roll and land. He was a maestro.

The CO of the Squadron was a most tolerant man and entered into a lot of our activities, but the Station Commander was a very different kettle of fish. I remember one Mess Night which coincided with the arrival of the twice-weekly train from Damascus. Rather late in the evening, all in

very good spirits, someone suggested that we get the steam engine out of its shed and go to visit the Frontier Force at Zerka. This was a military force of British Officers and Arab troops with whom we frequently worked and their base was about ten miles up the railway. Eight of us went down and opened up the shed. The engine was still hissing and showed pressure on the gauge, but it could not be made to move which was just as well, so we abandoned it and found one of those hand trucks, which by working a cross arm, one could propel oneself along. In we all trooped and pushed off into the night. Going downhill the contraption got out of control and I don't know why nobody fell off. Arriving at Zerka we took the trolley off the rails and up to the Officers Mess. By this time it was very late and as our popularity had diminished, we were put into a car and home we went. Next morning all hell was let loose! The Railway Company accused the RAF of interfering with a locomotive and of stealing a trolley. The Station Commander was not amused and was forced to write a letter of apology, attaching copies of our individual apologies to the Railway Company. We also had to give an explanation to Air HQ in Jerusalem of the whole episode. The eight of us involved, including some senior Flight Lieutenants, were told and I can still hear the words... "an irresponsible, unreliable lot and not fit to be officers."

It was during my time at Amman that I gave my first and only stage performance, when I played the part of a character called "Stanhope" in a war-time play, the name of which I do not remember. One day out of the blue, three men and three women arrived and said that they were a theatrical company and could they do a show at the camp in exchange for lodgings and a charge of two shillings a head. This was readily agreed upon and by the time we had dined them, they were in very good form. As the whole station was there the show was held in the gym. Some of us who had been in trouble over the railway incident, bribed one of the girls to "fix" the Station Commander. Half way through the show there was the usual sing song when this girl left the stage. Installed in an armchair in the front row sat the "Great Man" and before he could raise any objection she was on his knee, her arms around his neck and singing "Have you ever been lonely?" The house was in hoots of laughter and the stupid man got up to his feet and left. In our opinion honours were even.

During the year we went to Cairo for the annual air display which was fun as we were to demonstrate wing formation flying. This entails three squadrons of nine aircraft, all tucked up together, and it was quite impressive. By now, for some strange reason, I was Flight Commander as well as Navigation Officer and so my behaviour had to become a little more sedate, which was hard. I was lucky enough to be asked to the Palace and on two occasions I met the great man, King Abdullah. He was a wonderful person.



There was a polo ground in Amman which belonged to the Arab Legion and they used to lend us ponies to play on. The ground was devoid of a single blade of grass, but had an abundance of little stones. The ponies were well trained in the art of stopping and turning and many an RAF officer slid along the stoney ground and it was not a pleasant experience. I achieved the doubtful honour of being in the RAF team and used to play against, not only the Arab Legion, but the Frontier Force as well.

On looking through my log, I see that on 13th of June 1934 I did a Met climb up to 17,000 feet, which as there was no oxygen was a fair height at that time. By now I was tiring of the monotony of RAF life and envious of the pilots of Imperial Airways who used to drop in for fuel from time to

time with that great machine, the Handley Page 42. I applied for permission to resign my commission six months early and this was approved and on 13th July 1934, I left the RAF and was given my gratuity of £350 and a passage back to England.



Upon arrival in England two weeks later having shipped to Marseilles and travelled home from there by rail, I saw an advertisement for a pilot for Indian National Airways based in Calcutta. I had asked Imperial for a job, but there was not a vacancy at that time. Before INA would accept me I had to pass a blind flying test. This was conducted by a good friend, the Chief Instructor at Heston, and I passed. At the same time the DH Dragon had to be on my Commercial Licence and this was also arranged. My friend the instructor signing the necessary papers.

Chapter 11

INDIAN NATIONAL AIRWAYS

By the beginning of September 1934, I was at sea again, having taken the train to Marseilles and caught the weekly boat to Bombay. I was about to become an "Airline Pilot". The voyage to India was quite fun and the train journey from Bombay to Calcutta was a rude awakening after the luxury of the boat. The train took two nights and a day and the scenery was dreary and my arrival in Calcutta was very welcome! I was offered accommodation with the Dougal family. He was the pilot for Air Survey, an associate company to INA and who were carrying out a lot of aerial surveys in India. The family were shortly going to England on leave, which would mean that I would have the house to myself.



The house was in Dum Dum where a long time before, the famous bullets had been made in the ordnance factory which was still operating and was not far from the house. It was a very old house with walls about two feet thick and was typical of the time, having no running water or flush toilets. One of the servants, known as a sweeper, would carry the water to the room and empty the toilets etc. All the cooking was done over small charcoal fires in mud-made fireplaces and it was surprising what a good cook could produce. A six course meal was no trouble at all. The first thing I had to do was to get myself a bearer, as everyone had their own servant. Luck was on my side and the one I found was wonderful. He literally did everything for me. He not only looked after my personal needs, but he also ran the house, bought the food, and he even slept on the floor outside my door in case his services were wanted during the night.

The DH Dragon was a biplane in which the pilot sat in a small closed-in cockpit in the nose and there were seats for 6/8 passengers and a small loo. It was powered by two Gipsy Major four cylinder engines, and for its time it was a very successful machine and a large number of them were produced and operated in many parts of the world. At the time I joined INA, it had just started operating and there were five of us pilots in all. The route was a daily service, Calcutta - Dacca - Calcutta and twice weekly Calcutta - Chittagong Akyab - Bassein - Rangoon. In addition to these services a lot of charter work was carried out and at the weekend there was always joy riding.





The fleet consisted of three Dragons and two Fox Moths. The Fox Moth was an odd DH machine and looked as if one had taken a pump and blown up the centre of the body. The pilot was in an open cockpit in the middle and in front of him between the wings was a small cabin for two. It was powered with a Gipsy Major and was rather slow and underpowered when loaded. If the load of mail and passengers were small, this plane was used instead of the Dragon.

During my RAF time I had read about the monsoon rain, but it was not until I arrived in Calcutta in the middle of it and was put in a Fox Moth and told to do a Rangoon flight, that it really hit me - literally. Let me try to describe a flight under such conditions.



The weather is hot and about 90% humidity, the time is 8am, a few bags of mail are loaded and perhaps one passenger and into the open cockpit I get having been told of the usual monsoon conditions along the route which meant a mixture of sun, torrential rain and wind from light to gale force. There is no such thing as radio and we take off on a green light from the tower. The first course eastwards to Chittagong was across the top of Calcutta and then over the Sundarund country, the name given to the vast area of rivers, glades and marshes around the top of the Bay of Bengal. It was a featureless area and maps showed poor resemblance to the detail. The distance of this leg was about 200 miles and one could be certain of stormy weather on this sector. So, when in front loomed a white wall with low, black clouds hanging over it, there was only one thing to do - down to just above the palm tree tops and be prepared to get wet. Into the wall of water you flew and it was just as well a harness was fitted as the turbulence at times was tremendous. Visibility was less than a few hundred yards and even wearing goggles it was impossible to see out through the windscreen because of the rain and sometimes hail which cut the face. These conditions would prevail for some fifteen to twenty miles with almost darkness in the centre of the storm. The drift could be judged by the bending of the palm trees to the wind so one could allow for the very strong and variable wind. Then the outlook ahead lightened and with one or two big bumps the way was clear again if somewhat damp. The storms varied in distance apart and intensity, but could not be forecast or estimated. I don't know why the engines did not miss under these

conditions. Perhaps the rest of the trip to Chittagong would be fine or if luck was out, there would be a storm over the airport. If visibility was at all possible you landed in the usual sea of mud and water, but if it was impossible to locate the field then it meant waiting until the "worst" was over. It was local knowledge with a little skill plus a very docile aircraft that produced the result. Had there previously been a lot of heavy storms the surface water was the problem when taking off but somehow with the spray flying away from the prop it was just possible to make it. The bottom of the Dragons had to be reinforced because the waves from the wheels met under the fuselage and shot up causing damage to the fabric.

The first leg was easy and the ground all around was at sea level, but the next sector south down to Akyab (Sittwe) was more difficult as the hills sloping the coast became increasingly more mountainous and the route included many islands along the coast. Still again by local knowledge plus the fact the speed could be reduced to about 60mph when necessary, the flight could be completed by "island dodging". The airfield at Akyab was just a strip with a slight slope. The wind invariably blew up and down the coast, which was a phenomenon caused by the high mountains close to the coast. The normal procedure if there was a lot of water about was to land at the uphill end and stop before the water. This was the lunch stop and consisted of sandwiches brought down by the Agent.

The strangest cargo I ever flew whilst on this service was a Burmese passenger and his pig bound for Rangoon. Even from the cockpit I could hear the pig squealing and this continued all through the journey. The cleaners at Rangoon were not too pleased with the cargo!

The next sector to Bassein was bad, as the storms grew worse due to the high land and the islands, and the wind could be very very strong. On one trip I flew south from Akyab for two hours and returned in thirty minutes. Bassein is on the inland plain of Burma over the coastal hills. The way to get there was to fly down the coast to a valley which appeared to have a saddle clear of clouds then have a "go" at passing through the hills onto the plain. It was frequently necessary to attempt this several times. From Bassein to Rangoon the going was easy, as the monsoon was milder inland behind the hills. This is not to say that it did not rain but that the intensity was less. Upon reaching Rangoon in the late afternoon the pilot

was a wet, bedraggled and tired person, but a hot bath and a few drinks soon put this right and the thought of the return journey the next day did not keep one awake.

The Dragon had been fitted with radio and carried an operator, but I could never understand why since there were no direction finding stations. The only station on this route was at Akyab, but if the storms were severe, it would not operate and should the weather be fine, it was not required apart from ordering lunch at Akyab. In fact, as soon as the monsoon got really going, we took off both the radio and operator in order to make the aircraft lighter on the soggy aerodromes. At times the small wide wheels of the Dragon were no match for the water and despite every effort, it was impossible to take off. It did not help matters when the water got into the air intakes and caused the engine to miss. I am sure DH had not intended this little airliner to be treated as it was during the monsoon season.

The biggest hazard of flying in India at low altitudes are the large number of vultures in the air and apart from the damage these birds could cause to the aircraft when hit, was the repugnant smell emitted as they penetrated the fuselage.

Shortly after we started it was decided to buy an Avro X or Fokker VII. This was of the usual high winged Fokker construction and was fitted with three radial engines, one in the nose and two under the wings. The idea was that with the increased height, bigger wheels and more power, it would get out of the mud more easily. There was space up front for two pilots, but we only used one and an engineer because unlike the DH fleet where the pilots started the engines themselves by swinging the prop, on the Avro a second person was required to wind the handle. In some ways this aircraft was an improvement, but it was less mobile than the smaller ones and could not be used during very bad weather. Apart from this, the cabin for ten was usually more than required for the loads, so more often than not, one of the DH family were used while the Avro was used for charters and joyriding, which rather defeated the original object of the exercise.

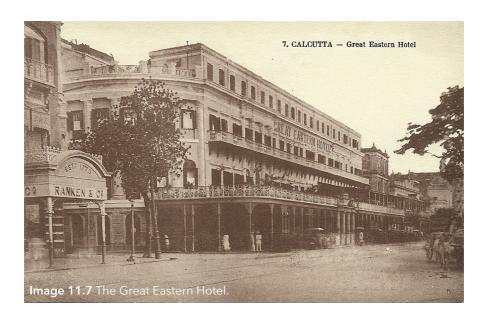
My first trip to Rangoon was my initial trip as an "Airline Pilot" and so far as pay was concerned, I considered that the pilots deserved every penny they received. I must admit that there were times when the chances of survival seemed very small indeed. I cannot remember anyone ever getting into serious trouble and the mail usually got through safely.



At this time life in Calcutta was for the European wonderful and he was supreme. This was before the Empire started to decline. The same can be said for Burma and Rangoon. In Calcutta was The Bengal Club, to which only the Burrah Sahibs belonged. The Saturday Club, which was a social-cum-sports club was another and anyone who was anyone was a member. This club even imported an English Dance Band for the winter season. Then there was the Swimming Club and two excellent restaurants Firpo's and Peleti's and also the Great Eastern Hotel. Life was a round of parties one after the other with Saturday night at the "Slap" culminating the week. It was there I was to meet my future wife. In the Great Eastern



Hotel upon ordering a drink, the bottle was put in front of you as in the Wild West movies and after helping yourself, the charge for whisky or gin was one rupee, the equivalent at that time of one and sixpence. This did not exactly encourage sobriety!



At the beginning of December 1934, I was sent on a charter to Jammu in Kashmir to bring His Highness the Maharaja of Kashmir to Calcutta. This was the social centre in India for Christmas and the New Year. Their Excellencies, the Viceroy and Lady Willingdon, came to stay at Viceroy House, their second home in India. I took a Dragon and in two stages of 4 hours and 3 hours, reached Delhi on the first day. It is possible for the modern jet to fly this distance in about one hour. Next day I flew to Lahore and from there up to Jammu, the winter capital of Kashmir. Since there was no aerodrome I landed on the twin polo fields. As this was the first aircraft to do so His Highness came to see the arrival and to ask that his mother be taken up for a ride, which naturally was done. Afterwards I fuelled the plane and tied it down for the night, a practice which was common and always in the back of the plane would be the screw pegs, one for each wing and one for the tail. Then off to the official Guest House for a wash and brush up and then on to a private dinner with His Highness at the Palace.

The ruling Princes of India were then a law unto themselves and lived a fairy story existence. Next morning His Highness and four of his staff climbed aboard and the huge man had to squeeze himself into the rather small seat, but he managed to do this eventually. Had he chosen to go by rail it would have taken four days and even using his own carriage, the journey would have been tedious in comparison to a few hours in the air over a period of two days. That day we flew to Delhi where we lunched and then on to Lucknow for the night, a total of just over four hours flying time. Lucknow was the seat of the well known Siege some years before. My wife's grandmother was caught up in the siege from start to finish as her father served in the Bengal Artillery. They were lucky to escape with their lives, as so many others did not.

We continued the flight next day with only one stop at a small field to refuel on the way to Calcutta. His Highness preferred to land there rather than Dum Dum and we touched down at a small aerodrome in the docks area of the town. On landing I was presented with a handsome pair of gold and platinum cuff links bearing a crown insignia with the letters "HM" for Harry Maharaja, the equivalent of our own Royal title of "Elizabeth Rex".

This little field was just large enough to allow me to get out empty but would be of no use if any load was to be carried as it was surrounded by H/T cables and there were cranes at one end.

With the approach of Christmas we drew lots as to who would do the Rangoon service on the 24th as it would mean spending the day there and returning on Boxing Day. With the luck of the draw, I got it and I saw that there were three passengers down and none on the return. I have no recollection of Christmas Day, so presume that life could not have been too bad. Having drawn this service it meant that I was off for New Year, which suited me as this was the night of all nights at the "Slap", as the Saturday Club was called. That night at a party I noticed some friends of mine sitting at another table accompanied by a very attractive girl and having an eye for the fair sex, I deserted my party and joined the other group and that is how my romance started with "the" girl, for she was later to become my wife. I learned that her name was Marjory and before the evening was over, I asked her to dine with me the next evening. This was nearly the end of the event because in my usual brash manner I had sent my driver and the car to collect her instead of presenting myself, and it took a few glib words to convince the extremely irate guest of her welcome, particularly when she discovered that another female had joined our dinner date. The old saying "two's company..." is so true. It was some time before I was to see Marjory again for she lived at Tung up in the Himalayas near Darjeeling where her father owned a large engineering business.

One flight which always stands out in my mind was a service to Dacca in the Avro X on a Sunday morning. It was convenient to take the Avro because a number of joyrides had been previously arranged there. The flights lasted ten minutes at a cost of R55 (seven and sixpence). The pilot stayed in his seat while a traffic boy put the passengers on and off.

One group of army officers in the cabin along with their wives and girlfriends sounded in very high spirits from where I sat. After the flight I was looking out to the left, past the port engine, when I saw to my horror, one of the officers walk bang into the rotating propellor and fall to the ground. I quickly cut the engine and got out with a horrible thought that there lay a corpse but to my amazement the body moved, lifted itself off the ground and slowly staggered off. What a stroke of luck. The officer's Bombay Bowler (Khaki Solar Pith Hat) had taken the force of the propellers blow and as he fell to the ground so did the topee, chopped through the top. He got off with minor grazing to the scalp and no doubt, a very thick head into the bargain. They say "the devil looks after his own" and I couldn't help thinking that on that particular occasion, he was indeed on my side.

Early in January the Viceroy gave a ball at the House and I received a formal invitation since I had made his acquaintance during my time in Delhi with the Gipsy Swift. Lady Willingdon was a great believer in discipline and heaven help anyone who dared to step out of line. I have already described the protocol attached to these social functions and the procedure for attending a ball in the Viceroy's party, but the Calcutta Ball was something apart. Invitations were sent out and I learned that if a reply had not been received by the stipulated date and a recipient turned up at the Ball, admission was refused. Alternatively, if one accepted and failed to attend, then that person's name was erased from the next year's list. I can still clearly remember the scene. The bar was beneath the ballroom down a wide flight of stairs. This opened after the third dance and by the start of the fourth dance everyone seemed to have converged there until Her Ladyship informed all and sundry that, "just because the bar is open, please do not think that the Ball is over." I was then told to

rejoin the official party where I had my invitation, dance card, filled for me by Madam. I still consider it an honour to have been asked to join the Viceroy's party at the Ball.

On the 7th January 1935, I did another charter for HH of Kashmir and according to my log book, took off from Dum Dum and completed one and a quarter hours night flying. This was the only flying of this type I had done before going to Lahore to start a night mail run to Karachi. It was quite an outstanding occurrence, as night flying by civil aircraft was still in its infancy.

It was during my time in Dum Dum that I committed my biggest social faux pas to date. One of the Directors of INA had asked me to dinner. Some Burrah Sahibs were present and it was a most distinguished and impressive gathering. At dinner my seat was towards the middle of the table with my hostess at one end. When the conversation turned towards fruit I felt sufficiently informed on the subject to join in. "Do you like peaches?" I asked her, "because we feed the pigs on them in New Zealand." My eye suddenly landed on the little velvet "devils" nestling in the fruit bowl in front of my plate and I became aware of the awful "hush" and the poker faces of the other guests. "Oh," I laughed, "I didn't mean it in that way..." My voice trailed off and the silence continued and I was, thereafter, considered a "bit of a bounder". Oh for the savour-faire and composure of the man with the silver spoon!

In the middle of April I had contracted some "bug" which put me into a nursing home for a while. For convalescence I was advised to go up to the hills, which meant leaving the heat of Calcutta for a cooler climate and that sounded good, but I had nowhere to go and knew nobody in the hill stations. My mind went back to the girl I met on New Year's Eve, so I wrote and asked her if I could come and stay for a couple of weeks. She said I could and it was arranged that she would meet me at the end of the main line where the Darjeeling Railway started. She would then drive me up to her home in the car. I told my bearer that I was going up to the hills and informed him of the train I intended catching and with his usual efficiency, he made all the arrangements so that all I had to do was arrive at the station just before the train left. He was so perfect and precise in everything he did, the booking reservations, packing clothes, making beds and arranging food required. It was even his custom to dry and powder

my feet after I had bathed and my trousers were white and crisply laundered and he would hold them for me to put on in case they touched the floor. During my trips to Siliguri, which had become frequent, he was the one who marked the mangoes, paw paws and bananas for the "Miss Sahib" and thanks to his ingenuity, he never let me down.



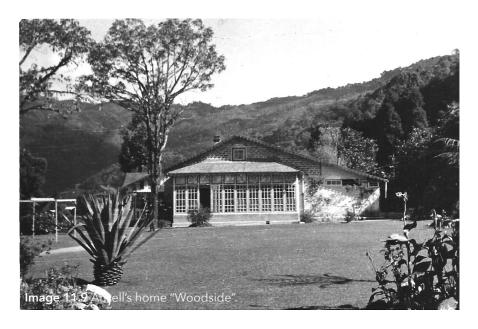
The train was due to reach Siliguri at 6am and Marjory devotedly made the two and a half to three hour journey from Tung just north of Cursing, to be there on time and her devotion has stretched over the years since then.

The Darjeeling railway was one of the eight wonders of the world climbing 7,000 feet in a distance of 35 miles. The track continually crossed the road and ascended in a series of reversals

and in three places, it completed a loop around itself. Car drivers had to check in at each station (every five miles) to obtain a pass in order to know how many cars were on the next sector simultaneously, as the road was very narrow. This information was transmitted by telegraph up and down the line and the rules were very strictly enforced. After heavy rainfall the road and the railway could be washed away. It fascinated me to watch this

slip of a girl behind the wheel of the Essex, negotiating the bends as if it was all in a day's work.

During my stay with the Ansell family, Marjory and I became very attached to each other and just before I was due to leave, we decided to become engaged, which naturally called for celebration. I remember cabling the news to my mother in New Zealand and she cabled back, "Wait. I am coming."



On my return to Calcutta I was back on the flying rota again and life returned to normal except that when possible, I would get the weekend off and take the Saturday night train to Siliguri where Marjory would meet me on the Sunday morning. I would spend the day at Tung and return in time to catch the night train down again. The bride to be was certainly an exceptional girl to drive up and down that mountain twice in one day.

My future wife's paternal grandfather was the founder of the engineering works carrying out civil, electrical and mechanical work, the machinery and factories for the tea gardens, and they also built the first water turbine in Nepal. This required the designing and making of a machine capable of being packed on mules and assembled by written

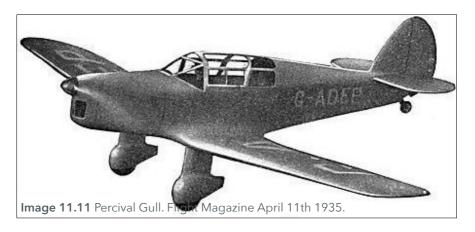
instructions only, as white men were then not allowed into the country. Father-in-law used to go everywhere in an Austin Seven of the Ruby vintage and that little car would go over tracks impossible for larger vehicles. During her father's absence, Marjory ran the works and apart from being a competent bookkeeper, could supervise the foundry, machine shop and do any of the necessary drawings.



During the time at Dum Dum when I had the house to myself our Chief Engineer stayed with me for some time. His name was Buck and the main reason he came to stay there was because I had by then become engaged to Marjory and he acted as a chaperone when she came down to buy her trousseau. It did not go down well with mother-in-law when we spent most of the trousseau money on having a good time and poor Marjory went home with very few clothes and a great deal of explaining to do.

During June the Company decided to open a mail route from Lahore to Karachi via Multan and Jacobabad. The theory was for the flight to leave late in the afternoon and arrive in Karachi in time to catch the Imperial Airways flight leaving at dawn to London. In their better wisdom the company decided to use the new low winged monoplane called a Percival Gull using the uprated Gipsy Major of 120hp. As this route would entail night flying, the aircraft would have to be equipped with landing lights and have navigation lights installed. To operate this electrical apparatus it was necessary to install a generator and as there was no means of connecting to the engine, a wind-driven one was fitted. The whole procedure was a bit tricky for the amps used by the landing lights were so great and the battery so small that their use was restricted to "switch on just before touch down and then off" - the reverse on take off, otherwise all the cockpit and navigation lights would go out.

I test flew the first of the Gulls at Delhi and did the necessary landing to have it included on my licence on 30 June 1935 and the following day I flew it up to Lahore and then took the train to Karachi to test the second aircraft and fly it back to Lahore. This was a very pleasant aircraft to fly and in fine weather life was easy, but the shape of the windscreen was such that in rainy conditions at night, it was virtually impossible to see out. There was room for the pilot and two passengers more or less sitting one behind the other.



As I have said, the service left late in the afternoon and arrived at the first stop Multan about sunset. Multan is one of the hottest places in the country and this was the hottest time of day. It used to be hell staying there during the dry season and the poor old engine worked overtime

getting us airborne again. The next stop was Jacobabad and we would arrive there after dark to land along a flare path of five four-gallon tins containing a mixture of petrol and paraffin, which the Indian petrol company agent would light and then extinguish after the landing.

This strip of baked dirt was no problem at all in dry weather, but when the rain came the fun began. The landings were not too difficult if visibility was good. The wheel spats were removed so that the mud would not clog the wheels and the underside of the tailplane was given a second layer of fabric to protect it from mud and stones. The problem was take off, but I worked out a routine. If the strip was very wet after landing, the coolies would meet the aircraft and push it through the mud to the shed used as a terminal because the engine was unable to do this under its own power. The procedure for take off was for the boys to push and the aircraft power used to get to the first flare without stopping. The throttle was then opened and if by the time the third flare was passed the pushers could not keep up with the aircraft then the pilot would make it into the air.

The remainder of the trip was simple. The beacon at Karachi could be seen a long way off and the landing light with its "shadow bar" in front to prevent dazzle was a welcome sight. The light was placed across wind and the moveable shadow bar was manipulated by an operator so that the aircraft was always in a small dark sector and so never blinded by its beam. The departure for the return flight was determined by the time of arrival of Imperial's plane from London, but this was usually a day flight and created no difficulty.

It was during my time on this route that I was sent to Delhi one day to fly Lady Willingden to Calcutta. As the Avro X was un-serviceable, the Gull was used. Her Ladyship was a fairly large person and the Gull rather on the small side so that conditions were rather cramped and uncomfortable, particularly in the hot weather when the transparent roof made the inside like an oven. The way Her Ladyship endured these conditions for eight hours with only two stops was remarkable. Some of her comments though, were at times most unladylike.

Before giving up this route I was to train two Indian pilots to fly it. They were brothers and sadly their careers ended in a tragic way. One night one of the brothers left Karachi as the other brother was about to arrive there, when about 50 miles out the two planes collided and they

were both killed. The accident happened some time after I had returned to England.

In that first year of airline flying I think that I can honestly say that I learned things the hard way. One discovery I made, which helped me in later years, was that I must make my own decisions. I also learned always to be on the look out for trouble when it was least expected.

Life was very peaceful on the mail run and the sacks of mail did not come up with the usual complaints, "It's much too hot,", "My shoes are all muddy," and all the other grievances which passengers tended to air. Little did I know that I was heading for a fall. One lovely moonlit night when I was almost half way between Jacobabad and the turning point for Hyderabad or Karachi, I was drinking a cup of coffee without a care in the world when the oil temperature started to rise and down went the pressure. I knew that this was no gauge failure and decided to land. I throttled back and started down from the usual 5,000 feet. Luck was with me for there was a good moon and I could see, though the bare sun baked earth was rather indistinct as I lost height. It was imperative that I get down before the engine seized so that if landing was successful and I could fix the trouble, a take off might be possible. This part of the country was completely uninhabited and it could be some time before I was found. I came down, barely above the ground and put on some power and the landing lights. The ground ahead looked pretty flat with a few patches of very low brush called Camel Thorn, and doing a 180° turn, I put out the flaps and eased off the power and she touched. The engine was immediately switched off to save damage to the propellers in the event of my landing on the nose. I hit one or two bumps which lifted the tail before the aircraft stopped and I was thankful to be down all in one piece.

By that time it was almost midnight, with the aid of a torch I took a look round, noting that there was no sign of oil around the engine and the tank registered half full. What could be wrong? The amount of oil used was normal. The engine had been changed recently and newly overhauled, and after cursory examination, the trouble still remained a mystery. I could do nothing more until first light, so I climbed back in and fell asleep on top of the mail bags, where I spent a somewhat restless night.



I arose at dawn and made a detailed inspection of the aircraft. In addition to being a pilot I also held a ground engineer's licence at that time and I harboured the hope that my checking would not take too long. With some oil, I always carried for topping up at fuelling stops, I filled the tank and then checked the relief valve and the oil lines. Suddenly I noticed that in the wing where the oil tank was situated, a pipe which ought to be led through a lower hole in the spar to the engine, was running through an upper hole. This brought the top loop of the pipe almost level with the middle of the tank and somehow, it looked wrong. The tank was now full and I started the engine. The pressure and temperature were both normal and after a good ground run, I decided to take off. With nothing more than a few bumps this was achieved and the rest of the flight to Karachi was undisturbed. All during the trip my mind dwelt on the loss of pressure and the puzzle of the pipe. I discussed this with the Chief Ground Engineer for IAL at Karachi and we both agreed that, if the pipe came up in a loop as it had, then it was possible that an air lock had resulted, so we emptied the tank to the same level it had been on the previous night and I went on a test flight around the aerodrome. After thirty minutes down went the pressure again, so I returned and landed. The pipe was removed and re-routed through the lower hole in the spar

and the engine re-started and everything was found to be OK. So now we knew that the culprit was the engineer, a local inhabitant, who had changed the motor at Lahore and fitted the pipe incorrectly. I cornered this little man on my return to Lahore and along with the local manager, gave him a piece of my mind. I suggested that perhaps a parachute might not be a bad idea, but no one thought I was serious. Whilst I was a licenced ground engineer I was not responsible in any way for the engineering and I only kept this licence in force for my own interest.

The little sojourn in the desert just described took place on the 23rd July 1935, but believe it or not, on the 27th of that month I was to repeat the operation with a few variations.

The start was similar. The flight left Jacobabad on schedule after the arrival of the mail from Quetta, and when one hour twenty minutes out the engine started to miss badly and there was excessive vibration, so down we must go by the look of it again - could I be so lucky for the second time? As we were obviously not going to get either back to Jacobabad or on to Karachi, I did have a few minutes to fly on and check things over. The magnetos were switched off one at a time, but both were functioning correctly with the usual drop of about 50 rpm. Opening and closing the throttle by stages made no difference so this pointed to a stuck valve or broken piston ring and the valve looked the likely culprit. Down we went and after low flying for a few minutes with the landing lights on, we passed over a good looking piece of ground, 180 degree turn and full flap easing the power off and the nose up, we touched. My hand was already on the switches and at the first contact, I cut the engine so that the risk of fire and damage to the propeller was reduced. Along the ground we ran and were just stopping when into a big hole went one wheel. The aircraft tried to slew round and finished by very nearly tipping on its nose. Fortunately the prop had stopped cross-wise and on hopping out, the only damage was a bit of bent cowling under the engine and a grazed wing tip where it had rubbed the ground. For some reason I cannot remember, the usual bottle of water was missing and all I had was a part used thermos of coffee, which is not very thirst quenching in this the middle of the hot weather. Even at night the temperature was well into the eighties so I was not so happy, but as there was nothing that could be done until light I retired for the second time and reposed on the mail bags

and tried to sleep. I was walking about as the eastern sky started to grow light and as soon as possible had the cowlings off and removed the rocker box covers. Sure enough it was the inlet valve of No.2 cylinder stuck wide open. The only thing was to take the head off and try and free it. There was a basic tool kit in the aircraft and the engine was pretty simple to work on. Off came the exhaust manifold by simply undoing the three studs on each cylinder with a box spanner. Then on the other side, the inlet manifold by the same method after having taken off the carburettor controls. Now I could free the cylinder head bolts on the offending cylinder, as these were usually very difficult, especially if the engine was reaching the end of its hours for overhaul. By now the sun was well up, there was no shade and I was very hot and thirsty. I was struggling with the nuts when a shadow fell across me and standing by my side was an Indian peasant with a few goats. Where he had appeared from I do not know, but we shook hands and it was like the meeting of Livingstone and Stanley. What he said I do not know and I am sure what I said he did not understand. He then squatted on the ground and watched me and took a swig out of a goatskin bottle he was carrying. Did I dare ask for a drink or would it kill me? The contents were I presumed water, but of what origin your guess is as good as mine. It was hell working in the sun with my hands above my head and looking up trying to free these infernal nuts. At last one came off after a mixture I had made of oil and petrol had soaked in as a form of penetrating oil. Then another and finally the other two. Then very gently I levered the head off and there was the offending valve. By now thirst was the major thought and that goatskin was becoming less and less repulsive. What if the old boy were to get up and go? I must have a drink at all costs, so I pointed at the skin and said, "Parni," meaning water and it was offered to me. Here goes, I thought to myself and took a swig from the neck. The taste was ruddy hot and I don't know or do not like to think what else, but it was water. So I took another drink and said, "Thank you," and retuned to the offending valve which could now be taken under the wing in the shade. By hitting the valve, via a piece of wood with a hammer, it shut; then the reverse on the stem and it stuck open after more of the homemade penetrating oil. Back and forth went the valve and very slowly the springs started to do the work for me and every time I hit the stem it bounced back again. Success at last and one I hoped would see me back to Jacobabad. Time was now late morning and by the time I had put all the bits back, it was noon. I started the engine and all seemed well. The old man took off after his goats, which scattered as the engine started. As all seemed well, I packed up the bits and pieces and as quickly as possible, took off on the return to Jacobabad, as this was far shorter than going on to Karachi and from my experience, once a valve had started to stick, it would do the same again before long unless the valve could be removed and the carbon cleaned off the stem. Returning to the mud stop the thought foremost in my mind was a long, long cold drink followed by an equally long shower.

The Company was just starting to organise a search for me as I flew over the town to let the petrol agent know he was required and I landed. A telegram was sent to Lahore saying that a complete new cylinder head was required and an engineer to fit it, so off I went to the Rest House and awaited results. By this time I had decided that if there was a third time, it might not be so lucky and that if I was to keep on with this service, something had to be done drastically. I wrote to the Managing Director and told him either a parachute was supplied forthwith or I was leaving and pointed out I would not hesitate to use the former but as all the good old pilots did pending results, I kept on flying for another month. I suppose if this sort of thing happened today the union would call everyone out, but I am pleased to say that during my long time in commercial flying, a strike was never ever talked about as we considered ourselves a professional body and I still believe the profession would have been far better off if the British Airline Pilots' Association had kept to that principle.

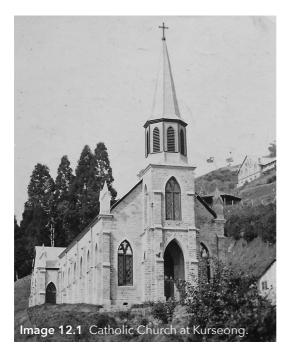
Chapter 12 MARRIAGE

It had been arranged that Marjory and I would be married in Tung on 26th September 1935. She had prepared her trousseau for a life in India and soon these arrangements were to be changed. At the beginning of the month the Company decided my request was unreasonable, so I declined to fly the route any longer with the expected results that I was given a month's pay in lieu of notice. Here was I, about to be married, without a job and no chance of getting one in India as the only other operating was Tata Airways who operated from Bombay and were later to become Air India. During my stop in Karachi I had become friendly with the local manager for Imperial and I asked him if there was a chance of a job there. He communicated with London and came back with a reply that it was possible and that if I returned to England I would have an interview. This decided me to return to the UK, so I wrote to Marjory and told her what had happened and that we would leave as soon as possible after the wedding.

My mother, sister and a friend were due in Bombay about the middle of the month, so I went down there by train to meet them with my faithful bearer. The family arrived and a five-berth compartment was hooked on the train for Calcutta. The family were as impressed as I had been with the India Railways on my arrival at this port. We arrived at Calcutta, spent a day at the Great Eastern Hotel and then on up to Siliguri where Marjory was to meet us with the car. The bearer now had not only me but three females to look after and their baggage, all of which he took in his stride without batting an eyelid. Marjory was at the station to meet us and one of the first things my mother did was to take off a beautiful diamond ring and give it to her. This gesture set the seal on a very close relationship which lasted until mother died. The family were very impressed by the way their future daughter-in-law drove the Essex up that mountain road and I must say it was quite a feat. Mother and the others were to stay with the Batterbury family and he was head of the railway and very good

friends of my future in-laws. We all arrived in Tung about a week before the wedding and George Batterbury took the family for a picnic one day up the Teesta Valley for he had to go and see some washouts on that line. This is a very beautiful valley with the big Teesta River running down it. George told us of sitting by the river on one occasion when a tiger strolled out of the forest and looked at them, rather him than me. This water was also well known for catching that fighting fish called Mahseer.

The great day was to be the 26th and the reception in the Kurseong Club was only the second big reception to be held there. On the day everyone put on their best bib and tuckers and the bridegroom was in RAF Uniform. I had borrowed this from a friend, but his head was smaller than mine and I had to carry the cap instead of wearing it. The bride exercised the prerogative of all brides and arrived late, but I must add not through her own fault, but due to her car being stuck behind a bullock cart on the road into town. Still, these were the hazards of travel in the mountains. I believe the driver of that cart received a commentary of his life from before birth as expressed by my father-in-law, whose use of the local language was fluent.



The Church Service was a great success, the choir sang and the bell rang out and away we drove in state, this time not obstructed by any carts, to the Club and the reception. At the reception were all the surrounding white population plus some friends of ours from Calcutta and about fifty servants and factory workers who had walked five miles in procession singing and playing a harmonium. They were allowed into the Club in relays and guarded the wedding presents which were laid out along the whole length of one side of the dance floor.





A week before we had been presented with a "Kukri", one of the famous Gurkha knives, at a special function which the workmen had organised. A long speech was read out by the headman, while the knife and garlands lay on a brass tray. Speech over, garlands were put round our necks and the knife given to Marjory. She had to say a few words and found it quite easy as she knew the language, after which I did say a word or two, much to the amusement of the gathered crowd. The wedding cake was quite a novelty. The top was a reproduction of the Trophy I had won in

India, all made of marzipan.

Before leaving the reception we gave the servants enough money to buy two goats and I believe a few days later they had a very good party with their wives and children on the factory grounds. Marjory and I were to drive, or be driven, down to Siliguri to catch the night train to Calcutta then the idea was for a few days to be spent at the Great Eastern Hotel and after stay with some friends until the family, who were following on later had arrived. Marjory had been given the Essex car and we had decided that the five of us would drive it from Calcutta via Lucknow, Agra, Cawnpore, Delhi to Lahore and then, as there was no road to Karachi, sell it and take a train. Marjory and I were catching a boat from there to England and the rest of the family would go on the same boat to Bombay then catch their boat back to New Zealand.



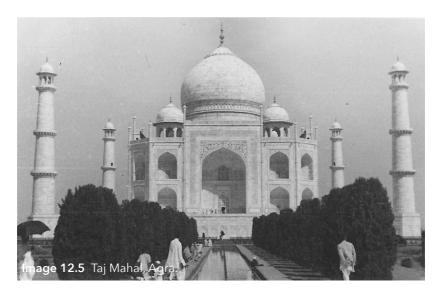
We arrived in Calcutta the morning after the wedding, not feeling in the best of health, and were joined in the hotel by various friends. When the family arrived, life for the next few days was very gay and after a few further days of fun and games, we set off on the then doubtful roads of the interior of India. The poor bearer of mine was sent by train with twenty five pieces of baggage to meet us at different towns and to book hotel rooms. I think the first "meet" was to be Allahabad, a distance of 500 miles. The poor Essex had the five of us in it and the roof loaded with such an amount of luggage that I had to fit a bamboo pole from the floor to the roof as a support. While on the road between the main towns, we had to carry our food, bedding, which due to the heat consisted of only sheets, and cooking utensils. At night the stop would be at what was called a Dak Bungalow beside the railway and used by officials on inspection tours. These places were very primitive and consisted of the odd beds on a wooden frame. There was a chow kidah or watchman in charge who could cook after a fashion and as Marjory could speak in Urdu, Hindustani and Nepalese, we had no language problem. The poor car groaned its way out of Calcutta and over the Willingdon bridge and then turned west and bump, we were off the tarmac and it was to be a dirt road almost all the way to Lahore. Would this car, which was by no means new, make it? Apart from mother, who was a wonderful sport and had been brought up in New Zealand on tough motoring, we were all young and did not really worry. The weather was very hot and the dust flew both outside and inside the car as the windows had to be open. The sweat ran down our legs mixed with the dust and left muddy rivulets. Still, we laughed and drank bottles of lemonade bought at the village stores we passed. At times the monkeys would run beside the car and catch anything we threw out. Bullock carts blocking the road were sworn at until they moved to one side which took some time as the drivers of the carts would be asleep and until you could wake them, nothing happened. One of our sports in Calcutta after a party, would be to run a sweepstake on how many of these carts going into Calcutta you could turn round without the driver waking up. There must have been some very irate drivers at times, when instead of being at the market in the morning, found themselves back in the country again.

The night stops were always good for a laugh, as something was always going wrong. There were flies, there were mosquitoes, there were lizards running round the walls and at times there were other less pleasant things crawling about too. Often the beds would be taken outside and with the mosquito nets tucked well in, we would try and sleep and keep the thoughts of snakes out of our minds. On one occasion we were

all "tucked in" for the night when thunder started, so there was a mad rush inside carrying your own bed until the storm was over.

At times on the road we would come to a big river and the only bridge across would be the rail one. When this occurred, the car would have to be loaded on a truck, then wait until a train arrived when it would be stopped and your truck booked on. Across the bridge, stop, unhook, off load and away again. These episodes took some time as no one really knew when a train would be arriving. These were the only times in my life a train has been stopped for me. I had often read of how certain of the nobility in England have the rights to stop a train, now I felt like one of them, except the trains were somewhat different.

As we motored into Allahabad everyone was wondering if the bearer had arrived and been able to obtain rooms in the hotel. What a welcome sight it was to see him appear, as if by magic when the car came into the hotel and to hear his first words, "Teek hi Sahib," meaning "It is good or all right, Sir", and much to everyone's amazement, he had the right suitcases in the right bedrooms. The shower was perfect and nearly as good as the one I had at Jacobabad after the forced landing. Then a long John Collins or two and we all felt like human beings again. I have a wonderful photo of the bearer with all the luggage on a bullock cart at one stop.



The next big stop was Agra to see the Taj Mahal and as it turned out, there was a full moon and we did as Noel Coward said in Private Lives, "Did you see the Taj Mahal by moon light?" It really was a wonderful sight this cold, white, marble tomb standing up there against the sky. The only trouble was mother, who was in such rapture, tripped and fell skinning both shins. Since then, it's always been known as "Mother's Moonlight Rapture".



On we travelled to Delhi with the usual routine prevailing with the weather being just as hot, but the nearer we got to the centre of the country, the less the humidity which made motoring a little better. A day was spent sightseeing in Delhi so the family could see the Viceroy House, Red Fort and other well known sights.

Then on to the last stretch to Lahore, which was uneventful and finally to the hotel there where we were to stop for a few days before the train journey on to Karachi. The good old Essex was, by now, a bit like the "Old Grey Mare", "She ain't what she used to be", and was sold on credit against a new car in England for £35, which was not a very generous offer, but she had served the first and present owners very well.

A council of war was held and it was agreed to take the whole of a six berth second class compartment on the train, as this would give us more room and would not be so stuffy in the heat, plus the fact it would have its own toilet. The day came and late in the afternoon in we all got for another journey of two nights and a day. The accommodation consisted of three bunks up and three down. There were no tables or chairs. We took enough food for the trip, a spirit stove and kettle to make tea. In the middle of the floor under a large slow running "punka" was a big tin bath fitted with ice to try and act as an air conditioner. Off the train went and we sat around talking and smoking and not looking forward to the idea of bed, as they were very, very hard. The windows were open to let the air in, plus the odd bugs and flies even though the shutters were down. The bearer slept in a compartment next door and at any stop where there was a buffet on the station, he would come in and see if we wanted anything and to add more ice to the bath, which before long was a mass of muddy water from the dust. We were all coated as well. Even if, as we did in desperation shut the windows, it still came in through the cracks and when in the early hours of the morning mother said, "Has anyone been to sleep yet?" A chorus answered, "No."

I remember sitting on the "Thunder Box" holding the little stove between my feet and the kettle with one hand trying to make it boil, whilst under my breath uttering oaths about railways, as the train lurched and rattled along.

Breathing was truly difficult as we all had handkerchiefs tied round our noses as if in "purdah" and staggering out of the train on the second morning at Karachi and into the hotel, we must have looked a scruffy bunch but we were desperate for a bath and sleep in a nice, cool, clean bed. There was about a week to spare, so I went off and passed the semaphore side of my navigation licence, which I had sat for three months before but messed up this part. Time passed quickly as I had a number of friends there who looked after us very well and when in the end, the time came to board the boat, we were really quite sorry to go. One young lady even escaped for a last fling with a newly found boyfriend and only just returned before sailing.

The trip to Bombay was uneventful and my mother was in her element as there was in the bar a fruit machine, which was a new toy then. I think she must have just about purchased the ship by the time we got off!

At Bombay came the parting of the ways. Marjory and I on a ship to England, the others to wait for the P&O ship to Sydney and the bearer to return to Calcutta. The wonderful man was very sad and wanted to come to England with us, but we had to say no as there were too many difficulties involved. Before we left we gave him a watch and it was farewell. He stayed and looked after the rest of the family, saw them onto their boat and when mother went to find him to give him something, he was gone. I really think that he was too upset to see them again. How many times since then have I thought back on how wonderful he was as a servant, housekeeper and secretary all rolled into one and wished he was still with me.

The City of Canterbury, the ship we were on, made her way home via the Suez Canal. I spent a lot of the time studying navigation for more exams I wanted to pass. Marjory was not so happy, as she is not a very good sailor and to add to her misery she had very few warm clothes and we were due in England a month before Christmas. I really did feel a bit of a cad for having led her to believe we were to live a life of servants and luxury in India and not one of a housewife in England. Still, as she has always done, made the best of it and came up to smile again.



Chapter 13

ENGLAND 1936

The ship docked in Liverpool on a real Liverpool winter's day, cold, windy and trying to snow. I thought perhaps I should have gone on flying without a parachute and taken the gamble. Perhaps if I had, one of the two who collided might have been me and that thought made life look not so bad. We went to London by train and out to the Croydon area to look for somewhere to live. A small semi-detached house was found and we moved in on Christmas Eve 1935 in such a fog nothing was running. I had to carry a bag of coal from the shop home feeling my way along the pavement. We were very short of cash and it was the most miserable Christmas we would of spent. The house was cold and damp and all the plumbing was frozen up and to get water at all we had to boil the kettle and pour it over the water pipe outside to thaw it. Lunch that day was lamb chops with very few trimmings.

It had been arranged for me to have an interview with Air Commodore Brackley the head of Imperial Airways, as soon as I arrived and this was carried out as soon as it could be arranged. The company offered me a job as first officer of the Kent Flying Boats and I was to go to their school at Croydon for a technical course to cover both my commercial and ground engineer's licence. The pay was £500, which was not excessive, but not too bad in 1936. I was also to go and do two weeks reserve flying, first on the Blackburn B2 trainer which was a small biplane in which the two pilots sat side by side.

I had reported to the Imperial school on 16th December in time to do a bit of study before the Christmas break. Life in the school was not very happy and the work dull, plus the fact the place was run by an ex very senior RAF officer. I being a rebel did not see eye to eye with the "Bull", as I had had my fill of that already. In my spare time I was sniffing around at Croydon, as there were a few other operators there in both the charter and services flight field. One firm in particular, British Continental Airways, was just getting going and seemed to me to be very advanced from an

equipment point at that time. They offered me a job. The pay was better by at least £150 more than Imperial. What should I do? Stay in the school and become a first officer for many years or take a gamble on BCA and even if the aircraft were smaller, fly in command again.

For some reason I cannot remember, the Air Vice-Marshal at the school asked to see me. The outcome was an argument and he said, "Stead, you are in this company due to my influence."

That was it! I had been recommended by the manager in Karachi and accepted by Air Commodore Brackley who was one of the finest men in civil aviation and who did more to promote it than anyone.

"If that is the case," I said. "Please accept my resignation, as I don't want to be anywhere due to your influence as I am quite capable of earning my own living," and walked out.

There were repercussions and I was asked to stay, but I had made up my mind and joined BCA at the end of my week's notice.



Image 13.1 British Continental Airways poster.

Sometime later it was reported that the Air Vice-Marshal had said that no one had ever spoken to him like that before. He was a pompous ass and I was not alone in my opinion. If I had stayed I ofter wonder how different life would have turned out. I think I have had a more varied and interesting life, but have in the end suffered a smaller pension than if I had remained with Imperial and then BOAC, but then one cannot have everything in life.

British Continental Airways was managed by very good directors and the pilots, like myself, had been brought up to get there by your own initiative. The fleet when I joined was a Percival Gull, a DH85 Leopard Moth, two DH89s and a DH86. The DH89 was the modern version of the Dragon with tapered wings and two Gipsy VI 200 hp engines which greatly improved the performance. The DH86, a new four engined biplane, also had Gipsy VI engines and a cockpit for two pilots. On order were three DH86As, a later version of the DH86.

At the time I joined, King George V died and the first job I was given was to rush the photographs of his funeral up to Edinburgh in the Moth on 28th January 1936. It was a good flight up to Edinburgh.

The night was spent in the city with the intention of flying home direct the next day with only a fuelling stop. The next morning I popped in to the met office and was told there was widespread fog over the midlands and south, but the east coast was patchy. So it was decided to try that way and all went well at the start, but as I went south patchy fog was below. I did not have a radio or navigation aids, so decided to go down in a clear spot and see how thick it was along the coast. At about 100 feet I could see enough to keep out of trouble, providing I followed the seashore, which I did until I approached the town of Redcar when the visibility shut down to about 100 yards. At this time under me was the edge of the sea and I saw a wide expense of good sand. I had to make an immediate decision to land or go back and hope it had not closed in to the north. Something told me to land and I did a 180° turn to seaward, then closed the beach at a small angle and I went down to just above the waves. The beach appeared, I already had full flaps out, throttled back, slight turn to the right and I was running along perfect, hard sand. The fog was so thick I could not see the top of the beach, so steered with the sea behind me very slowly and then could see soft sand, a road and shops, so I stopped to review the situation. It was fortunate for me that the tide was low or I might not have had all this landing area. People started to run across the beach and then, last but not least, the police. "What was I doing?" "Oh, it was getting a bit thick so I decided to land and wait for an improvement." This seemed to satisfy all and the arm of the law even volunteered the remark, "It won't lift today." "How very uncivil of it," I replied which invoked laughter from the crowd. The sand up to some beach huts did not look too soft, so with the help of the officer, I taxied up to them, as this was well out of the way of any sea that might come up during the night, and it was now obvious there would be no take off until tomorrow. Right opposite me, now the "local one day wonder," I could see a small hotel, so a room was taken overlooking the sea with my aircraft under the window. I phoned the company and there was no comment about the "landing ground" and the manager merely said, "Come on when you think it fit." This was the first time I had been away flying since our marriage and my new wife had failed to enter my mind and I forgot to ask that someone tell Marjory of the delay. When I arrived home it was to discover she had been very worried as to where I was, but had at least made contact with the company and found out that all was well.

The next morning when I opened my eyes there was a blue sky, but the tide was in so the departure had to be delayed until there was enough hard sand showing, then I was away with one stop for fuel and back at Croydon before lunch. The photos had been delivered on time and that was all that mattered. The return was not even discussed. This was the type of flying I had been used to and enjoyed being able to battle my wits against nature when she can be hard at times.



Image 13.2 The local newspaper reported my visit to Redcar.

Next I was taken round the routes on the DH86 for experience on this aircraft and to see the routes which were: Croydon - Amsterdam - Croydon, Croydon - Lille - Croydon, Croydon - Antwerp - Amsterdam - Antwerp - Croydon and Croydon - Amsterdam - Hamburg - Copenhagen - Malmo - Croydon. Then I was sent off in the DH89 for thirty minutes to do the six landings required for an endorsement on my licence. At this time the senior controller of Croydon, Jimmy Jeffs, who was to become a very good friend and finished up in charge of London's Heathrow, used to watch the landings and then conduct a "technical exam" on the aircraft and sign the licence. How different from today.



The BCA's aircraft were, as far as the equipment went, far in advance of the time. We were the only aircraft operating from Croydon at that time fitted with Direction Finding (D/F) loops and blind flying instruments which now included artificial horizon and directional gyro. As well as this, all the instruments were metric - fuel in litres, oil pressure in kilograms per square metre, speed in kilometres and altimeter in metres. The fleet was also fitted with their own loops for taking bearings of broadcast stations and any of the few beacons then operational. This was the most logical equipment to have because all the flying apart from in

and out of Croydon was in Europe, where everything was metric. How simple it all was.



Blind landing aids were still not available and the main method of approach was for your radio operator to send by wireless transmission (W/T) a signal to a ground D/F station who would take a bearing of the transmission and send either the bearing from him to you or the bearing from you to him. On approach to Croydon you would be given a height to fly from a known point and would approach the field on a series of bearings from the tower, but having to use W/T there was, if you were on a "series of QDM's", an elapsed time between bearings of about two minutes. If the weather was really bad the controller would be out on the balcony of the tower and when he heard your engines would tell the tower operator, "Motors north-east or south-west etc." This would be sent to you and after that it was in your court, but he would continue to report your, "Motors...." Perhaps by today's standards a bit hit and miss but don't forget that aircraft were very manoeuvrable and speeds a lot lower.

Some of the continental airports had their D/F station on the edge of the fields so that you could come in low over them. There were no such things as runways, just large areas of grass, some flat like Amsterdam and some undulating like Croydon. The Germans were at this time in advance of us in blind landings and were developing a system called Lorenz which was the forerunner of the standard Instrument Landing System (ILS) in international use today. In March 1936 BCA decided to fit the Lorenz system to their DH86s although the only airport equipped was Hamburg which was on the company's route to Sweden. The ground side of the equipment was being installed at Heston on a private aerodrome where I had collected the old Fokker III, but never really become operational during the time I was with BCA.

The system was a guided track presented on one meter which would show if you were to the right or left of the beam which lined up to route a clear path into the airport. The other meter showed in a vertical picture whether you were up or down on the Glide Path. Also mounted by these two instruments were a red and green light which were operated by two beacons on the ground at predetermined positions. The signal from these



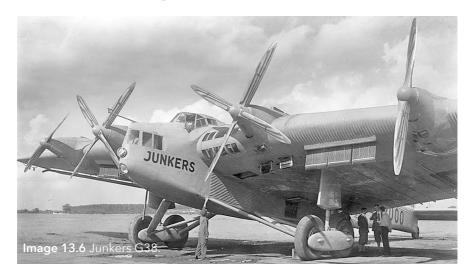
beacons was in the form of a cone with the maximum intensity of signal when over the top. The outer beacon gave a slow flashing green light and the inner, which was usually very near or on the edge of the airfield, was a fast flashing red.

The Germans were far ahead of the rest of Europe at this time with radio equipment and could by the use of two D/F stations keep a fixed track of you and direct you to a given point on the Lorenz approach or if it was not installed would bring you to the edge of the field on a safe path both in direction and height. It must be remembered that all the radio work was by W/T and the essence of success of all instrument approach was the efficiency of your operator who, in the DH86 sat in the co-pilot's seat doing both duties. Some of our operators were working for a pilot's licence and others were Marconi operators. One of the operators working for a pilot's licence was after the war to be my flight captain on the Stratocruiser with BOAC.

I remember one day when approaching Hamburg in heavy snow and low cloud and being directed by the German D/F crew. The approach started at 1,000 metres and I was progressively brought down to 100 metres (300 feet) with still no sign of the ground. Then down to 50 metres (150 feet) with still nothing to see, when after a short pause the operator beside me said, "They say you are over the edge of the field." I eased the throttle back as the snow covered field rushed past, I pulled the stick and throttled back and we were down. It was a wonderful example of coordination between the radio operators. In today's aircraft this would not have been possible due to the speed and size of the machines. On this occasion the tower congratulated me on the landing and I in turn thanked the operators. This was not the only time this type of approach was used. I see by my logbook that in March of that year I carried out nine full approaches, six at Hamburg.

When we started the service to Sweden it used to terminate at Malmo in the south as there was at that time no airport at Stockholm. The flight was up via Amsterdam - Hamburg and Copenhagen one day and back the next, except for the weekend when Sunday was spent in Malmo. On the way up we used to have lunch at Hamburg and I can still see the wonderful wiener schnitzel I always had and on the return it was coffee and a slice, in season, of a great gateau of strawberries and piles of thick

cream. Malmo was a very pleasant and old port and we used to stop in a hotel named "The Tunnel" due to the tunnels beneath which were used as bars and restaurants. There was not much to do but if the weather was fine a visit to the gardens with perhaps a meal there. If we went up on a Saturday I used to catch the German flight to Copenhagen and spend the night there returning on the ferry next day. The distance between the two towns is only about ten miles. Between the two, the Germans operated a very large four engined Junkers G38 monoplane similar to the JU 52 with three engines. The G38 had seats in the leading edge of the wing where some of the passengers could sit and it was quite a sensation to sit there and look forward to the pilots.



The pilot did not have direct throttle control but used engine telegraphs and between the engines in each wing sat an engineer to look after them. The flaps were so big that on normal approach this was all that was used to control descent. There was virtually no noise apart from a slight rumbling as it took off or landed. The question of wind noise was only to become a problem with the increase in air speed at a later date.

I see from my log book that in May there were three flights of gold from Croydon to Brussels. On each flight the value was £91,000 at the then current rate of exchange. It was an interesting load as special timber was laid on the floor of the DH89 to support the concentrated weight. This was

found to be necessary a year or so before when a load was being carried in a Dragon which hit some bad weather and one box went right through the floor into the sea. The handling of gold was thought nothing of and the porter truck with a dozen boxes on it could been seen sitting unguarded in the main hall of the terminal. About a year later some bright boy realised this and just walked in and took a box capable of being carried by one person. Today, I believe that they are deliberately made too heavy for this to happen.

One day in April I had been to Amsterdam and back on a flight and Marjory had come along for the day to see the fantastic sight of the fields of tulips all in flower. On the return flight we were crossing the Channel when ahead was the German airship Hindenburg which was soon to be destroyed by fire on arrival at New York. We flew round her as she made her startling way down the Channel and what an impressive sight she made.

Whilst in Malmo one trip, there was a very bad crash at the airport. A KLM four engined Fokker was taking off when just over the field all four engines cut out and it crashed into a street and went up into flames. The loss of life was for those days considerable and was one of the few major disasters I remember today. I went to the airport shortly afterwards but was delayed by the tragedy as, if I remember correctly, it had hit the control tower as well. To see this big plane and house blazing always remains a clear picture in my mind and a reminder of the dangers. I never knew the reason for the engine failure.

The Swedes were very efficient in the control of their flying and I remember coming across from Copenhagen one day into Malmo in cloud on a series of bearings from the D/F station. I had run what should have been the time but was still getting the same bearings. Not very far behind the Malmo airport were hills and something told me that all was not well, perhaps it was the sudden turbulence. I turned back and just as I did, up came the reverse bearing and the word, "sorry." Sorry be dammed, I thought. I must have been very close to the hills, so on landing went to see the airport controller. He called the radio station and was told that the operator had not "sensed" all the bearings so had missed me going overhead. There was no nonsense with a serious error like this and the

operator was sacked there and then. I was apologised to and asked if the action taken was adequate.

On the 1st August I had the privilege of taking the first commercial service out of the new airfield at Stockholm. This was an interesting place as the runways were cut in between small hills due to the lack of flat ground. This, plus the high ground in the area, naturally restricted the use of the place when the weather was bad. I would like to go and see the modern airport taking todays largest jets.

Three of the pilots in BCA were very technically minded. There was Morton, who was a genius where radio was concerned, and Bradencamp, who was at that time writing a book on navigation including astronomical work, which was a subject in its infancy as far as aeroplanes were concerned. The sad thing is, before the book was finished, he was killed with another of our pilots, Pat Hattersley, on an experimental night mail service for British Airways to Germany in a JU86. They were approaching Gatwick (BA's base) in poor weather and hit a hill. His widow gave me his book and asked me to finish it but it was way beyond me to complete this complicated subject. However, I did learn a lot from what had been written and applied this during the war when out in the Atlantic in a Sunderland flying boat. I had the sad task of scattering his ashes over Croydon and I am sure that if he were able he would say, "George, go ahead and tell the story of my ashes."

His ashes were collected by me in the afternoon and as Marjory would not have them in the flat, I put them in the garage for the night. The next morning I took them up to the airport and with a friend of both his and mine opened the urn and put the ashes in a paper bag to make it easier. I had borrowed a DH Leopard Moth, the successor to the old Puss Moth. Off we went, me flying and Philip Avery sitting behind in the cabin. It must be pointed out that Avery was very dark haired and had a moustache. Over the field we came and I opened the side window which allowed a fair blast of air in. Philip put his hand in to throw out a handful, held his hand out of the window and opened it. The lot blew back into the cabin. I heard a curse and looked at him, his hair and moustache were grey. "To hell with that," he said and threw out the whole bag. We often laugh at the thought of some house or garden receiving a bag of ashes

from heaven. We never told the owner of the aircraft until after he sold it that it had a dusting of human ashes all over the cabin.

As the year went on I spent some time flying test work for the Lorenz system at Heston and also testing the new Marconi beacon.

At the beginning of August I was at Croydon when one day a very modern and very new Percival Gull arrived, so I went down to have a look and out stepped Amy Johnson, by then Mrs Mollison. It was the first time I had seen this famous girl and her new machine ready for yet more records. She asked me to go for a fly with her and we went round the south coast for a while with me flying while she worked at some navigation problems. It was a lovely aircraft to fly and it was the last time I would meet Amy. She disappeared on a delivery flight of an RAF plane over the Thames Estuary during the early days of the war. I have often felt that if she had remained Amy Johnson she could have been alive today.



Image 13.7 Amy with her Percival Gull.

There are some interesting costs in my log at this time. For example, at Le Zoute on the Belgium coast, I paid 4/6d for two lunches, 1/5d for two teas and a taxi to the airport for 2/10d.

At the beginning of September we opened what I think was the first flight to the continent from a city other than London, when the Liverpool - Doncaster - Amsterdam route started and I was sent to Liverpool for the first three weeks of it. The aircraft used was the DH86 and I had on a radio officer called Vaughan. When the company amalgamated with British Airways I believe he went to Canada and rumour has it made a fortune by bringing back fruit machines to this country. These were the days before "duty hours" and "time off" had been thought of and yet we did not complain, or threaten to call an industrial dispute or behave as the young prima donnas of today do for very little call. I see for three weeks with only Sundays off, I was flying from 11am to 7pm, which would mean a working day of ten hours for six days a week. Perhaps the poem "Pilots of the Line" was very applicable to the pre-war pilots.

About this time the government were asking for tenders to operate a South Atlantic Service at a time when a suitable aircraft was available. I have on the back of a dinner menu a wonderful drawing of a rail tender being towed by an aircraft across the sea with a sailor standing in it with a telescope.

None of this was to develop before the war put a stop to all civil flying. The menu referred to was for a dinner given by three directors for the staff at the lovely home of the chairman, Sir Percy MacKinnon, the then chairman of Lloyds. It was a fabulous party attended by forty-two staff and seventy-two guests in all.

The menu had some excellent comments on it and I quote the toast to the ladies:

"We admire them for their beauty; respect than for their intelligence; adore them for their virtue and love them because we can't help it."

Then the toast to us:

"We are splendid. We must have more of us." and Samuel Pepys's well known saying

"'Tis strange to see how a good dinner and feasting reconciles everybody."

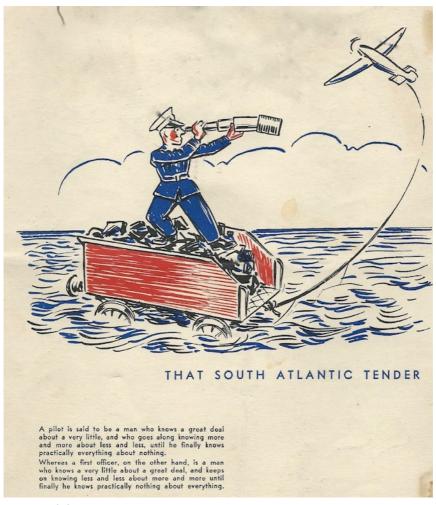


Image 13.8

Finally, "He that is drunk is as great as a king." That night we ate seven courses and the "coaches" were for 3 am. What a pity the whole of this very closely knit body was to fall apart so soon after. Perhaps the Three Musketeers who gave the party had knowledge of this on that day in October 1936.

Up to this time I had flown thirty-seven different types of aircraft and had a total of 2,800 hours of flying and my age was only twenty-five, which is not really a bad record, and I think perhaps difficult to beat.

In early November we were told the Company was going to join British Airways and I could be transferred to them if I wanted. This was a big blow to us but one which was perhaps not too unexpected. In the aeroplane magazine of the time was an advertisement for a pilot for Cook Strait Airways in Nelson, New Zealand. The death of my two good friends, Hattersley and Bradencamp, plus the idea of returning to New Zealand made Marjory and I decide to try for the job and was successful in getting it. It was with real regret that I did my last flight for BCA on the day before they ceased to operate on 14th December 1936.

Chapter 14 NEW ZEALAND 1937

Cook Strait Airways paid our passage to New Zealand on the RMS Rangitiki, sailing on 15th January 1937. This gave us a month to pack up the flat and have the furniture, car and other bits and pieces, including my workshop equipment, shipped on a cargo boat going direct to Nelson, the Company base, and as Christmas and New Year came into it, there was not much time, still it was all done in the end.



The ship was 17,000 tons and quite new at this time and one of the three "Rangi" boats, as they were known as. Two of these fine ships were lost to enemy action during the war. We sailed out of the Port of London on a cold, bleak winter day and headed south for Jamaica, so before very long the sun was shining and it was getting warmer every day. Marjory got very badly sunburnt and was quite ill for about a week, but from then on we had a lot of fun as we were sitting at the Chief Engineer's table and he was a very amusing person. The ship arrived at Kingston, Jamaica, to take on oil and to give the passengers a day ashore. We did some sightseeing, like all good tourists, not thinking that one day I would be

flying regularly in and out of this port as well as to the new resort town of Montego Bay on the North coast. Most of the night was spent in a very good night club with an excellent calypso band and we returned not long before sailing. From there the course was set for the Panama Canal. This is a fascinating piece of engineering and the whole operation of hauling the ship into and out of the locks was done by electric engines on rails called "mules" with never a sound spoken. The world's largest lock is in the Canal and is the Miraflores Lock which was opened in 1914.

There are two locks 1,050 feet long and 110 feet wide and the gates are 8 feet 2 inches high. Two of the largest ships to pass through the canal were HMS Hood and the German liner Bremen. Where the Canal is cut through a hill it is called Gaillard Cut and is 270 feet deep and 300 feet wide at the bottom. During the cutting of this hill a special railway was used and up to 330 trains each carrying about 350 tons left the site daily. The yearly traffic through the canal exceeds 10,000 ships. A long section of this waterway is cut through areas of swamp and many of the construction workers died of malaria for there were no modern sprays in those days to kill the mosquitoes, or drugs for those who were unfortunate to catch the disease. The Panama Canal is not the longest in the world for big ships or as I write today perhaps it is, as Suez once held that fame until 1957 when the Israel-Arab conflict closed it.



After leaving the Canal we headed almost non-stop to Auckland across the Pacific with only the usual two hour call at Pitcairn Island to drop the mail and provisions. England had been left in mid winter and it was mid summer when we arrived after a trip of about five weeks. My mother had motored up to Auckland to meet us and we drove down to her home in Hastings to where she had moved after the death of my father. How the famous Taupo to Napier road had improved since I had last been over it. Now there were long stretches of tarmac mixed with sectors of gravel. I am pleased that Marjory saw the original route of the road as I had told her so much about it and because by the time we returned to New Zealand some time after the war, a lot of the bends along with the steep hills had been "ironed out".

About a week was spent in the home town being entertained and visiting old friends and then I went down to Wellington and over by air to Nelson. Marjory was expecting our first child and was to come down once I had found a place to live.

Nelson is situated at the top of the South Island and on a perfect beach with mountains behind on both sides. The air was so relaxing it used to be known as Sleepy Hollow. I found a house to rent up a gravel road on the side of a hill overlooking the beach. It was a perfect setting. The golden sand, blue sea and away to the left snow covered mountains for some nine months of the year. The house was unfurnished so I moved into the local hotel to start work and awaited the arrival of our furniture.

Cook Strait Airways operated the routes: Nelson - Wellington, Wellington - Blenheim and Nelson - Greymouth - Hokitika using three DH89s, the twin engined successor to the Dragon.

The field was only a large paddock with a small hangar on the plain about four miles out of town. There was no radio except a company station which was to say the least doubtful as was the aircraft equipment and that was still only W/T. Anyone who has tried flying an aircraft and operating a morse key and trying to write the reply will know what I mean. If all was well we would really only play with it, otherwise we just flew. In any case it was all below cloud except at times up the west coast from Greymouth where the mountain range could be seen as this ran the whole way up the island on the western side. The operations were, or tried to be, carried out on the same principle of operating ferry boats

which the company also operated from Wellington to Nelson. A normal day's work would be Nelson to Wellington then one, two or three shuttles to Blenheim and back to Nelson. The first trip taking about 45 minutes and the flight to Blenheim about 30 minutes.



The airport at Wellington, New Zealand's capital city, was in these days quite a place and I will try and explain. The town is built round the west and north sides of a large, except for a narrow entrance, deep water harbour. On the south side across a narrow strip of land was the airport. What was unique was that all round the harbour were quite high hills and there was a formidable "knob" beside the approach. All this used to cause a very strange wind effect. Wellington has always been called "Windy Wellington" and it is not uncommon to have a weather report giving, "Wind NW to NE 15/50 knots gusting" and how correct this used to be and the "bumps" were some of the worst I have ever experienced. After a pilot put his head through the roof of the cockpit we had harnesses fitted and I have had both engines stop simultaneously due to the carburettor

losing petrol. The DH89 was a versatile little aircraft and very seldom had to admit defeat and our reliability was not too bad.

In New Zealand at this time were two airline companies, ours', Cook Strait, and the Union Airways who were owned by Union Shipping Company of New Zealand and operated Auckland - Wellington - Christchurch - Dunedin, plus a few local services in the North Island. At this time an uncle of mine, Alexander Roberts, was chairman of both the Union shipping and airline companies. He was a wonderful person and very much respected in the business world at Wellington. It was he who had been in charge of the New Zealand Pavilion at the British Empire Exhibition in 1924.

About two weeks after I arrived in Nelson the cargo ship with the household effects and car arrived, so I went down to the dock to clear the lot through customs. There was a rather elderly customs officer on duty in the then small port. He looked at the shipping papers and said:

"Stead......Stead. I know that name. Did you have a relative living in Christchurch?"

I said, "Yes. My grandfather and an uncle."

"Was your grandfather GG Stead?"

"Yes," was my reply.

"I used to work for that wonderful man when I was young."

I told him I had been working in England and now had joined CSA.

"Well, as I see it, you have immigrated so do not have to pay any duty on your effects or your car."

I wondered what would have happened if he had not known my grandfather.

Marjory arrived down with my mother and we soon had the house set up and I settled down to a routine of flying either morning or afternoon and a day off.

To go back to BCA while I was with them, Dick Makgill, a friend of Digby and Worthy Down RAF days, came looking for a job and he had started flying with them towards the last days of the company. Before I left England, Makgill had asked me to try and get him a job in New Zealand, so I told the management and as there was another vacancy Mak was offered the job and he took it. He arrived in due course and came as a paying guest to live with Marjory and I, as did another pilot who was

living in New Zealand called Stuart Gilkison who was later to become my brother-in-law.

Marjory had a wonderful system of payment for us all. At the start of the month everyone paid in a sum of money and this all went into a box and whoever went to do the shopping took the money out of the box. All this was very fine but towards the end of the month the kitty would be very low due to extravagant living at the start of the month. Many a time we used to go down to the beach and dig for pippies, a type of New Zealand cockle, to augment the housekeeping. It was all a lot of fun and we enjoyed life to the full.

The climate was wonderful. Even in winter when there was a frost at night, the house on the sunny side of the hill would be so hot that no fire was lit until evening. The only problem with the house was there was no mains water supply and water had to be hand pumped into a tank from a well. This was very good exercise as it took about twenty minutes pumping to fill a good bath and woe betide anyone who did not do their share. We used to try and tell Marjory who was at this time expecting the first of the junior Steads, that the exercise was good for her and I must say she did do more than her fair share. We used to pray for rain as it was collected off the roof straight into the tank. After we had been there for some time I fitted an electric pump and did my own wiring running an overhead wire for some twelve yards from the garage to the pump. The wire had not been up long before I was in trouble. The law stated that all electrical work must be carried out by a fully qualified electrical engineer, and so it had to be done again.

One of my life hobbies has always been model making and as I had taken a lot out with me, I started again. The project was a four foot long tug boat, later converted to a cargo ship, powered by a twin cylinder compound steam engine. The boiler was fired by a paraffin blow lamp. We had a lot of fun with this boat as it developed enough power to pull me round the model yacht pond in a small dinghy. We had also taken out with us a 4'6" sailing model of a Brixham Trawler which we used to sail. The chief pilot and engineer of the company and one of the old school of New Zealand pilots, was George Bolt and he built model speed boats, so in all we had a lot of fun together.



The next project was an "Aqua-bike" for use off the beach. This consisted of two pontoons on which was mounted a bicycle frame for driving a paddle wheel at the rear and the handle bars worked the rudder. The first time we tried it there was a small surf coming onto the beach and Makgill who was on it succeeded in getting out past the waves and then turned for the beach. He was immediately out of control with the outfit trying to surf in until it buried the nose of the floats and turned head over heels hitting poor Dick over the head in the process and nearly knocking him out.

Another project we had was the buying of a very aged motor boat for fishing and messing about in. At the local regatta we took on board a lot of beer and entered the first race but were still going round the course by the end of the afternoon. "Those pilots..." people were heard muttering. Still we had enjoyed it.

One day something happened which I had read about but one did not believe could happen. We went out to fish and I said to Makgill, "Throw the anchor over." He did but without tying anything to it. He never lived it down. Poor Mak used to be called "Dumbell" as he was always so vague or pretended to be with outstanding success, a habit I have often practised since. It was very sad when after the war he was killed in New Zealand in a Dakota which flew into a hill in the Sounds. It was never established who was flying at the time and I doubt it was Dick.

The trout fishing was very good in the district and we could often go off for an afternoon in the car and fish some of the streams or rivers, sometimes with success, sometimes without but the country was beautiful just to be in. There was a flat and very fertile plain on which was extensive fruit farming, the principle crop being apples for export. At that time a case of apples could be bought at the orchard for five shillings. Behind the fruit farms to the west rose a range of mountains and to the south and east high hills of fertile farm land. The eastern ridge divided the Nelson Plains



from those of Blenheim, another very flat area about forty miles to the east. The north end of these hills formed the Picton Sounds, a beautiful area of deep water and green hills with the town of Picton at the head of the main sound.

There was a daily ferry from Wellington to Picton and it was a fascinating sight to go through the sounds on a fine day on the ferry just skirting the rocks round the headlands. It was in this area, or where the entrance to the sound to Picton started, that the famous dolphin "Polaris Jack" lived and for years between the wars used to meet the boats and

swim in front of them all the way to Picton. He would wait and escort it back to the Heads again. Then one day in the 1930s' he did not appear and it was thought that he had got too daring and had been hit by a ship as he dived across the bows.

If the weather was too bad to fly direct from Nelson to Blenheim we used to fly round these sounds or between the western side and an island close to them separated by about only 50 yards of water at one place. During the war when I was again in New Zealand on loan to the RNZAF, I was wrecked on this island while going from Wellington to Nelson in a very aged ferry boat.

The flying was not very interesting from a pilot's point of view as, due to the nature of the country and because there was no direction finding system, it was all visual. From a passenger's point of view, if the weather was good and as we never flew very high, it was spectacular. The route to the west coast was, if possible, over the mountains or if not round the top of the land and down the coast. To fly down the west coast on a fine day with the range of snow covered mountains on your left passing Mount Cook and the Franz Joseph Glacier had to be seen to be believed. A friend of mine had a small charter company at Hokitika and used to fly tourists up to the glacier and land on it.



The other stop we had on the coast was Greymouth, a coal mining town and port. It was the coal from here that was in the bunkers of the Royal Navy ships at Samoa during WWI when a cyclone hit the area and it is said that but for the heat from this coal, the ships would never have got up steam fast enough to get out to sea.

Patricia, the eldest of our family, was born on the 19th of June and was cause for a super "Bottle Party". All our parties in Nelson were of this type which meant all the men took a "baby" which was a gallon jar of beer and the girls all a plate of food and a lot of fun was had. The other thing we used to do was to brew and bottle draft beer so you would have a "Bottling Party" but I am afraid very little beer ever got bottled.

There was in Nelson a one and only traffic cop who did not like pilots and was always trying to catch us for some reason or other. The road up to our house was quite steep and involved three hairpin bends. On more than one occasion I have been followed by the traffic cop along the road for going too fast and he would try to catch me. My car and those of the rest of the boys were faster than the cop's so we would go like hell and make the road up the hill with him in hot pursuit. The law then required you to be stopped by the police on the highway and time and again we would make it into the drive and he would stop on the road outside to be laughed at. He did have one or two minor successes when the culprit was not watching his rear view mirror but on the whole honours were with us.

They made in Nelson a liquor cider which was liked and had a prolonged effect. Once did I drink too much and was very ill for two days. Every time I had a drink of water I was tight again. While we were in Nelson the Royal Navy Cruiser "Leander" paid a courtesy visit and the ship's band was to give an afternoon concert in the park. In the morning they were to be shown the sights and this included a visit to the Cider Works with the result that the concert had to be delayed for twenty-four hours. It was a more lethal drink than really rough Normandy Calvados. There is only one worse drink I know of and that was made privately by a French farmer from plums and was given to us in a medicine bottle by a veterinary surgeon friend. The bottle's stick-on label bore a skull and cross bones!

There was one very senior member of Cook Strait who none of us liked and he did not very much like the pilots as they were not like the ship captains who always said, "Yes, sir." There was in New Zealand at that time a joke you could fit to your car so that when the engine was started a high pitch whine started and clouds of smoke appeared. Well, one day the man in question left his car at the airport and flew off to Wellington, so we fitted one of these things to his car. He was due back on the afternoon flight so we were all at the aerodrome doing some "ground study" when he arrived and in due course went to leave. He started the engine and off the infernal thing went. Out he jumped and opened the bonnet to find clouds of smoke. Makgill appeared and asked if anything was wrong.

"Quick get a bucket of water. The engine's on fire."

Makgill picked up a fire bucket and threw it right over him.

"Oh, I'm sorry but you moved just as I threw the water," said Dick.

The noise stopped, so did the smoke and a very mad little man, without saying a word, got in and drove off. He did seem to be more tolerant towards us after that.



Life went on during 1937 in a very carefree way and we had a lot of fun without too much flying to interfere with it. In fact the flying was very easy if you kept below the clouds and did not loose your nerves going into Wellington on one of their windy days. The number of times we had to cancel due to the wind were very few thanks to the docile nature of the DH planes.

Christmas in New Zealand never seems the same as it is in England where the days are cold and short. "Down under" on the other side of the world it is of course mid-summer and in Nelson that means it is hot with long summer days pushing the thermometer into the 90s' and more. So instead of turkey and trimmings plus plumb pudding, we had cold meats and salads, followed by fresh fruit salad, strawberries and cream or passion fruit, cream and ice cream, a most delicious meal. We had a Christmas tree but this was quite a novelty as it was not the normal practice.

By then New Zealand was making some very good wines of her own and these were the liquid of the day. Lunch started with some dozens of Stewart Island oysters, the finest oysters in the world. We asked one of the pilots with Union Airways flying down south to get them for us and leave them in Wellington and we would call for them. The price was five shillings for fifteen dozen, already open and packed on ice. Oh, for those days again! At the moment I am writing this in Arcachon where perhaps the finest oysters come from and today they cost thirteen shillings for twenty-five. What a difference!

Early in the New Year of 1938 I had an incident that I was not very happy about. It was related to the maintenance of the aircraft and as a result I nearly had a battery fall through the floor. As the holder of a Ground Engineer's Licence, I was in a position to express a fairly forceful view of this to the management. These views were not accepted and in the heat of the moment I made it clear that if there was any more trouble I would go to the Air Board and make a complaint. At the beginning of April a similar incident took place and I told the manager I was going to carry out my previous statement. As a result I was given a month's salary in lieu of notice. This did not seriously worry me as Marjory and I were both getting a little tired of the life and I was tired of the monotony of flying two very short routes.

Chapter 15

RETURN TO ENGLAND

I left Cook Strait Airways at the end of April 1938 and we decided to return to England on a Port Line 8,000 ton meat boat. These boats used to carry about twelve passengers and were very comfortable. I suppose there was a lot of luck in who the twelve were as the periods at sea were long. Our passengers were all very good fun and included as the ship's doctor Gavin Schofield, a young New Zealander who was travelling to England for further study and who is today one of New Zealand's leading surgeons. Gavin became a good friend of ours in England before the war split us up.

Before we could sail there were a few weeks to fill in and this gave us time to sell all the furniture and the car and then go up and stay with mother for a while to say goodbye to all the family and friends. It is interesting to note that a two berth cabin cost only £100 for the three of us including baby food for young Patricia who was by now eleven months old.



The ship, Port Gisborne, having worked her way round some of the smaller ports loading frozen lamb finally sailed from Wellington. The route was via Cape Horn to Las Palmas in the Canary Islands being the only stop on the voyage to England. The afternoon we sailed, Wellington

was living up to her rich name of "Windy Wellington" and as we cleared the heads and steamed eastwards she started to roll. Before very long it was ominous when the cabin steward lashed the trunks under the bunks and Patricia's cot to the side of my berth. Poor Marjory who is not, to put it mildly, a good sailor retired to bed and remained there until after the Horn and we were approaching the Falkland Islands. The good ship was rolling to a marked degree by the time Cook Strait was cleared and never rolled any less until we rounded the Horn. It was fascinating to watch the sea as the great combers came up the starboard quarter and rushed, surging along the side of the ship making her heel well over to port. Our cabin was on the port side and the port hole would be covered by solid green water half the time and we looked up at the sky the other half. The galley was situated amidships and on two occasions an exceptionally big sea washed it out. Sometimes the sun shone making the spectacle even more impressive but more often than not it was grey and overcast with rain or as we got further south, sleet and snow as we were at the start of the southern winter. The nights were long and the days short.



How Marjory survived I don't know, but those three weeks must have been an eternity for her. One of the few foods she could keep down was cold meat and pickles, which was odd. I assumed the duties of nursemaid to Patricia who was spoiled by all the crew and passengers and on her first birthday was given a wonderful day complete with cake, in fortunately the calmer waters of the Atlantic. There grew up a routine when it came to her bath time.



There was supplied by the ship a small tin bath which would be put on the floor of the cabin and enough water put in so as not to spill as we rolled and some of our fellow passengers would come in with a bottle and all would have a drink as I washed and powdered the baby to be followed by her food. It was always good fun and even Mum enjoyed the diversion.

At last the great day came, three weeks out and there out on the port bow was that great lump of rock called Cabo de Hornos, the

southern most point of the American continent and the terror of crews in the days of sailing ships. In later years I have read of the single-handed yachtsmen who have rounded this formidable frontier of east and west and feel they are a race of men on their own and a breed of Englishmen we should be proud of. They are not fools; they are extremely competent

sailors battling their wits against nature which at the Horn can be a vicious foe.

We rounded the Horn about noon and it was surprising how soon after we had altered course to go up the Atlantic, close by the Falkland Islands, that the sea started to go down. After such a long time when everyone was used to walking about as she rolled up to thirty-five degrees, the absence of the roll made it seem odd and unreal to take ordinary steps and not to have to hold on. The sun was shining as we passed very close to the Islands and how nice and green they looked. The sheep, which are of New Zealand stock, must thrive and grow fat on those islands sheltered from the worst of the weather by the high mainland of South America. No wonder they are sought after by others, but let us hope they remain as part of this shrinking commonwealth for a long time to come.

A terrible event took place before we reached Las Palmas, the ship ran out of gin! A disaster, but still we managed to survive on what was left in the store. The ship did not have a bar and you purchased your booze by the bottle. I think gin was five shillings and whisky seven and six, so perhaps that was the reason for stocks running low.

When the last bottle of Gordon's was finished we put a note in it saying it was the last bottle of gin on the Port Gisborne and if anyone found this note and sent it back, we would send them a full bottle. The bottle was presumed "Lost at sea" as the wartime saying used to read and the author was never asked to fulfil his offer. A great tragedy was to take place later on when approaching the English Channel. Everything was finished except for the Van Der Hum liqueur and we had to finish the voyage on this much to the detriment of our palates. The chief steward was heard to say, "The ship has never run out of booze before."

The stop at the Canaries was just long enough for the ship to fuel and as by now we had been on board for four weeks without a stop, gave all the passengers the opportunity of taking a drive round the island and a meal ashore. After all this time living on a "moving pavement" it was quite noticeable the difficulty we had of walking on a "still pavement" and one can appreciate the difficulties the long distance yachtsmen experience after a long time in a small boat compared to our 8,000 ton ship.

Chapter 16 WRIGHTWAYS

The ship docked in London at the end of June 1938 and off we went to our old haunt of Croydon, Purley and Carshalton to look for somewhere to live and to find a job. There was a small firm operating at Croydon flying the daily papers to Paris and bringing back fresh fruit and vegetables for the English market, as well as charter work. The firm's name was Wrightways and the chief pilot, Frank Brent, was an excellent administrator as well as a pilot and he and his wife were to become very good friend of ours. I went and saw Frank and after telling him of my checkered career he decided I would fit into his pattern of flying and offered me a job at the princely salary of £1,000 per annum, which was very good money in 1938. We rented a new three bedroom bungalow with lounge, dining room, kitchen, bathroom and wc and garage. I would not buy the house as the owner wanted £995 for it and we considered it too much. I purchased a new 1.5 Litre MG saloon for £335 and took delivery of the car at the factory and was handed the keys by the managing director, Mr. Cecil Kimber who with his family were to befriend us after the war started. Marjory and I had a live-in maid and would go to London each Saturday evening to go to a show after dinner and could not even spend a £5 note. In fact my salary enabled us to live as well as I did later as a senior BOAC captain with a pay cheque five times the size.

Wrightways were operating two DH86s and three DH89s and the aircraft were very fully equipped so that an excellent regularity could be maintained which was essential for the "paper run". The fuel reserves were always such that there was adequate to go to Le Bourget (Paris) Airport, attempt a landing and if necessary return to Croydon or if that was unfit for landing, an alternative airfield. In fact in the year before the war, we operated with greater regularity than the cross Channel boats achieved.



PART OF FLEET AIRPORT OF LONDON.

-WRIGHTWAYS CROYDON

LTD - SAFETY AIR CHARTER EXPERTS
TEL: CROYDON 6123/4.

Image 16.1



The result was that we were asked to attend a reception given at London House and were presented with the very sought after Cumberbatch Trophy awarded by the Guild of Air Pilots and Navigators each year for the best record of safety and reliability. This year the Grand Master, HRH The Duke of Kent, presented the award to us and I had the privilege of a long discussion with him about aviation, a subject on which his knowledge was considerable. It was in tragic circumstances the next time we were to meet during the war.



Image 16.3 The Trophy.

"The four pilots of Wrightways, JW Duggan, F Brent, GG Stead and PC Fair, received the Guild Trophy for reliability, which was given by Miss Cumberbatch. Mr WG Speat, managing director replied for them. He gave due praise to his team of pilots who had flown regularly every morning to Paris with the newspapers in all kinds of weather."

Flight Magazine November 24th 1938



Image 16.4 Press cutting

The threat of war was increasing and we did a lot of flying both by day and night with Army Co-Operation for the training of the Observer Corps guns and searchlights. It used to be fun flying on different courses to see if the searchlights could get a fix on you as there was no such thing as radar to help them.

In December of 1938 the company did two charters for Imperial Airways of mail from Croydon to Alexandria and both of them fell to me. The first of these flights was uneventful and took in Croydon - Paris - Marseilles - Rome - Malta - Benghazi - Alexandria and the same route back. The second flight was one of the few times I have been truly worried and at a loss to know the solution to the problem. The flight started the first day Croydon - Paris - Marseilles - Rome and according to all the available information the airport at Rome was open for night flying and had a radio beacon. This airport was like Brooklands only bigger and was inside the motor racing circuit outside the city. I had a very good radio officer with me and we left Marseilles intending to arrive at Rome by

dusk, but we hit a very strong east wind and it was dark by the time the islands of Sardinia and Corsica were crossed. Below us was a thin layer of stratus cloud. I did not worry as I had a radio beacon and D/F was good. We asked for a weather report using the same call-sign as the beacon of the airport and were given a report which included cloud cover at 1,000 feet with 10km visibility. We came over the beacon on top of the cloud and descended in a small pattern. I had worked out a course to keep clear of the high ground to the east of Rome. In these days there were no such things as Internationally Approved Approach and Landing Charts. Each pilot produced his own and there was no control of aircraft climbing or descending but as there were so few, this was not necessary.

I turned and did my final run up to the beacon on time and came below the cloud at a little under 1,000 feet and got the first shock, for below was a lighthouse and a small harbour and water. The radio operator called Rome and asked for the position of the beacon using this call-sign and at this point the Rome W/T station went off the air. Now I was left under low cloud, not very good visibility, about 30 minutes of fuel, not knowing where to go and no radio. While the RO tried to make contact again I was working out a system of ditching, if I had to, in the harbour at the same time as studying the map and flying the machine. On the map there was a straight road running east from Rome to a small seaside resort of Ostia and this had a little harbour. Was I over this? Why was the beacon coding the Rome identification? Was that lighted road leading to Rome or was I to the north or south and the road led to the mountains? I said to the RO we would fly up the road for fifteen minutes and if nothing could be identified would return and ditch in the harbour. If the second had to be done we would very likely not have got out as there was no escape hatch in the roof and in the cabin the mail bags would certainly block the exit. Up the road I went at about 500 feet with the ground rising gently all the time. Then I saw what appeared to be a glow reflected on the cloud, a few minutes more and, YES, there were the lights of a big city and it must be Rome. As the western outskirts were approached I could see the light beacon flashing the airport code. I was so short of fuel I started to descend and went straight in and landed. Although there were no lights, the surrounding roads were enough to outline the field. On getting out of the aircraft I was not, to say the least, in a very good frame of mind. I was met by two police officials complete with guns and escorted to the office of the commandant. The conversation was conducted in broken English by one very irate Italian and an Englishman trying not to loose his temper. It went like this:

Commandant, "Why have you landed after dark?"

Pilot, "Your aviation information obtained in London from your officials say the airport is open at night."

Commandant (who would not look at the instructions given for the airport), "That is not correct."

Pilot, "If the airport is not open and the information incorrect, it is a fault of your administrators."

Commandant, "You should not come after dark. It is very inconvenient."

Pilot, "Why was the radio beacon on the coast coding this airport?" Commandant, "I do not know."

Pilot, "Why was there not a flare path when I was trying to land?" Commandant, "The airport closes at dark."

Pilot, "Why did the radio station stop when there was an aircraft in trouble?"

Commandant, "It is nothing to do with me."

As we were not getting anywhere and tempers were fraying I said, "I am sorry for the trouble and would like to leave at 07:00 tomorrow would you please arrange for fuel at 06:00." and walked out. We had landed at 18:30 GMT and it was now an hour later.

At this time Italy was at war in North Africa and I feel the night position of the beacon and the unknown closing of the airport together with the armed police was all in some way connected. The company did write a protest to the Embassy in London but a satisfactory reply was never received.

The R/O and myself went into town and had a good meal plus a bottle of Chianti but I must admit that night sleep did not come easily. It was as close to serious trouble I have ever been in my forty years of flying. What worried me was the lack of assistance from what one presumed was a responsible and helpful country. Maybe the fact that we were to be at war within the next eighteen months had something to do with it.

The commandant did order the fuel and we were off at 07:30 direct to Malta. On the return flight we stopped again at Rome but at 10:30 on a lovely summer day with a beacon operating at the field this time. We again refuelled at Marseilles and because of bad weather reports of snow and ice over France we decided to have a shot at a direct flight to Croydon. Aircraft of pre-war vintage were not fitted with any de-icing equipment except for a flap on the engine air intake which could be operated to allow hot air from around the cylinders to be used to stop the carburettor icing. We flew up the Rhone Valley but by the time we reached Lyon it was obvious the cloud was too high to get on top of and a lot of ice was being collected on the aircraft and in particular on the rigging wires causing them to vibrate badly which could cause a failure. Also there was a chance that the control cables might ice up so I decided to land at Lyon.

It was obvious this was a very bad spell of weather which the forecast said would last for some days and as it was the 22nd of December, the company said to leave the aircraft and come home by train and boat. This was very good of them and we arrived back on Christmas Eve much to the pleasure of the families. I went and collected the aircraft on the 29th and took off for a direct flight to Croydon, but the weather was still very bad and discretion was better than valour and I returned after thirty minutes covered in ice. It was not until the 31st that we got home in time to see the Old Year out and New Year in which would end in war.

Chapter 17 1939 & WAR

Work during the early months of 1939 was normal. Papers to Paris, charter flights to Le Touquet and Dinard at the weekend and an ever increasing number of army co-operation details. Chamberlain went to Munich and famously said, "There will be peace for our time." The army increased the co-operation to as much time as we could let them have and this applied to all the other charter operators as well. Perhaps in some people's minds the Munich agreement did not ring with a very clear note.

The summer months came and people went to the French resorts for holidays but only if they had a firm booking for the return flight. By August we had been given instructions that when ordered the company was to evacuate Croydon and move to Barton, a small aerodrome to the south-west of Manchester. Croydon was to be taken over by the RAF as a fighter base.

Hitler attacked Danzig and Chamberlain issued him an ultimatum about Poland. Hitler invaded Poland on the 1st of September 1939 and on that day we were ordered to move to Barton. The last paper service to Paris was on 30th August and the French were still saying, "There will be no war."

On the 2nd September I was sent to RAF Abingdon, "To take a load of passengers to France. Details would be given by the RAF." On arrival at the base I was taken to the commanding officer and told that my passengers were the Headquarters of the Advanced Air Striking Force and the destination was Rheims. What a lot of eggs in one basket, an Air Marshal, an Air Vice-Marshal and a covey of Air Commodors and Group Captains, twelve in total. I wondered if they were wise to put all the brains in one aircraft.

On the day war was declared I did two more trips with considerable fear and trepidation waiting for a German fighter to appear. If we had only known how long this phoney war was to go on, there would have been a lot more breathing space. As everyone expected Croydon to be bombed at the start, the family took off on the same day we went to Barton and went to stay with friends at Oxford until we all got sorted out. Croydon did not get bombed and I don't think it was a target at all and was only hit during the indiscriminate attacks on London.

During the first two weeks of war I did sixteen round trips to Rheims with staff and then equipment for the RAF and army. The priorities at this time were a little strange. One trip I did was to Hendon to pick up an urgent case for the headquarters at Rheims. This was a long, oblong box about the size of a coffin. On my arrival in France I was met by an army officer and a lorry and was told it was a fruit machine for the mess and I established this to be true when I later played on it.

By the middle of September the war had settled into a routine and we started a regular freight service to the British Expeditionary Force using Shoreham, near Brighton, as an operating base. The loads were collected from the airport for Gloucester at Brockworth and the French base for us was the airport at Épernay in the middle of the champagne country. Needless to say there was a lot of this wine being drunk in the south of England for a while. The family moved down to Brighton and we lived at the Grand Hotel.

The freight flying routine continued until the end of the first week in December but towards the latter part of the operation it became very depressing. The RAF at the French aerodrome would appeal to us to get spares but their signalled requests were of no avail and the squadron was beginning to be unserviceable. Back at Gloucester we would ask where the spares were and would be told they were available but would have to await their turn for despatch when at this time we were moving loads of folding iron beds, believe it or not.

The last trip I did from Épernay was just as the Germans were moving forward and the owner of some champagne caves, with whom I had stayed with for odd nights when over there, gave me ninety-seven bottles of vintage champagne because as he said, the Germans were not going to get it. The sequel to this was that I put it in a friend's cellar of the house where the family was staying at the time. Before the war ended the owner of the house was killed and the house sold, complete with cellar and my

wine. What a terrible thing to have happened when all we had had was one bottle to sample when I first arrived home with it.

On the 9th December I was attached to a heavy bomber squadron which was based at RAF Finningley, but used to move up to Kinloss in Scotland for operations. My job was to transport the ground staff and stores for the moves and to be their general carrier. The reason for the moves was really not known as there were no raids over Germany at this time but I presume someone knew what it was all about.

Whilst at Finningley, I used to live in Punches Roadhouse outside Doncaster, so the family drove up to stay there as well. Marjory drove up during possibly the coldest freeze-up of the war, on a road that was icy all the way from Brighton. It did not stop freezing for the best part of three weeks and all flying virtually stopped. I did not fly from the 22nd December to 11th January.

As I previously mentioned, our aircraft were fitted with the German Lorenz Blind Landing System and a ground system for this equipment had been installed at the RAF station at Waddington and I used to go over and demonstrate it because the RAF aircraft were apparently not fitted with airborne equipment. To my surprise the CO of the station had been my CO when I was in Amman and now Group Captain Cockey. The work with the bomber base went on until the 4th April when all civil flying other than Imperial Airways was to stop.

When we were notified by the Air Ministry of this decision, I applied to Imperial for a post and was accepted. They in turn had to apply to the Air Ministry for my release as I was then liable for call-up. The powers to be had other ideas as they wanted some civil and experienced pilots to assist with the collecting and organising of the aircraft as they were called in for war service, so Imperial were told I could not be released for the time being.

On the 10th April 1940 I was back in the RAF as a Flying Officer and posted to Ringway, the main aerodrome for Manchester. The CO of the Civil Aircraft Unit was my old friend Sir Nigel Norman who owned Heston Aerodrome from where I had collected the old Fokker nine years before. He was pleased to see me as I was him. The first time I went to his office he was a Wing Commander in the Auxiliary Air Force and I saluted him and said, "Sir." His first words were, "Thank you for that. In public

we must stick to that but in private I am still Nigel." He was a grand chap and was one of the first to start the paratroops and as far as I know the first unit was at Ringway where a dummy drop had been set up. It was a great loss when Norman went off on one of the first operations over Italy and did not come back. The "Paras" was not the efficient unit of today as they lacked equipment, both arms and aircraft, and communications.

Civil aeroplanes were arriving from all over the country, some so old and decrepit they arrived on lorries. Others were worn out but still arrived under their own steam. We often wondered who the character was who had paid good money for some of it and the late owners must have been laughing their heads off. We had to sort out what would fly and which there were spares for, and the rest were to be broken up for scrap.

As well as sorting this lot out we did a lot of army co-operation work and for this there were three rather old Fairey Battles, a low winged monoplane with a Kestrel engine. It was built like a battleship and flew like one.



There was one very nice little plane there, a Percival Q6, which was the modern version of the Gull I had used in India. It was powered with two Gipsy Six engines and had a retractable undercarriage. I put this to one side for myself and used it for communication and army co-operation.



The other job we did was ferrying aircraft from the factories and maintenance units to the aerodrome. During this period the planes I flew included Hurricanes, Blenheims, Spitfires and Wellingtons. There was never any question of flying dual. You would arrive at a factory in a DH89 we used as a ferry and the chief pilot of the company would say, "Have you flown...?" and if you said, "No," he would take you out to the aircraft and I remember being introduced to the Hurricane like this...

"Have you flown anything like this?"

"Well a Percival Q6 and a Comper Gipsy Swift."

"Then you will find this a piece of cake."

I got in and put on a parachute and the chief pilot continued...

"For Pete's sake don't let it boil as it is difficult to stop - better to be cold than hot. Once you start the engine don't hang around too long or it will overheat. Now here are the switches, fuel cocks, trim tabs..."

He did a general run around of the cockpit and finally said, "Take off with tail well up, speed..., approach speed..., stall..., Good flight," and off the wing he got.

Someone on the ground held their thumbs up to show the starter power was on. I switched on and pressed the button and the sixteen cylinder engine burst into life. Radiator closed for the start and then wide open and I waved the chocks away.



This was the first time I have ever flown a modern fighter and as I lined it up into wind, wondered what it would feel like. The weather was not too bad but I had to stay under the cloud and fly down the approved route or else get shot at. Check radiator, open trim control, mags - both ok, fuel - both on, water and air temperature normal and controls free. Opening the throttle slowly and full rudder to counteract the torque, up came the tail and with a slight forward movement of the stick, back a little and we were in the air. Gear up, throttle back as speed was increasing fast and the cloud base was getting near. This was fun and across the countryside we went faster than I had flown before, round the turning points on the aerodrome and after twenty-five minutes was circling the Fighter Station at Tangmere saying to myself, "Must do a good landing in front of all the boys," came in and landed. After this I always tried for a fighter ferry flight rather than Blenheims, the twin engined day bomber. The routine was the same except in the case of the Blenheim when the test pilot said, "If you lose an engine on take off cut the other one and go straight ahead unless you have plenty of flying speed." Not long after this a unit was formed for ferrying aircraft and they were given proper instruction on flying the different types, but at the start it was a bit free and easy.

The family had come to join me and we settled into digs at Altrincham not far from the airport and were to stay there on and off for most of the war. All during the blitz they were there and at the start used to go down to a homemade shelter in the garden, but in the end and especially during the winter the chances of being hit by a bomb were less than dying of pneumonia.

Another job I had was flying the Commander-in-Chief Western Command and the Chief of the Imperial General Staff. This was very interesting and very enlightening people to take too. I remember flying General Sir Robert Gordon-Finlayson on the day Italy came into the war and I said, "What now?" He replied, "Don't worry, they will prefer to be taken prisoner than fight." What a true statement this was. On all my flights I used my pet aircraft, the Q6.

This work carried on and by the beginning of July it was obvious the situation was becoming serious and that the RAF were short of experienced pilots, so I decided not to ask for my release to Imperial again when the present job ended as it was due to, but to ask for a posting to flying boats as I had always been fond of the sea. Their role was long distance work requiring navigation as well as flying experience. The posting was readily agreed by the Air Ministry and at the beginning of August I was posted to the School of General Reconnaissance at Blackpool for a ten week course.

Before leaving Ringway we had the Dutch Airline fleet delivered to us by their pilots at the time of the invasion of Holland. It was funny that I should be the one to receive these pilots as I had thought of joining the Dutch company a few years before but decided against it as I would have had to learn the Dutch Language before flying outside Europe. The thought often crosses my mined as to what the story would have been if I had joined as not many of their pilots came out with the aircraft and all the wives stayed behind. Among the pilots who arrived were Parmentier and Moll who had done so well in the England to Melbourne race before the war.

The last trip I did from Ringway was on the 19th July 1940 with General Sir George Cory who was kind enough to say they would miss me as I was always on time. I can say that throughout my life I have never been late for anything where I had the power to control the event. At times I have driven my good wife up the wall and even now, retired and with all the time in the world, I still tend to work to a time schedule. Just before I left the Flight at Ringway I was promoted to Flight Lieutenant, so someone must have thought I was not too bad!

Chapter 18

204 FLYING BOAT SQUADRON

So up to Blackpool we went and settled into a seaside boarding house for the ten weeks of the course. There were lectures on ship and aircraft identification, navigation and meteorology, as well as armaments. We flew in old Avro Ansons and as far as navigation and meteorology went, I knew a lot more than the lecturers and the exercises round the Irish Sea were really futile. One day we were told to stand by as crews for a job. The aircraft had ten twenty pound bombs loaded but we were not told why and the bombs remained tied into the cabins for the rest of the course. It did leak out later that if the invasion had started, we were to have gone out into the English Chanel and thrown the bombs out of the cabin doors on to the Germans, and this was confirmed by a comment in Churchill's first book about the war.

The course ended on 17th October, and I was sent direct to the Flying Boat Conversion Unit at Stranraer in the south-west of Scotland. The aircraft were the old Singapore boats with four Kestrel engines mounted in pairs in tandem, one pair "pulling" and the other "pushing".



Flying was good fun if somewhat ponderous, as the old girls were very slow and a bit unwieldy. We were taught to splice, to do semaphore, row boats and stand up in the open cockpit in the nose to take photographs of ships. In November in Scotland this was not the warmest of jobs, but I was in the element where I was at home and to be able to fly in it as well, made life very good.

The course ended and with four hours of day flying and three hours of night flying I was considered an "Average flying boat pilot" and was posted to RAF 204 Mobile Flying Boat Squadron at Sullom Voe in the Shetland Islands, which was equipped with Short Sunderlands. This boat was the military version of the Empire flying boat but was fitted with bigger engines and more fuel capacity.



From an armament point of view it was good, as there was a 4-Gun Turret in the tail, a gun each side amidships and a 4-Gun Turret in the nose. It also carried four depth charges on racks which came out of the doors in the top of the hull under the wings when required. The interior was fitted with a ward room forward, then a galley followed by a crew

mess room with bunks. The boat was deemed to be a self-supporting unit and we always carried enough rations for a few days.



Image 18.3 Short Sunderland Flying Boat.

I took the family back to Altrincham and then went to Invergordon which was a flying boat base to wait for a boat from the squadron to come and pick me and others up, as this was our only communication with the mainland. The Sunderland was unknown to me and I was very impressed with its size and performance on the flight back to the Shetland Islands. Sullom Voe was the inlet on the north of the Shetlands and was flanked by low hills on three sides with an outlet to the sea round a bend on the north side.

December was spent flying as Second Pilot to other people on convoy escort and search work between the Islands, Iceland and further north. The average flight time would be eleven hours and the boats were run on the same principal as a naval ship. There was a captain to each boat and a permanent crew of eleven: Captain, Second Pilot, Navigator and Third Pilot, Engineer, Radio Operator, four Gunners and two spare "Jack-of-all-trades" who were cooks and relief gunners. Only the captain flew the boat

and the gun positions were manned at all times with a look-out always in the Astro-dome.

The camp was of temporary wooden huts and were none too warm in the winter when snow was on the ground, unless you sat on top of the little coal stoves in each of the rooms which would not stay in all night. We had one Flt Lieutenant called Lovelock who used to go out and roll in the snow every morning before breakfast. Apart from flying there was very little to do and one of the main pastimes was walking over the moors trying to shoot snow hares, but as they were the same colour as the snow and we were not, the odds were very much in their favour.

The squadron Intelligence Officer was Cyril Mills of the circus family and in the middle of December he took a week's leave and went to London. A signal was received from him asking for a boat to be sent to Invergordon on 22nd December to "Pick up stores.". This great chap, at his own expense, had purchased such an array of food for the whole station that I didn't think the Ritz could have equalled our Christmas that year. From Christmas through to the New Year we lived like lords.

On the 2nd January 1941, I was given my own boat and went down to Invergordon for a working up period. This included air firing, bombing, depth charge dropping, reconnaissance and the general welding together of an efficient crew. Although I say it myself, by the time we were ready to go, not much would have missed out attention. One of my tests when we were flying on a reconnaissance exercise was to open a window and drop out a packet of aluminium marker powder and a few minutes later fly back over the area and see who first called on the intercom, "Object bearing...." Two weeks were spent on the working up exercise and then back up north to work. The first job we did was a ten and a half hour convoy escort. As the Shetlands are far north, in January you either departed in the dark or returned after dark. Night flying was carried out with the use of Flare Boats which had paraffin flares on them and were laid in a line as near into the wind as possible but not too far off the line of the Voe because of the hills. The control boat would station itself at the down wind end and apart from this boat and the flares, all the surrounding countryside was pitch black. With the wind from the north away from the entrance, and with a fully loaded boat having just taken off it was necessary to turn and follow the water until clear of the land. This was not easy on very dark nights when the wind was across the water but although there were some near misses no one ever came to grief.

The navigation aids fitted were: drift sights, bubble sextants and a film strip above the navigation table that would project onto the chart a precomputed line of position from certain stars. All these astro aids were excellent, but as ninety per cent of our flying was below cloud looking for submarines and ships they were not a great deal of help. We were fitted with the original radar, though it was still in its infancy and very unreliable, but I found with a bit of fiddling and messing about the radio operator and I could keep the picture on it to a certain extent. How far removed it was from the screen on the Boeing 707 and how I would have loved to have one in the boat. Although we were fitted with loops, there were no direction finding radio stations in our area,. The only beacon we ever used was one on an island on the approach to Oban, when it was working.



We usually flew between 1,000 and 2,000 feet or if the weather was really bad down at sea level. There was naturally radio silence except in the case of a "sighting" or an emergency, when a signal would be coded and sent. As well as the signal code we had a recognition signal fired from a Very Pistol consisting of a two star cartridge with a different sequence of

colours changed daily. The code was known to the navy and we would be told which signal to use at the briefing before take off. The briefing would include the type of patrol e.g. Convoy Escort, Reconnaissance, Search and Rescue, together with the full known details of position and surface units involved. On return there would be a de-briefing of the flight.

The biggest problem was the return to a base when the weather was bad especially when it was dark. We might leave Sullom Voe and return to Oban or Bowmore on the Isle of Islay, depending on how short of fuel we were or the weather conditions. It was freely admitted by all the captains and crews that they were at times terrified when approaching the coast on a dark night with rain, sleet or snow after ten hours at sea below cloud with no proper fix. Trying to find an island with a very low powered light on a headland when perhaps flying at 200 feet was not funny, especially when we were trying to make Oban which meant flying quite a distance through the quite high off shore islands. It required not only skill but a lot of luck as well. Icing we took in our stride. The leading edge of the wings had what we called "Political Paste" on them as it was of really very little use, and allowed the ice to form further back making the situation worse. For the carburettor we had an alcohol spray in the intake and a drip-feed for the blades of the props. The only person I knew who got into trouble was not from our squadron and who found himself flying up a valley one night and could not turn round, so as he reached the cloud level, he pulled the throttle back and just sat down and slid up hill to a stop and all the crew stepped out.

One Sunday morning at the start of the month we were sitting in the mess when the ack-ack guns started firing. This had never happened before so we went out to have a look and we were just in time to see a JU88 crash into the sea by the beach. So pleased were the gunners that they took off to see the result of their handy work, but while they were down on the beach, over the hill came a second JU88 which dropped a stick of bombs which luckily did not do any damage. Were the gunners' faces red!

I see from my log book that on the 26th and 28th January 1941, I did two patrols above the Arctic Circle north of the Faroe Islands. This was during the time the Germans were trying to get a pocket battleship out into the Atlantic. There was a lot of very bad ice on the second of these trips and we were losing power with very little height between us and a very nasty sea. The briefing had been, "If possible find the ship and unless relieved stay with it until fuel runs out." Not a pleasant thought but one Sunderland and crew would be a small loss if the result was a pocket battleship.

In the middle of March the boat was due for overhaul at the Maintenance Unit at Pembroke Dock in South Wales. The procedure was for the crew to fly the boat down and go on leave until it was ready or there was a new boat available. In either case leave would be about three weeks. By this time we had accumulated a good stock of tinned food from our daily flying routine, so on arrival at the dock the share out took place and on arrival at home or digs it was a welcome sight, especially the tinned butter, fruit and meat.

When we returned from leave to collect the boat I was asked to do a flight to the south of Pembroke Dock for a couple of boffins to test a new piece of radar. Off we went with the boffins on the radar and about thirty miles south and at 5,000 feet, in front of us appeared a Heinkel. I sounded the alarm bell. The boffins who had not been told that if it sounded to hold on as I pushed the stick forward and dived towards the sea with the forward gunner firing all four guns. The Heinkel took one run at us but decided that our fire power was too good especially the midship guns which were scanning and firing. The boffins quickly agreed that they had all the information needed and we returned home. The information had been obtained in about half the time originally required! I was pleased with the crew as this was the first time we had been in "Action" and the co-ordination was good.

All the time I was with the squadron I had two first class 2nd Pilots. The first was David Brice who had been a First Officer with Imperials and the second was David Hewlings who had been a Borstal governor and went back to it after the war. Apart from being a most efficient officer, perhaps due to his training, he was excellent company. The navigator, Wylie Wakelin, a New Zealander like myself, was a Sergeant Navigator when he joined the team. I had him promoted to Pilot Officer and before leaving the squadron had taught him to fly and obtained a pilot's course for him. He recently retired as one of BEA's senior pilots. As a navigator his work was excellent and if he pointed to the chart and said, "We are

here," the chances of not being very near that point were very small. Wylie is still a very good friend and we were sorry when he went back to New Zealand to live. The Flight Sergeant in charge of the rest of the crew was an excellent cook and we lived like kings on grilled steaks, chops, eggs and bacon. You name it and he could cook it. In fact the only difference between us and the navy was that we did not get a rum allowance.

On the 7th April we were told to move up to Iceland and that an old passenger ship was to be our base at Reykjavik. In the space of twentyfour hours we packed up and complete with spares and ground crews moved off. So mobile were we that this was no problem for the squadron. The ship that was to be our base was rather old but quite comfortable, except that she was designed for tropical use and was a bit cold. The reason for the move to these higher latitudes was to cover the convoy route in mid Atlantic. At the end of April we were on a sweep ahead of the convoy route and were at the extreme north end of it when a lifeboat was seen and down we went to just above wave tops and passed low over it. I could see three bodies lying in it and I turned for a second run. This time as we passed one was sitting up and waved. Now came the decision what to do. The convoy must, hard though it may seem, come first. There was radio silence and the escort ships were too far away to contact by lamp. All I could do was to drop some food, take a very accurate bearing and distance for the leading ship and return to patrol. When I reached the head of the convoy instead of passing the usual distance ahead, I closed the leading escort and signalled with the lamp the position of the lifeboat. This must have been passed to another destroyer on the flank as a little later it took off at speed for the position and on the next sweep to the north we saw the lifeboat alongside. The outcome we never knew but perhaps more than one life was saved that day. That day we were twelve and a half hours in the air and a little short of fuel by the time we saw the flare path and very pleased when we picked up the mooring buoy.

The crew was now increased to twelve because when the lookouts had been on duty for too long they became unable to see small detail and as we were looking for periscopes it was essential this did not happen.

At the end of May I was sent on a survey trip round Iceland to look for alternative landing sites in case of bombing of the main base and also for use in bad weather. We flew up all the fjords and landed in most of them. In the case of two we had to land as there was not enough room to turn around in the air. The sides of the fjords were so steep it was often impossible to anchor and we would move to the side and just off shore with two of the crew in the bow, cut the engines as we gently touched bottom. Crew would go ashore with a line and the boat kept off by the wind. The local farmers and their families would come down to see the boat as this was such a new sight for them. Two days were spent on the trip with the first night at the northern town of Akureyri where we were well entertained. The next day we did the big north peninsular and what a fascinating piece of country this was. Then on round the coast, past the active volcano on the south-west side and so back to base. I was to repeat this trip again a little later with the Commander in Chief Allied Forces in Iceland.

At the end of May all the captains were assessed by the Squadron Commander Denis Coote and mine was Pilot - Exceptional (the highest rating) and Navigation - Above Average which for an ageing civil pilot was perhaps not too bad. By this time I had flown 543 hours in command of a Sunderland, nearly all on operations in the north Atlantic with flight times averaging ten to twelve hours each.

At the beginning of June the US Navy arrived with their long range Catalina Flying Boats and a destroyer as a depot ship. They were to carry out a neutrality patrol off the east coast of Greenland. In fact what they were doing was watching for any trouble going south to the Canadian and US coasts. I was sent on the first patrol they did and we were in the air for fifteen hours. The flight was north of the Denmark Strait between Iceland and Greenland to the coast at 70° North and then down the coast to the southern end at Cape Farewell and then up again. It was most interesting as the whole coastal area was frozen with big icebergs off the shore. There were a few small villages and two Danish Met Stations. We circled them all and the locals came out to wave. I don't think they saw an aeroplane very often. The Catalina, as we called it, or the PBY5 to the Americans was a high winged, two engined boat with a very long range designed for this type of war.



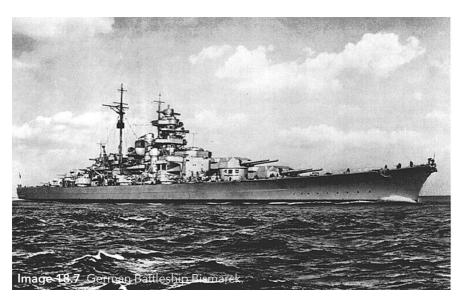
The armament was two guns in the nose and two cannons in the blister about midships. Later I flew one of these boats with long range fuel tanks from the west coast of the States to Honolulu in twenty-six hours.

Escorting a convoy consisted of wide sweeps to the north and south of the convoy track and a few miles ahead looking for the telltale white plume of a U-boat's periscope. When the sea was calm this was easy but if the Atlantic was its usual self, then to see the streak was very nearly impossible but we were a deterrent to the U-boat coming up to periscope depth as his hull could be seen in the wave troughs. One day we were on our way home when a patch of oil was seen so the alarm for attack was sounded as it could be a damaged Jerry leaking oil. Speed was essential. A 180° turn diving to sea level and as the alarm sounded the depth charges went out, then as we passed over the patch of oil I dropped two. As we turned again they went off in the area of the oil. On going back over, oil could be seen rising from the centre so the other two depth charges were dropped. Whether this was a damaged U-boat or a sunken ship losing oil it was impossible to say. The usual signal for attacking possible U-boats

was coded and sent and we were given a "possible sinking" due to the increase in the volume of oil after both attacks. We stayed around as long as fuel would allow but saw nothing more. While on these patrols it was not unusual to see a ship torpedoed and when loaded with ammunitions would explode and the blast could be felt in the aircraft when we were near enough. When a convoy was attacked we were often called in by the escort to a close patrol in an attempt to locate the U-boat as the track from the torpedo could easily been seen from the air.

We were on patrol one morning in the Denmark Straits in very poor weather with low cloud, sleet and patches of fog. There was a big flap on as it had been reported the new German battleship "Bismarck" was trying to break out into the Atlantic. Our briefing was to patrol to the north of HMS Hood who was lying at the southern end of the straits. We had managed to find the Hood once and then went north but the weather was impossible for sighting anything. The navigator was working hard on a search to the east and west as we worked north. Then something started shooting at us but we were in fog and could not see anything. The radar at that time did not work very well and in the sleet and snow it was even worse so nothing was seen on it either. There was only one burst of fire so we kept on and reported the fact to base. At the end of the sweep we returned to the position of the Hood but could not see her so we did a second sweep lasting about two hours and back again to try and locate her. At one time we did see some debris in the sea but this was not unusual as a lot of ships had been sunk and the sea was full of it. At the end of our endurance we returned to base and were told it must have been the Bismarck which fired on us as the two cruisers which were the only other British ships in the area had not. On debriefing I told of the debris where the Hood should have been and I was questioned a great deal and the crew were told not to speak to anyone. Twenty-four hours later it was announced that the Bismarck had sunk the Hood and was free in the Atlantic. How little we knew of the drama going on in the fog and mist below, so near yet unseen. We never knew if it was the wreckage of the Hood we had seen but feel it could well have been. She sank with a terrible loss of life. It was some days later when a Catalina flying in mid ocean found the Bismarck again and was really responsible for her final destruction. Briggs, the pilot of the Catalina later came to Invergordon when I was Chief Instructor and at the end of the war joined BOAC. After the finding of the Bismarck he was always know as "Bismarck Briggs".





It was during June that we had the one and only incident to a squadron boat. The boat was returning in poor weather at night from the south-east and hit a hill on high ground to the south of Reykjavik. We did not know what had happened to him that night and there was nothing that could be done until dawn when an aircraft was sent to search the area where he was most likely to have met trouble. The search plane reported he was down on high ground on a strip of land and there was no sign of life but had not been a fire. A ground party was got together and set off with all the necessary equipment to get as near as possible by road. Most of Iceland is volcanic and the barren areas where the boat was, is of lava with a hard crust on top of soft dust. The party got to within about seven miles and could see the aircraft. Half the party started to walk up with food, water and medical supplies and with a radio. The idea was that when they had inspected the crash to radio the rest of the party to say what was required. As they started to walk up the hill the going got softer and softer and for the last two miles every step broke through the crust and they went down, at times, to their knees. By the time they returned to base their legs were in a very ragged state. The first message said that there were two survivors one of who was the captain who had been thrown out in the crash. Both were in a very poor state as they had been out in the wet and cold all night and also suffered injuries in the crash. The rest of the party went up with stretchers to carry them down and requested a fully equipped army party to come up and collect the bodies. The captain, Flt Lt Hughes recovered and in due course was back in operational flying. I do not know the outcome for the other survivor.

In the middle of June we were again due for a refit, so we did an escort patrol to the south east and then down to Oban for fuel and then onto Pembroke Dock. On arrival I was told that on return from leave we would be allocated the first of the new Mark II Sunderlands with a similar airframe but with bigger engines, the Pegasus XVIII, with constant speed propellers. Up till now the propellers had only been two pitch, which was fine for take off and cruising, but the new constant speed type should improve the performance and endurance.

The family were still outside Manchester and being well and truly bombed. It was very odd that every time I went home on leave the bombing stopped for the whole period and started again as soon as I left. After the usual three weeks' leave we all gathered at Pembroke to see our new 'mount'. The Flight Engineer Officer and I tried to find out about operating a constant speed propeller: the best climb revs; cruise rpm for weight; consumption at low revs; high boost; etc. No one could answer any of the questions and we were told, "You will have to sort it out for yourselves." This we did in a series of test flights at Pembroke and then on the flight back to Iceland. When I left the squadron the "Stead Power Curves" were used by all the Mk II boats. They must be the only set of curves produced purely as a result of flying tests and without the use of the "slide rule boys".

Chapter 19

GIBRALTAR

We were only just back at our base in Iceland when one afternoon a signal was received ordering the squadron to proceed with all speed to Gibraltar. This was put into effect and the only problem was what to do with the mess funds? The result was a large purchase of drink from the ship's stores divided amongst the boats and at dawn the next day the squadron took off. I had my crew of twelve plus ten passengers and spares, baggage, spare ammunition, depth charges and all the other items required to keep the boat operational. We were all loaded in a similar manner and were obviously very overloaded. I remember looking at the two wing floats and thinking it was the first time they had both been in the water at the same time. All the captains had agreed to go down the harbour so we could if necessary carry on straight out to sea without having to turn. What a take off! With throttles wide open we went a very long way rocking the boat fore and aft with the elevators before finally we came up onto the step. The step on a flying boat is a change in the shape of the under water section which brakes the suction of the water and thus enabled the speed to be increased. If the boat was very heavy or the water was flat calm this could be a problem and both were the case on this morning. The old girl was doing her best and as we approached the open sea, slowly and with a very gentle pull back of the controls she eased up into the air. The direction of the run was the same as we wanted to go which was just as well as for some distance we were very low and near stall speed. Still this was war time.

Eight and a half hours later we landed at Pembroke Dock and after refuelling spent the night aboard and left again the next morning for Gibraltar. The load was the same but there was a good wind on the surface and a chop on the water so take off was easy. Ten and a half hours later we made recognition signal to Europa Point, received an acknowledgement and landed in the bay between Algeciras and the harbour whilst keeping out of Spanish waters. The squadron did not

know why we had been sent to Gibraltar until we arrived there and found out it was to supply reconnaissance for "Force H" which was the naval escort for ships passing through the Mediterranean to Malta and Alexandria. I did two of these reconnaissance flights and at the end of the first made a signal by lamp to the Flag Ship of Admiral Cunningham to say we were returning to base. The immediate reply was, "Thank you mechanical P Cunningham." The Admiral was well known for his wit and there was a supposedly true story that one morning he was returning to Gib with Force H when the Admiral in charge of the dockyard sent the signal, "Round spherical object two miles south Europa Point. Must be mine."



One convoy escort we did was west of the Portuguese coast and we were sweeping about ten miles north of the ships when a cargo ship of about 6,000 tons was seen on its own. This was strange as neutral shipping was rare, so we went to investigate and tried to call him on the lamp using the international code for "Who are you?", "Where from and where to?" But he would not answer at all and started to alter course. This looked very suspicious so we went back to the leading escort and told him

what we had seen. A destroyer was despatched and we went back to locate the ship again. After a while the navy arrived and circled the ship and to our great excitement they went alongside and were still there when we returned to patrol. When we arrived back in Gibraltar we reported the incident and a few days later were told that the ship we had found was German and full of prisoners from the German raider Altmark. The last I heard of the event was from a press release saying that the navy had captured the ship but no mention of the boys who had found it.

The next job was a flight to Malta with some ten VIPs. The flight was planned to leave Gibraltar so it would be dark when we approached the "Narrows", the area south of Sicily and north of Tunis. At Malta we had to land, refuel and depart to be west of the "Narrows" again before dawn. At this time Malta was being bombed night and day and I was told that the only lights I would get for a flare path was as I approached the inlet used by the RAF. On final approach when I was ready three flares would be lit and put out again as soon as I was on the water. The night was ideal as far as we were concerned, with a nice thin cloud cover at about 1,500 feet and a bit of moon above it. We flew the whole way at about 1,000 feet and picked up the western island of Gozo and followed south of the islands and then with flaps down came round the final bend, fired the usual signal and were on the water by the time the first flare was lit. The flight had taken six hours with three being after dark. As we picked up a mooring buoy a raid started but work just went on and we refuelled ready to go for take off within the hour. The passengers this time were also VIPs and we were back at base in another nine hours. The next trip was again to Malta to pick up the Governor and Lady Jackson and with a stop at Gibraltar carried on with them to Calshot near Southampton at the original flying boat station. The passengers were taken off and we left for Pembroke Dock because no boats could stop at Calshot due to the bombing of Portsmouth and Southampton. By the time Pembroke was reached the crew had been on duty for a bit over two days and in the air for 32 hours and as vigilance could not be allowed to lapse during the flights, we were very tired. In the Med the threat was the Italian Air Force, in the Bay of Biscay it was the German long range aircraft and near England the Heinkels and JU88s. The flight up from Gibraltar was planned so that we passed through the Biscay during what darkness there was in August.

At the Pembroke we were given another Sunderland and returned to Gibraltar after a stop at Mount Batten in Plymouth Sound to pick up passengers. On Arrival at Gibraltar the rest of the squadron was missing and we were told that they had all gone to Bathurst in Gambia on the west coast of Africa.

Chapter 20

GAMBIA

On 27th August 1941, we took off for Bathurst and it was rather fun to fly for hundreds of miles along the beach going south but avoiding the coastal ports as some were still in the hands of Vichy France and after the Dakar affray were not too friendly. I had never ever heard of this outpost of the Empire and as we turned into the mouth of the river Gambia and landed to the north of Bathurst, the capital, felt that this was not going to be all honey and wine. We usually flew in hot weather with the windows by the pilots open, but as we made this descent the air was getting hotter and more humid, and when we were finally on the buoy it was revolting. All one could see was a town of tin buildings and a sweep of mangrove swamps.



A launch came to take us all ashore and the coxswain said, "Do you want to go to Half-die?"

"Where is that?"

"There," he said, pointing out a wooden jetty on the edge of the swamp.

"Do we have to?" I asked.

"No, we can go straight to the boat," he answered.

I had seen a ship at anchor which I thought was our late home in Iceland but it turned out to be her sister ship "MV Dumana" and we were to live in her. This was the other extreme to Iceland, she was too hot! She was built to sail the seas and the ventilation would no doubt been adequate but lying in the river here was far from adequate. Still there were many other people in far worse conditions all over the word so we could not grumble.

In September I was sent down to Freetown to collect a VIP and on arrival found it to be Admiral Boyd of Ark Royal fame, who with some other naval officers were on their way from the Mediterranean to England after Ark Royal had been damaged in action. They came to stay with us in the Dumana while waiting for another flight home. For some time we had been talking about a survey flight up the river for some hundred odd miles to the town of Georgetown. The bishop of Gambia came to meet the Admiral and as he wanted to go up to Georgetown it was arranged that the next day I would take a flight up there with the Bishop, Admiral Boyd and six of his staff. No flying boat had ever been up the river let alone landing at Georgetown. The sight of a Bishop and an Admiral on the flight deck of a Sunderland dressed in only pairs of very wet shorts must, I think, have been a unique sight.

One evening our CO and the Admiral had been ashore and had just reached the bottom of the gangway when a rather drunken sergeant came out of his mess and walked across the deck and relieved himself over the side of the ship. Unfortunately the Admiral was in direct line of fire. The act was still in progress when the great man arrived on deck and went up to the sergeant and said, "You are the first man to have done that to me but I bet many would have liked to." The CO was not so happy the next day when a certain NCO had to apologise to the Admiral.

Anchored in the river with us was a hospital ship to look after both personnel out at the aerodrome and ourselves and it was to this ship that I retired on 18th September with malaria and was off flying until the beginning of October. While in the hospital ship my promotion to Squadron Leader came through but as I was on quinine and off drink, the party had to wait. When it did take place, it was quite a night.

One of the sports for many of us on the Dumana was shark fishing over the stern of the boat. The river was infested with them. There were no rods so all that was used was a heavy line, a short length of thick flying control wire and a hook made in the workshops. When a fish was hooked it was pulled in under the stern of the ship, shot with a rifle and pulled on board.



For most of the time I was on the ship we did not have potatoes and used rice as a substitute with the shark boiled, fried in batter, curried, every way the cook could think of until it was coming out of our ears. Never have so few missed the humble potato for so long and it does not seem possible the missing "spud" could mean so much in one's life.

The next bit of excitement was when one of our aircraft failed to return from patrol and I went out to look for it. There it was sitting in the sea about ten miles off Dakar and I went down and signalled to find out what was wrong.

"Out of fuel," was the reply.

"We'll bring you some," we signalled back. We flew back to base taking about two hours and by the time we landed had worked out a plan to use four and five gallon cans to store three hundred gallons in my boat and use a rubber dinghy to transfer them. By late afternoon there were enough cans on board with a spare dinghy and we took off. Apart from a slight swell, the sea was calm and the landing was not a problem. Our boat was manoeuvred in front of the other one and a line paid out to him

which he made fast. My idea was to tow him slowly ahead so as to make it easy for the dinghy loaded with cans to fall back to him and then be pulled back empty for refilling. It all worked like a dream and within an hour the transfer was completed and both boats took off for Half-die, the name given to the east side of Bathurst when shortly before the war an epidemic killed half the population.

By the end of October I was again on the hospital ship with a second and more severe attack of malaria which would not clear up and it was not until the end of November that I was fit to fly again. The powers that be said I must go home as another attack could be fatal, so on the 6th December we took off for Pembroke Dock, but the "Old Girl" as Sunderland T9070 was called by the crew, did not want to go as the starboard outer failed soon after take off. Again on the 7th, 9th and 10th we tried, but that engine was in collusion with the boat and kept stopping. It was not until the 15th that we reached Gibraltar and on the night of the 16th flew up to Mount Batten and on to Pembroke. I think we, as a crew, were sad because during the past year a close knit body had been formed and I cannot remember a cross word having been spoken by anyone, even though we had been in some very difficult situations. The crew was split up, David Hewlings to get his own boat, Willy Wakelin to go on a pilot's course and the rest of the boys to various other jobs. Apart from David who had joined the crew when Brice left, we were all due for a rest having flown 1,677 hours during the year. My assessment by the CO for both pilot and navigator was "Exceptional".

Chapter 21

OPERATIONAL TRAINING UNIT

The next job I was sent on was to be a little more settled although this was not known at the time. The family were delighted that I had arrived armed with "goodies" in time for Christmas 1941 and once again the raids stopped. A week after leave started, my posting arrived to report to No 4 (Coastal) Operational Training Unit (OTU) at Invergordon as Chief Flying



same time my promotion to Wing Commander. As a united family again, and for a while we hoped, we took off in the car for the north. Accommodation was a problem, for there were not only the RAF but also the navy and army in the area, but we managed to get a room a t the Commercial Hotel in Alness a couple of miles from the OTU and stayed there the whole time I was with the unit. The owners Mr and Mrs Grant went out of their way to look

Instructor and at the

after us.

The work of the OTU was to take the pilots from the conversion units and train them to operational standards which meant the usual gunnery, bombing, navigation, crew training, night flying and a new form of ground training in commando tactics which included the use of an assault course. The course was just being built at the time of my arrival and in order to set the standard I was the first to go over it. Physical exercise was never my strong point and going over that course nearly killed me. Still it was done and all the crew at the unit had to go over it once a week!

The boats at the unit were an odd collection. There were Catalinas, Sunderlands Mk I and II, and for navigation and radio work we had the old Singapores and Lerwicks. The old Singapores were on their last legs or floats and very seldom managed to stagger into the air. The Lerwick was an aircraft powered by two big engines with a short and deep body and a small wing. It was fast but dangerous and would virtually not fly on one engine and had a nasty habit of twisting a wing if a float was allowed to hit the water at all hard.



There had been a squadron of the Lerwick planes but so many pilots had been killed flying them they had been re-equipped and what was left of them were sent to us. There were very few staff pilots I would allow to fly it as there was only provision for one pilot so dual was impossible. One poor chap took off in one to do some landings, hit the water hard on the first landing and opened up to go round again. By this time we had R/ T communications in the boats with a few miles range. The duty pilot called me in to the office and said the Lerwick was in trouble with the pilot reporting that every time the speed got anywhere near that for landing the port wing dropped. "What should he do?" It was obvious that he had bent the wing on the first landing and now had an unbalanced lift. It was a very good question, "What to do now?" The roof hatch was designed for escape on water but not for use with a parachute due to the proximity of the props and the machine was so unstable I was certain he would not get from the pilot's seat to the cabin door and even then it was doubtful he could get out. I took over the radio and told him the facts as I saw them and recommended that he did a very fast approach and put the boat on the water at a speed just above that at which the wing dropped. He agreed to this and we told him not to try it until all the marine craft were moved to form a long line up the harbour and he should land beside or just past the first craft. When all was ready I gave him the OK and this wretched machine, which we called the "PIG" as it looked like one, came round and the pilot did a superb job and amidst a shower of spray came to stop without trouble although he was a bit shaken. The boat was pulled up on the beach and scrapped. That was one problem out of the way but we still had two left!

One of the jobs attached to the OTU was liaison with the Air Training Corp at the south end of Loch Ness at the town of Fort Augustus with the very old large monastery, where there was an evacuated boys school from Glasgow with its ATC unit. Up to now an officer had gone down there by car once a month to see them and I decided to take one of the old Singapores down, land on the loch and anchor off the monastery. To test their initiative no warning was given and we just landed, taxied up to the beach and anchored. Not only did the boys flock out but the Abbot and all the priests came also. This was an event and Father Oswald Eves the priest in charge of the unit put on his uniform and became Pilot Officer Eves of the ATC. We were entertained to lunch and then all the boys were given a short flight and a lucky few came back to Invergordon with us returning by bus later. This established a principle and from then on I

went every month by air with a sneaking hope of seeing the famous Loch Ness monster, but I think it must have been shy of flying boats.

The monastery is a beautiful building and has a superb organ reputed to have as many stops as there are feet in Ben Nevis. I remember Oswald Eves playing it one day for the crew and was busy rendering "Begin the Beguine" when a door shut in the background and "Begin the Beguine" became "Ave Maria" without a break.

It was very pleasant to live an organised life with an office routine but my love was the boats not the office chair. There was an excellent bunch of instructors including "Bismarck" Briggs and two captains who had left the squadron before me. Our flight offices were on a small Norwegian passenger ship which was moored to the quay and we used her as a mess for lunch as the main mess was in Alness. The captain of the ship was an excellent type and would feed us very well and always seemed to have a stack of gin which was not easy to come by. I often wonder what was this ship's end as her hull must have had so much weed I doubted she could move.

The RN and RAF had an aerodrome not far away at Evanton and I used to borrow a Lysander plane for a flight on a pretext such as navigation co-operation with a bomber station. It was fun to use wheels again instead of floats and better still to get away from the office for the day. One day late in my time at Invergordon I flew off to see the Photographic Reconnaissance Unit at Fraserburgh commanded by Lord Douglas Hamilton who the last time I had seen was when we passed in the Persian Gulf, he going south to fly over Everest and me going home in the Gipsy Swift. The unit was equipped with the latest Spitfire Mk IX and he asked me if I would like to fly one. Naturally my answer was "Yes." Into one I was put with the remark that, "After the engine is started, don't hang around or it will boil." Down to the end of the runway I went, a green light from control and I pushed the throttle open leaning slightly forward. My back and the seat joined forces with a bump and we were rushing down the runway and into the air. When I got the thing under control the speed was over 250mph and the climb rate 3,000 feet per minute. Nothing like this had happened to me before and I was thrilled. For about twenty minutes I shot round the sky and then came in to land after the thrill of my life. It was like riding a race horse after an old plough horse - sorry T9070, my faithful mount, but I am not maligning or forsaking you. I had taken off over the sea at the end of the runway and not long after I had returned I was standing talking to Hamilton when another Spit took off and went into the sea about fifty yards offshore. We watched as up to the surface came the pilot who later came to see the CO and said, "The b...... cut out at take off so I pulled the gear up and went for the sea. When we hit the bottom I opened the cockpit and floated up, took off my boots and swam ashore." He was still carrying his boots and I am sure that no-one but an Australian Sergeant Pilot could have pulled that off.

During March 1942 Marjory and I had the honour and pleasure of being asked to a concert at the Naval Station where we were entertained by Sir Harry Lauder. It was a wonderful performance for nearly two hours during which he sang all the old popular songs so well known to us all. In the mess after the show we were both introduced to him.

There was to be a big defence exercise of Invergordon in which the Norwegian Commandos, who were on exercise walking most of the way across Scotland, were to take part. The idea was for the commandos to attack from the west in the afternoon and we, the local defence force, were to stop them. My CO and myself were appointed umpires to see fair play. On the western edge of Invergordon there is a railway line cutting with a bridge over it leading to our lecture huts and station HQ. During the morning the Norwegians were seen approaching the bridge and as they were not due until the afternoon and the local defence were not ready, the CO, Group Captain Francis, went out and told them to stop until after lunch. Their CO was heard to say, "I suppose the Germans would stop if their attack came before it was expected." Still, they played the game and did stop much to the amazement of the troops. At this time I happened to be at Naval HQ, a converted house on the water front talking to the Officer in Charge and standing on the lawn. Out of the front door came a rather elderly Royal Navy Reserve Commander with a club in his hand saying, "Sir, the enemy is approaching."

The Naval Officer replied, "What is that you have got Commander Makin?"

"It is a club and the only weapon I have for defence," he said.

The Officer's reply was short and sweet, "Don't be a bloody fool and get back to your office."

The action in the afternoon was very short but the commandos had the time of their lives climbing over buildings and successfully taking all the defence positions. If one had not seen this happening it would have been hard to believe that two years after the start of the war, it could still happen. A few days later, this tough body of Norwegians embarked overnight on ships and disappeared back to Norway to harass the occupying Jerry.

In April I did manage to get an operational flight which was a search for a lifeboat off the southern Norwegian coast and for this I was given a fighter escort, but after four hours off the coast and seeing nothing, was recalled to base. This was the only time I had fighter cover on any mission and I take my hat off to those boys flying over long tracts of hostile sea with their one engine and not a very happy thought as to the result of being shot down.

May came and with it a pleasant surprise. I was called to the CO one day and told the award of a Distinguished Flying Cross had been made to me but to say nothing until it was announced on the radio that evening. All the residents of the hotel used to gather to hear the news and that evening was the same as any other until the announcer said:

"The DFC has been awarded to Wing Commander G G Stead, RAF. The citation says he has completed more than 6,000 hours flying of which 800 were operational. He is the most brilliant and reliable pilot and navigator of his squadron and as a result of his qualifications is always given the hardest tasks calling for special skills. He carried out day and night operations in the Shetland Islands, Iceland, the Mediterranean and West Africa."

This called for a big celebration in the pub that night and resulted in a very sore head the next day. Still it made the efforts of the past year or so seem well worthwhile.

Not long after, the summons to attend an investiture at Buckingham Palace arrived together with a ticket for the family. The day before we took a train down to London from Inverness in first class sleepers and booked into my old haunt, the Regent Palace Hotel. The next morning in our best bib and tucker it was rather nice to say to the taxi driver,

"Buckingham Palace please," but I might as well have said, "Victoria Station," for all the reaction there was. The police at the gates checked passes and in we went. The family were shown to seats in the room where the investiture was to take place and I together with about thirty others were taken into a waiting room. We were called from there one at a time and as I entered the room and stepped onto the dais where King George VI stood, my citation was read out. The King was very interested in the work of Coastal Command and spent about five minutes talking to me about it. After I went and sat with the family until the end.



Image 21.3 My Distinguished Flying Cross and Citation.

As the year went on, the ground training was improving and we wanted a flying boat hull for simulated training of various type. There was a damaged Sunderland on the slip which had been there for some time, a left-over from another squadron, and the Command was asked to let the OTU have it. This was agreed so the next thing was where to put it. The only really suitable place was at Alness near the mess where more training huts were being built. Now how do you get a piece of machinery

the size of a Sunderland two miles along the road and through a village with overhead wires. The job was left to me, so I talked to the police and naturally they were fully co-operative. The CO of the Transport Unit and I decided that if the wings were removed it would just go through the village street. What transport would we use? It was agreed to use the beaching gear and by stopping to grease the wheels, it should last out for the journey. This gear consisted of a pair of double wheels which fastened to the hull each side under the wings, and a trolley in which the rear of the hull fitted and locked.



When all was ready we told the police and with a tractor in front and the police diverting the traffic we went off down the road. "Tis nay a bother t'all,", until we went round a bend and approached the village when we realised the question of the power and telephone lines across the road had been overlooked and the pin and rudder was too high. All hands to the spanners and with a crane we soon had them off. Then with a man and a pole on top of the hull to lift up the wires we were off again overlapping the pavements on both sides. The whole boat was again erected under the trees and used for the rest of the war. As far as I know it

could still be there today, perhaps like my old Fokker in use as a chicken run!

There was still a certain amount of "bull" in the form of parades and even for flying boats these were necessary as discipline of the crew is essential for an efficient unit. Drill was never my strong point and so I was not too hard on the pupils. Sunday church parade was the worst, for it meant marching through both Alness and Invergordon with the locals looking on. I forbade my family to watch but was told much later that on one occasion to see me, they had to hide in a ditch so as not to be seen themselves. When a new course of trainees arrived I would say a few words so as to pave the way. They were told about the parades and why this was necessary, ending with, "So please help the staff by playing ball." By this stage of the war we were getting some very odd types in the air crews and one Ministry Order said, "The criminal records of airmen will not be sent to units unless asked for."

In July we had a visit from Air Chief Marshal, Sir Arthur Longmore and I took him for a flight in a Sunderland over to Campletown and then down to Oban and back to Invergordon again.

It was on the 25th August 1942 when one of the major tragedies of the war took place and one in which I was involved in a small way. On the 24th a Sunderland of the squadron flown by the CO, a friend of mine, landed from Oban and on being asked why he was here he made a very evasive reply so I did not pursue the question as it was obvious something was afoot. The Station Commander asked me to meet him on the jetty at a specific time in the morning saying at the same time that he would be off the station until then. I was on the jetty as instructed and there was the CO commander of the boat who told me he was going to Iceland. As it was low cloud I asked about the weather he replied, and I quote him word for word, "There is low stratus along the coast so I will climb above it before going across the north." There was a laid down rule to get out to the west and that was to fly up the coast to Helmsdale on the east coast and north of us, then due west until clear of all the Western Islands. The other route was to fly below cloud level all the way round the coast passing through the Pentland Firth round the top of Scotland.

Just then the Station Commander arrived in his car with three passengers one of whom was HRH Duke of Kent to whom I was

introduced. The party got into the launch and went out to the Sunderland and we watched it take off and depart out through the heads of Cromarty Firth.

As was normal in wartime there was radio silence and as would be expected nothing was heard of the boat. The next thing we knew was when the Station Commander sent for me later in the afternoon and told me that a Sunderland had crashed on high ground behind Hemsdale and that it was presumed to be the one with HRH on board. I was to go up there using his car. I went to the hotel for some gear and the family wanted to know where I was going but I just said, "Listen to the news," and took off in the car for a drive of about an hour and a half. By the time I got to Hemsdale it was getting late and I went to the local doctor who had been up to the crash and he told me there were no survivors. Although it was late, I felt I should go up to see the wreck for myself and the doctor said he would show me the way as it was very foggy and he was an authority on the moors. The walk took about an hour and we came to the site on the crest of a hill perhaps 100 feet below the top of the highest ground in the area. The wreckage was still smouldering with the army on guard around the site and it was decided nothing could be done that night. Some personal effects of HRH, which had been thrown clear of the crash, were given to me and I took them to the hotel where they were locked in the safe and handed over to the authorities the next day. The following morning I went up again with the party which was to bring the bodies down and a thorough search of the aircraft was made but all except the tail was badly wrecked and burnt. It was obvious that the crash had occurred when the plane had been in normal flight and not whilst trying to make a forced landing. I got back to the doctor's house in time for lunch and we were just finishing eating when he was called to the phone to learn that a crofter had just reported a badly burned airman had just walked into his house. We left at once and found it was the rear gunner who had been over twenty-four hours on the moors wandering about in a shocked state. Due to the condition of some of the bodies we had been quite sure all the crew and passengers had been accounted for and if the gunner had not made it to the crofter's cottage no one would ever have looked for him. I asked him what had happened but he could only remember they were in cloud and a burst of extra power was followed by



the crash. He was indeed a lucky Australian and I am told he recovered to fly another tour of operations. In due course there was a court of enquiry, the result of which, if it was ever made public, I never saw. To me it is still a mystery what happened as the pilot was very experienced, raising the question of why was he so low when he was on the correct course and from the one survivor the engines must have been operating efficiently.

The first two weeks in September I was on leave and accepted a very kind offer made by Major Stirling to go and fish at Loch Monar, one of the lochs on his estate near Beauly. We set up a camp by the loch and had a wonderful time. The old stalker had been told to look after us and he did this very well. One day the Major came down to see us and we dined that night with him in the "front room" of the stalkers cottage on homemade haggis and it was arranged for me to be taken deer stalking. I had never done this before and I reported at the cottage dressed as I thought fit but the stalker nearly collapsed and said the deer would see me a mile off, so some old clothes, all heather brown, were found for me. I was given a rifle and off we went. He said, "We'll go up to the top of that ridge," and

pointed to a mountain with clouds on its top. Up and up we climbed and at last made the ridge. We sat down and as far as I was concerned not before time. The commando course was child's play compared to this.

"There they are," said the stalker and over another ridge higher up I could see the animals. "We will have to work round them to get down wind," was his comment and to my knowledge of the wind we were at this stage up wind of them. Off we go in a big semi-circle and after about an hour of struggling through bog and heather he said, "We will crawl to the top from here as they will be just over the ridge," and went on, "You are to shoot the big stag which is with them." Up we crawled until we came to the crest and I wriggled the last few feet in a very exhausted state. I put the rifle up but was so out of breath I could not keep it still. There was the stag, sometimes in my sights, sometimes not and standing beside him was a doe. "Hit him in the shoulder and mind the doe," said my companion.

I tried to hold him in the sights and fired. The doe dropped and the stag fell over, then got up and took off with the rest of the herd. I give the stalker his due for he just said, "We will have to go after him as you have wounded him as well."

We found the poor beast not far away and put him out of his misery, but it was obvious my popularity was pretty low and my ability to shoot very dubious. What does one do with two deer carcasses about 1,500 feet up on top of a mountain and at such a late hour. Well, I will tell you. Out of his pocket the stalker produced two pieces of rope. "We'll pull this beast to the top first," he said, "and then come back for the second." The stag was dragged to the top and then I could see what his plan was as we were now above the loch and there was a steep slope down to it. The doe was collected and with both of them at the top he said, "I will go first pulling the stag and you follow with the doe but don't try and stop except when I do as you'll be pulled over." Down we went helter-skelter hotly pursued by the stag and doe and were soon down to the loch. "Now you stay here and I'll go for the launch," said the stalker.

Never have I been so pleased to sit down in all my life. It was dark when he arrived back with the launch and he had brought Marjory and young Patricia for the ride. The carcasses were loaded and taken back up the loch. I gave the stalker a well earned word of praise for ever after because of my exhibition, and he produced a bottle of scotch which was extremely welcome. We all became very good friends and we would go to see them in their cottage, which to young Patricia was the highlight of the day. Outside the back door was the pig but inside the kitchen where we sat would be a sheep on the only piece of furniture, an armchair in red plush. Sundry hens were sitting around and on the rafters perched the pigeons. Needless to say there were cats and dog as well. When the old man went out for a walk the whole entourage would follow including the pig and the pigeons! The whole show was fascinating to watch.

From a fishing point of view it was wonderful and in the time we were there, 87 good trout and a few pike were caught. Our diet was fish and venison which is hard to beat when cooked over an open fire and one is hungry. The end came all too soon and we had to go back. It was the best holiday of the war and the last we were to have for some time, as shortly afterwards the other side of the world would be my abode.

Chapter 22

RNZAF CATALINA SQUADRON

Not long after we returned from our holiday, there was a visit from the Royal New Zealand Air Force Chief of Air Staff, Air Commodore Isett to see how the New Zealand pupils were getting on. He was with us for a couple of days and asked me if I would like to be seconded to the RNZAF to train and command a Catalina boat squadron for them. It was to be based in Fiji and the boats were to be delivered new from the factory in San Diego. I gave their offer a lot of thought and talked to the family about it. My year at the OTU was almost up and I would then be due for a shift in any case and probably to a squadron command. The posting was for at least a year and if all went well the family could come out later and join me. We weighed up the pros and cons and decided I should take up the offer.

During the latter part of November 1942, I went on leave and took the family back to their old digs outside Manchester where they were to stay until it was settled how long the job would last and if it was worth while, then they would come out. In early December I received orders to report to an embarkation unit and it was a sad day when the family dropped me there, as it was possible we could be parted for a year, plus the fact Marjory was, we hoped, going to produce a son in about six month's time, all rather depressing. In the evening I was put on a train with a lot of other people still not knowing where we were going and travelled all night. In the early morning light I could see a lot of docks that looked familiar as we came into Greenock on the Clyde where I had taken flying boats to the Maintenance Base. Even at this stage no one knew where they were going except that it was across the Atlantic by boat. Out of the train and on to a ferry and we could see the great grey hull of the Queen Elizabeth lying down river and I must say it was with relief she was seen and not some small, slow ship. We had heard about her and that she was too fast for an escort and no surface ship could catch her nor her sister ship the Queen Mary. The only chance Jerry had was if there happened to be a submarine

in the right place as she went past. I was travelling as a "Senior Officer" and as such had better accommodation than the juniors.



As at this stage she was furnished as a troop carrier, there were seven of us in what was designed as a small two berth cabin. Six were sleeping three deep in bunks and one in the bathroom where the bath had been. On this crossing the total number of souls aboard was around 16,000 which included 6,000 Italian POWs.

The routine of the ship was wonderful and a credit to the RAF who ran the trooping side of her. Everyone had three good meals a day and they were good compared to the wartime diet of England. The hours you were to eat at were given on a ticket issued when you came aboard. The troops had the same meals but their sleeping arrangements were a little different. Eight hours in a hammock and sixteen out which meant three men to each berth. I never found out how the prisoners were accommodated in the bowels of the ship and brought up on deck each day to exercise.

It was an incredible sight to see this ship and it swarming with people, for not only were there troops but there were business men, aircrew going to collect aircraft and naval crew collecting ships.

We sailed not long before dark and by the time she passed through the boom was well on the way to 30 knots, a speed she averaged all the way to Halifax, Nova Scotia. I and the other senior RAF officers had been detailed for aircraft watches on the bridge during daylight hours and this was an experience always to be remembered. My watch was for two hours in the morning and two in the afternoon and we were briefed to the effect that is was forbidden to speak to anyone on the bridge except to report a sighting. The first morning I set foot on the "Holy of Holies" I was very impressed and wondered how many other men would have longed to be in my shoes. We were heading west into a full gale yet there was no wind going across the wings of the bridge due to the shape of the curve on the forward side. By the size of the sea the wind must have been 40 to 50 knots which added to our speed gave a mean wind speed of nearly 80mph, yet this great ship was only just slowly and gently pitching. I was told that the first time they fitted radar on her, she blew the lot away. The crossing took five days and due to a submarine scare during that time we had to go a long way south, the extra distance meant that at no time had she been making less that 30 knots.

The railway system into Halifax was only a single track line yet the ship was unloaded, re-victualled in the matter of a very few days. As far as I was concerned I was put in a train and away within half a day of arriving and en-route to Ottawa where I was to be met by the RNZAF liaison officer with the Royal Canadian Air Force. When the train arrived in Ottawa I could have dropped dead, as who should be there to meet me but Group Captain "Tiny" White, the same person who had taught me to fly years before. He and his wife Ann had a flat and off I went to stay with them while onward transport was arranged.

The next part of the trip to New Zealand was by American Airline from Ottawa to San Francisco and then on Christmas Eve I was aboard one of the big Boeing "Clipper" flying boats for a flight to Honolulu. The flight out took twenty-one hours and as the boat landed the results of the Japanese attack could still be clearly seen. Due to a very septic throat I was put into the US Naval Hospital for a couple of weeks and then flew by US

Army Liberator sitting in the bomb bay with a packet of sandwiches to Fiji. What extremes of travel, first the Queen Elizabeth, then the luxury of the Pan Am Clipper followed by a Liberator's bomb bay and the last leg in a RNZAF Hudson to Auckland in the middle of January.

I was given a few days leave and went to see not only the family but friends whom had not been seen since I left in 1929. Then on to Wellington to the Catalina Air Squadron and my friend Len Issett. He said the first thing they wanted me to do was a survey of New Zealand harbours to see which were suitable for flying boats, if and when required. I was given an amphibian called a Walrus, which at this time was the Royal Navy's "Maid of all works". It was powered by radial motor and carried a maximum of six people. This was fun and in ten days we covered the coasts of both islands and the smaller Stewart Island renowned for its oysters and perhaps that is why a call was made to its small harbour.



A lot of places we visited had not seen this type of aircraft before and as I used to land on the water and then put the wheels down and look for a slipway, a beach or anywhere I could "waddle" up, it used to attract a crowd. In some places there would be an airfield as well and then we would taxi round the harbour and go off and land on the field. The whole

idea of this survey was in case of a Japanese invasion, as at this time they were very near and still in control of the Pacific.

It was not until the beginning of April that any of the aircraft for the squadron started to come in and these were delivered by special delivery crews. The Americans had a strange method of supplying equipment which was something like this. Before any aircraft arrived, a ship arrived at Suva, Fiji, and unloaded what is called a ninety day kit of spares for each of the fourteen aircraft we were to get. The kits even contained replacement pots and pans for the galleys on the boats. The idea of the kit was so that the boats could be kept in a very high state of service but the waste was immense. The third boat to be delivered arrived with a damaged nose section which made it useless. I asked the American Supply Organisation to supply a new panel and we would fit it. "Sorry, can't do that as it would upset the production line but we will send you a replacement boat," was the reply and the replacement boat duly arrived. Money meant nothing. Speed and a standard system of supply was perhaps the reason for a successful outcome of the Pacific war in such a short time.



The main purpose of the squadron I was training was to supply coast watches on the Pacific islands and to aid communications in general. It was very interesting work as it entailed landing in the lagoons of different islands and dropping supplies to what were called "Coast Watches" who were in fact really spies in a mild form. The communication side consisted of flying VIPs round the island as required and my own appointment was pilot to His Excellency the Governor of the Fiji Group. The weather was nearly always perfect and landing in these lovely lagoons of crystal clear water with the coral reef at times looking very close to the bottom of the hull but was in fact a long way below, was a terrific change to my way of life after the Atlantic routine.

The social life in Fiji was still gay and there was no shortage of food but drink was rationed. I overcame this by turning my house on the beach beside the base into a Mess and having two officers to live there. There was a full Marine section of high speed boats to look after the squadron, plus visiting US Navy when they called in with either float planes or flying boats. These boats were also used to take the staff over to the beach on the other side of the lagoon to swim at the weekends.

One of the most amusing things to take place while I was there was when one evening the American Forces HQ gave a cocktail party. Everyone was standing around on the lawn outside the mess when quite low overhead flew a small Jap float plane. All looked up and a chorus of voices said, "It's a Jap!" It flew over Suva and then out to sea again obviously returning to the submarine it had come from. Not a shot had been fired from the anti-aircraft guns. Needless to say there was an enquiry by the US and rumour had it that the only person who could give the order to open fire was at the party!

In June we lost the only boat during my time and that was when one of my flight commanders took off at night for Auckland and did not arrive. In the late afternoon when it was past the endurance time a search was started and I flew down the track he would have to take but found nothing and returned at dark. During the night a report came in that aircraft wreckage was seen on the reef of an island called Kadavu about 80 miles to the south. Attached to the Marine Section was what had been a very nice fishing boat of about 50 feet and I decided with the Marine Craft Officer to leave at dawn for the island and arrived there the following

afternoon and after spending some time looking for an entrance to the lagoon, landed on the north west side of the island. We met the local chief and he said the wreck was off the south east side on the coral reef but there were no sign of survivors or any bodies. From a piece of wreckage we were shown it was plain that it was a Catalina and as there were no survivors we decided to return to Suva. The next day I flew over the area but there was nothing to see, so I presumed the crash had been in deep water or had broken up with the big swell running on the reef. The cause was never known but it was not impossible to think that a Jap submarine, possibly the one who had launched the visit to the cocktail party could have shot it down. If it had been a one engine failure they could have retuned to base or sent a radio message, as we knew radio contact had been established after take off.

Another job which fell to me was the morning we received an appeal from the hospital to drop some special food for triplets which had been born on one of the outer islands. We flew out to the island but could not find a place to land so did the package up well and fixed a streamer with the intention of dropping it onto the beach, but as soon as the aircraft appeared the natives flocked onto the beach so the drop had to be completed at the local sports field.

Another celebrity I used to fly was Ratu Sir Lala Sukuna who was the supreme chief of the Fijians and a most charming man. We did one trip with him when he was paying an official visit to an outlying island. As usual the landing was in the lagoon and as we circled we could see the canoes leaving the beach, so I decided that if I did not get down quickly the landing area would be spoilt so down we went. As we taxied in the boat was surrounded by canoes and I kept one hand on the engine switches in case I had to stop. We stopped in about six feet of water off a perfect beach on which to anchor. As soon as the noise of the engines died the singing could be heard. This was the "Song of Welcome" to their chief. Canoes were all around us and packed tight alongside our plane was a very well decorated and extra large canoe. Into this the chief stepped and he was taken ashore and I was honoured by being asked to accompany him. As he walked up the beach the locals bowed and the local chief introduced his council. While they discussed business I sat under a palm tree and took in the scene.



Then came the feast on a carpet of tapa cloth which was not only fit for a chief but for a king as well. What a variety there was, suckling pig, chicken, crayfish, shrimps, fruits etc. To drink there was the traditional kava cup made from a root crushed and mixed with water. I thought it tasted like rather dirty water and when you saw it being made the question of purity was in no doubt, for there was none. The feast lasted for most of the afternoon and after, amid more singing, we took off again back to Suva.

In September the training of the squadron was finished and I was posted to the staff of Brigadier Hunt commander of the troops on Tonga where the great old lady Queen Sālote ruled. While I was there we had a detachment of the squadron based in the harbour so I could still get in some flying as well as the office duties which formed the main part of my life. One interesting flight was out to see the under sea volcano that lies between Tonga and the Fiji Islands. At infrequent intervals this volcano, the base of which is some hundreds of feet below the sea, erupts and the first sign is the water boiling over nearly a square mile of sea, followed about a day later by black lava appearing above the surface. After another two or three days there is quite a large island consisting only of volcanic ash with a crater in the middle. The eruption will last about a week and then the sea takes over and the whole island slowly washes away again until nothing is left to see.

While on Tonga I attended the opening of parliament and stood with Brigadier Hunt just behind the Queen. It was an incredible sight as all the ministers and chiefs marched past her wearing full Victorian morning suits complete with top hats even though the temperature was around 90°F. The Queen was dressed in a long gown and on top of this was a short skirt made of tapa cloth of a royal design. This cloth is made by beating out the fibres of a local tree known in Tongan as "Haipo". The beaten fibres are combined to create the cloth which is painted with various local patterns. Before leaving the Island I was to attend a feast outside the palace and the Queen presented me with a piece of tapa cloth.

It was becoming apparent that if I were to stay with the RNZAF the future looked like office work and this was not my preferred way of life. I had earlier on told the family that if they could get a passage to come out, but there was no hope of this until the second Stead, young George, had been born in June and afterwards transport was difficult. Unknown to me Marjory had sold the car and all the furniture while waiting, so when I sent her a cable saying, "Stay put," it was a bit of a shock. I have made a lot of quick decisions in life, some for the better and some perhaps for the worse but all have in the end profited my experience of life. As my year was up, the RNZAF agreed to release me and at the beginning of November I left for England flying as far as Honolulu in US Navy boats. Then again the luxury of the Pan Am Clipper to San Francisco followed by TWA to Ottawa in a DC3 to catch a train to Montreal and finally the bomb bay of a Liberator to Prestwick where I took a train to Manchester and the family met me on the 20th November 1943.

Chapter 23

ATC BROADCAST

ATC BROADCAST GIVEN BY WING COMMANDER GG STEAD Sunday 28th February 1943 at the Seddon Memorial College, Auckland, New Zealand.

As you no doubt know, the Royal Air Force is divided into various Commands, of which the best known are Fighter Command, Bomber Command and Coastal Command. It is about the Sunderland Flying Boat which is operated by Coastal Command that I am going to tell you. The Sunderlands, which are in use in large numbers in the Royal Air Force, are four engined aircraft similar in appearance to the flying boats operated by the Tasman Empire Airways, only they are larger. They weigh approximately 25 tons and are armed with three power operated turrets. The normal patrol is for 12 to 14 hours but they are capable of remaining in the air for considerably longer if required.

Now for a typical example of a day with a crew on one of these aircraft. You appear only to have been in bed a short time before you are awakened by someone shaking you, and before you have opened your eyes a book is handed to you to sign so that if you go to sleep again it is you and only you that will suffer. You crawl out of bed, washing being dispensed with, stumble out into the dark and are met by a blast of icy wind and snow. By the time you reach the Operations Room you are wide awake and a little chilly. Here you meet the Navigator and Senior Wireless Operator and two other pilots, who are all briefed by their individual Specialist Officers. As the crew leave the Operations Room for the flying boat it is still four hours before dawn, as we are required to be at the convoy when dawn breaks.

The balance of the crew will have collected the rations for the trip and preceded us on board, and will no doubt have been busily engaged in sweeping snow off the wings which may, if it has been snowing hard over night, be to the depth of a foot.

The duty of the Captain of a large flying boat operating with a crew of about 10 is rather similar to that of the Captain of a ship in that he is not only a pilot, but must have a working knowledge of navigation, wireless, operation of guns, fire control and a hundred and one other small things. In actual fact he very seldom flies the boat but spends his time walking round checking that the members of the crew are carrying out their duties efficiently.

We slip moorings and before long this heavily loaded aircraft is airborne and heading out into the night to look for the convoy which is perhaps four or five hundred miles away in the Atlantic. While we are flying on towards our convoy, the cook, who has a full time job in a well equipped galley, is preparing breakfast, and those members of the crew who are not on watch will have turned in to get a spot more sleep before dawn. The Officers have their own ward room and we used to pride ourselves with having sheets and pillow cases on the bunks. Breakfast is served about two hours out and woe betide the cook who does not produce at least porridge, bacon and eggs, toast and tea. By the way, true to New Zealand standards, the kettle is boiling throughout the flight.

Dawn is breaking. Everybody is on the alert looking for the convoy as we are approaching its position, but this mass of ships has been at sea for some time and may have had to make alterations of course to avoid U Boats, so it is very probable that we will not find them in the position we were given, because as you know no ship will use its wireless whilst at sea in war time. After carrying out a short search the convoy is located, the navigator says it is not in the right position and we laugh at him and ask the convoy Commodore what his position is. Seldom do the flying boat navigator and the Navy agree. From now on commences the boring but important job of escort. Round and round the convoy flies the aircraft keeping a constant watch for the white feather of the periscope or the air bubbles produced by the propellers of the submerged U Boat. After remaining with the convoy for perhaps five hours we are relieved by another aircraft who has come out to take over protection of these valuable cargos. We tell the Commodore of the convoy we are leaving for home and ask if he has any messages he requires taking back. All signalling is carried out with visual lamps and it is worth more than your life to touch the wireless key, but at the same time a continuous wireless watch is kept so as to intercept any messages sent to you from your Base. We are on our way home perhaps with three hours to go, when we receive a message diverting us to another Base as the weather has closed in at our own. It is growing dark as we approach the alternative Base and the lights of the flare path are a very welcome sight. The crew goes ashore, the Captain, the Navigator and the Senior Wireless Operator proceed to the Operations Room where they are interrogated by the Intelligence Officer, and it always feels as if he wants you to write a book on your experiences, but in actual fact they are only the essential details that he is requiring. Then off to the Mess and then to bed.

It is to the boys of the ATC that the future operating of these large flying boats and other similar aircraft will be entrusted in the near future, as they are the coming members of the Royal Air Force, and it is with this object in view that I would recommend any boys who are keen on flying, either from the Pilot's, Navigator's, Wireless Operator's or Engineer's point of view, who have not already joined the ATC to do so, as in this they will get a grounding into the knowledge they will require to become a member of a crew such as I have just described. The earlier you start the more thorough your training, and the sooner you take an active part in flying operations.

Chapter 24

NZ "SHIPWRECK"

At one time while in New Zealand on the posting to RNZAF, I took a few days leave to go over to Nelson and see our friends from the Cook Strait Airway days and others who had lived in Nelson. One of those, Bob Griffin, now lived in Wellington and having met up we all decided to take the rather ancient ferry across to the South Island. The boat of about 1,500 tons was really very old, as I had travelled on her as a child from Napier to Auckland during a rail strike. By the time she sailed we were all in pretty good form and as we walked around the deck Bob kicked one of the two lifeboats and said, "I wouldn't like to have to get into that. I bet it leaks and is probably rotten as well." Little did we know that at dawn the next morning we would be in it. We all had cabins for the crossing but mine was away down aft and detached from the rest of the passengers' accommodation. In fact it was perhaps used as a horse box as well!! I was in bed sound asleep when I was woken by a big bump. My reaction was that we had hit the landing stage in the French Pass as this was not unknown due to the strong tides running through that part. Then there were two smaller bumps, so I opened my eyes and the first thing I saw was a sailor running past with a life jacket on. This was to my way of thinking odd, so I hopped out of bed, dressed, took my lifejacket and went on deck. It was completely dark with a blackout also in force but I could see the side of a big cliff very near. I could hear voices saying, "Is this the one we pull or do we let that one go?" or words to that effect. The crew were trying to launch the lifeboats as we were aground on a soft rock ledge off the west side of D'Urville Island. We were told by the captain, who as usual was wearing his bowler hat, that there was no danger as we were in calm water. The stewards passed round hot drinks. It was not long till dawn and as it rose, the tide fell and there was only a narrow strip of water between us and the shingle beach below the cliff. By this time one boat had been launched and we were told that after the mail had been landed all the passengers would be put ashore, so we knew our priority as

far as the shipping company was concerned. Eventually all the passengers, about twenty-five in all, were landed on the beach. By this time a RNZAF rescue launch had arrived and was busy laying out an anchor to seaward so that with luck the ship could be pulled off on the top of the next tide. This was achieved but by then a wind was getting up from seawards and surf was beginning to come in on the beach. First the mail was put back onboard and then the officer in command of the lifeboat was heard to say that he could only make one more trip off the beach and the remaining passengers would have to walk over the island to the Pass. As the track was very rough and climbed to some 1,500 feet we decided it would be Symes, Griffin and myself in the boat after the women and children, but in the end everyone did get back onboard and late in the afternoon the ship arrived in Nelson. Captain Hay who was a fine seaman of the old school had done a good job and he was cheered by the passengers as he stepped ashore still wearing his bowler hat! There was a pretty lively weekend in town before we all flew back again on the Monday.

Chapter 25

BOAC FLYING BOATS

In November 1943 I was back in England and I went to see Hugh Saunders, a friend of my sister and her husband, who was in charge of postings at the Air Ministry and was later to be Air Chief Marshal and remain a good friend of ours. The question of my being seconded to BOAC came up and he thought this was possible providing they were to ask for me. Down to Bristol I went to see Air Commodore Brackley who was in charge of the newly created Transport Command under which BOAC operated and who I had known previously in Coastal Command. They were only too pleased to have me and by Christmas all was fixed for me to go to the flying boat base at Hythe on Southampton Water. At this time the maintenance was at Hythe but the operating base and flight offices were at Poole about twenty miles to the west where all the service flights operated from. This was the place to find a house and get the family down. Luck was my way and I rented a very nice maisonette on the beach at Sandbanks but we were not allowed onto the beach. Poole is a delightful harbour and was ideal for the flying boats as there were various take off paths available and due to the islands in the harbour all in sheltered water. It is interesting to note that Poole is the second largest natural harbour in the world second only to Sydney, Australia.

As it was still wartime all our passengers were allocated seats by the powers in London and were brought down to Poole by train the evening before the flight was due to leave. BOAC had taken over the Harbour Heights Hotel at Sandbanks for passengers and at times for crews. The operations were controlled at the start from the Regent Petrol Company's offices on the quay at Poole and the passenger terminal was at the Poole Pottery building on the other side of the quay. The terminal together with the operations and line administration was later moved down the harbour to the Poole Harbour Yacht Club building and remained there until the Poole operations ended and transferred to Southampton.

The war had now reached the stage when North African campaigns were over and the war had shifted into Italy. Across the Channel the Germans still reigned supreme, but training for the invasion was taking place all along the local coast from Bournemouth to Swanage. It was not unusual for the family in their house on the beach to be told to open all the windows to stop blast damage. Aeroplanes would fly past just above the sea outside the windows laying smoke screens. Machine guns would start firing from the end of the garden and landing craft came ashore on the beach. To all this would be full sound effects from thunder flashes, landmines and other ordnance. The noise was terrific and very interesting to watch.

We were operating converted Sunderland boats fitted with seats in the lower deck and the freight holds and for war time transport was really very good. Lacking were the stewards and stewardesses we have today as part of the aircrews. The food was all cold and mostly sandwiches served with flasks of hot drinks and soup.

The crew consisted of Captain, First Officer, Second Officer, Navigator, Radio Officer and Engineer Officer. They were detailed for each flight as individuals and stayed together as a unit until returned to England. At this time there was only one route being operated to Karachi via Gibraltar, Jerba (Djerba), Cairo, Habbaniya and Bahrein.

When this service started France was still occupied and the campaign in Italy was still being completed, so as a safety measure the flight to and from Gibraltar was as far as possible completed by night or during the short summer nights through sectors across the Bay of Biscay to avoid the possibility of being attacked by German long range aircraft which were working the Atlantic from French airfields in conjunction with their U-boats. It was really back to the old work I had been doing with the RAF.

The stop in Gib was only to refuel and then on to Jerba, a small island about 250 miles south of Tunis on the north African coast. All there was there was a tented camp on the beach and we used to night stop in rather primitive conditions and some of the VIPs were, to say the least, a bit taken aback.

From Jerba we flew to Cairo more or less along the coast and it was always of interest to see the vast mass of war equipment left in the desert and see the harbours full of sunken and beached ships with Tobruk as the centrepiece. The approach to Cairo was past the Pyramids and then to a landing strip on the Nile just north of the Rood Bridge. This was an interesting landing as the river was not too wide and the wind usually across it. BOAC had two Nile pleasure steamers moored at the riverside base, one for the crews and the other for the passengers. It was here that there would be a crew change and the incoming crew would stop over for a break and take the next flight on. Cairo was still a wartime city and under the control of the Allies and lacked any real interest, but I could spend a lot of time sitting in a deck chair on the boat watching the local Nile sailing boats drifting down the river and when there was enough wind making off against the current. It was here we connected up with the route operated by the old pre-war Empire boats coming up from Durban.



From Cairo the flight was across the Sinai Peninsula, Jordan and Iraq, to land on a lake about 30 miles west of Bagdad where the RAF had a base called "Ramadi" on lake Habbaniya. This was only a fuel stop and then on to Bahrein, an island in the Persian Gulf, for the next night stop, where during the hot season it was a very hot stopover in not very good accommodation with rather poor food. Still, with all the problems of establishing bases at this time, I thought that the Corporation did a wonderful job and the ingenuity of some of the station managers was

wonderful and we all appreciated the efforts, even if we did complain at times.

Sometimes if fuel was short on the sector Bahrein to Karachi, we would stop at a funny little place called Dubai about 350 miles east of the sector where the local staff lived in the fort. I was once delayed there with an engine change when the passengers were all a mixed bag of WRAFs and WRENs and I do not know who had the best time, the girls or the boys, as the locally stationed engineers and others did not often see anything like the cargo we had arrived with. I felt that the engine change did take as long as possible.

At Karachi we used to land in the outer harbour or between the docks where we had a base at the outer end. The marine staff used to have a lot of trouble trying to keep the local fishermen in their canoes off the landing path in daytime and at night I often wondered why some of them were not hit, but then the old saying, "What the eye does not see..." Karachi was not a very interesting city and the two or three days we would spend there was quite long enough. The only fun was to hire a local sailing boat and sail out to a sand spit where BOAC had a hut to spend the day on the beach swimming and fishing.

The return to Poole was a repetition of the outward flight except the arrival on the English coast was sometimes interesting as there were no weather reports and as we know, the English weather can change very fast. On one flight we had followed the usual track of 10° west to the north of Brest and then onto the Isles of Scilly as we had to fly overland from there to Poole. All we could see of the English countryside was the top of the hills sticking out of the fog. We came over Poole Harbour and it was in fog, but there was a small clear spot off "Old Harry" or to give it its correct name, "Standfast Point". As I had been told on the short range radio telephone now fitted in the boats, that the whole coast was in fog, I decided to land in this clear spot and then decide what to do because my fuel was, after about 10 hours flying, getting a little short. We got down without trouble just before the hole closed in and while just off the point we could see nothing. The inboard engines were switched off to slow us down and a course set to the north hoping to see the Poole Bar buoy, one of the conical buoys marking the channel from the Bar to the entrance at Sandbanks. We were lucky for after a few minutes out of the fog appeared the buoy and then we were able to steer the courses from one starboard buoy to the next. As we did not have a chart of the buoys on board, the courses were given to us by the control station by radio telephone. All went well until out of the fog in front of us was the Haven Hotel and a very sharp turn to port was made with the rocks just off the wing tip as we made it into the entrance. Control had omitted to tell us the last alteration of course to allow for the bend after the last buoy. To give some idea of how thick the fog was, the width of the channel is not more than 100 yards and we had passed a launch sent out to look for us without either of us seeing the other.

We carried on flying this route until one day early in May 1944, there were orders from London switching operations from Poole to Pembroke Dock in South Wales. Those of us living on the coast of Hampshire and Dorset had been watching the build up of the Allied Invasion Forces and by now were living in a restricted zone and not allowed out without a pass. The move therefore was not a surprise and we knew the reason for it. The Maintenance Base was still at Hythe and the boats were ferried there for servicing. I was away on service when the invasion started but the family living on the beach at Sandbanks had a first class view of the force that had formed in and around Poole sailing out. Our operation carried on but out of Pembroke Dock until September when we returned to Poole and on November 11th I flew the first BOAC flight across France on a direct route to Jerba and not long after that we opened a night stop at Biscarrosse in southwestern France using the lake of the same name some seventy miles from Bordeaux. This stop was always enjoyed by both passengers and crew as it was in the very pretty pine forests and the hotel was a delightful old fashioned French country auberge. I can remember the beds all had real down filled eiderdowns which were about eight inches thick and as light as a feather! The base was used for some time and then as the world started to become sane once more, we moved to Marseilles and the passengers and crew were driven to night spots in the lovely town of Aix-en-Provence in the hills. It was a long drive for a bed but I think the passengers enjoyed it. At this time we also left the island of Jerba and took over the Italian Naval Mess at Augusta on the east coast of Sicily. This was the most luxurious building complete with fish tanks built into the walls, to say nothing of having two of their battleships anchored just outside the bar windows with prize crews aboard both. Slip crews were here and it was excellent, the swimming good and the surrounding country very interesting.

It was here that I had visions of going to jail or worse for sabotage. At the time I was wanting some heavy, three-core wire to supply electricity to my workshop at home but could not find any in England and so was on the scrounge down the route. Walking round the base one day I saw an open door going underground, I should say that, apart from BOAC and a few naval men the base was deserted. Down I went with a torch and went along a corridor where laying on the floor all the way along was just what I was looking for. Back I went and returned with a pair of cutters and cut off one end and started coiling it up until I came to a closed door with the cable going under it. I opened the door and to my horror I found a room with a light on and tables covered with maps and charts. I dropped the cable and left in a hurry with visions of having tampered with an operations room. Before lunch I was in the bar when a naval officer came in and casually I said, "Are any of the underground systems still in use?" He replied, "No. Why?" "Well, I was wandering around today and found a room with a light on and maps lying around." To my relief he said, "Oh, they've been like that since the Italians left." Was I relieved. I returned to collect my wire that afternoon.

At this time we also left the Nile in Cairo and started to operate from a large reservoir or artificial lake at Alexandria, which was much better except for the flocks of ducks which lived on it as they were a source of worry for us on take off. Once I hit one and in a million to one chance it went into the intake of an engine stopping it, which was a little embarrassing as we were just airborne and fully loaded. Still we made a hurried return to the water after a quick circuit.

By now the war in the far east was over and the route was to be extended to Calcutta, Rangoon, Bangkok, Hong Kong and later to a base in southern Japan. There was also a route to Sydney via Singapore, but this was not to start until after two flights by BOAC boats had taken place.

Chapter 26

LORD WINSTER'S FLIGHT

In 1946, I was given command of the boat to fly Lord Winster, the Minister for Civil Aviation, from Poole to Wellington, New Zealand. This was to be an interesting operation as the intention was to fly with two crews in a boat converted so that bunks could be provided for the crew off duty, plus eight passengers, without a night stop all the way to Sydney. The crew comprised myself in overall command, a second captain, first officer, two radio officers, two navigation officers, two engineer officers and two stewards.

The flight departed from Poole on 21st February 1946 and stopped for fuel at Augusta, Cairo, Bahrein, Karachi. Due to riots at Calcutta, we went to Allahabad, a very indifferent emergency stop on the Ganges, then onto Rangoon where three months before I had flown in the first boat since the war to be met by my friend Air Chief Marshal Sir Hugh Saunders who was commanding the area. We were again met by Sir Hugh who had a drink with the Minister while refuelling before we went onto Singapore for a nine hour stopover.

Lord Winster had a private cabin in the rear of the boat which by day had four seats and a table, and by night one pair of seats converted into a bunk. He had, at the start of the flight, asked me to have all my meals with him and by the end of the flight I was a much wiser person and had learned a tremendous amount from the very interesting man. Until his death a few years ago, we remained very good friends.

From Singapore we were going into unknown country as no flying boat had operated south of here since before the war. The first stop was Surabaya and no one was quite sure what to expect here except that the RAF were at the aerodrome beside the town and we were to land outside the harbour then come in on the water to a mooring laid for us.

Departure from Singapore was at midnight and the 850 miles to Surabaya was spent in dodging round the big thunder storms which develop over these waters at night. We had to try and remain in good visibility when near land as all the islands are mountainous with peaks reaching over 12,000 feet. The coast was approached at sunrise and a landing made in a clear blue sea and flat calm. A launch came out to meet us and lead us in through the remains of the pier heads which were in ruins. Inside the harbour was a mass of sunken Japanese ships which we had to pick our way past to the mooring buoy. After we were secure, all the passengers were taken off and a flat barge arrived with 40 gallon drums of fuel and pumps. The manpower was supplied by Japanese prisoners who operated the pumps as if they were engines. While this was going on, I went to see the Met Officer ashore and passed dozens of Japanese float flares all around the aerodrome and quite a few big flying boats without propellers. On asking why this was, I was told that before surrendering the Japanese had taken them off and thrown them into the sea to make sure that Allies did not use them.

From here we had a very interesting flight in perfect weather down and through the fascinating tropical island chain ending with the island of Timor in the east. It was from this island that all the pioneer flyers on their way to Australia used to set a course for Darwin, some 400 miles away across the shark infested Timor Sea, hoping their engines would not fail. Amy Johnson told me that this was the sector she was really frightened of. With the four engines purring away, we were not worried. The sun was shining, the radio officer was talking to Darwin and the steward service was excellent. It took seven and a half hours to reach Darwin as the Sunderland, by today's standards, had a slow cruising speed of only 160 knots. As the flight descended into Darwin, the heat and humidity rose up to meet us and it was like a Turkish bath after the nice cool of the upper air, but we were not to suffer for long and with a few thunder storms around, we took off again at night for the next stop at Bowen on the Queensland coast about 100 miles south of Townsville. This was just a small town and we moored off the town quay and again refuelled from 40 gallon drums. After Darwin it was pleasantly cool with a nice breeze off the sea. We departed again after about an hour onto Sydney and arrived there at the Flying Boat Base in Rose Bay after 77 hours flying from Poole. We were to night stop here and fly the Tasman to Wellington the next day and Lord Winster, who all the way out had taken a great interest in the crew, asked me if I was satisfied with the crew accommodation. I was not happy with it as it was in a RAF transit camp some way out of town and so I said so. The Minister turned to the Australian Minister for the Interior who had met him and said, "If my crew can't be accommodated in Sydney, I will fly straight on to New Zealand." It took about five minutes for us all to be in the best hotel in town. As the base was the Australian end of the Trans Tasman route operated by Tasman Empire Airways it was very well equipped. The airline was using a modified version of the Empire boats which were pulled backwards into a dock so that one could walk ashore making operations very much easier.

We left Sydney the next morning about 07:00 for the 1,400 mile flight to Wellington. The Tasman Airways base was in Auckland but as Wellington is the capital city the flight was to land there. About three quarters of the way across a radio message was received saying that Wellington was closed due to weather. I was not happy about this and asked for the actual weather and a forecast for our arrival time. What was difficult to understand was, if Wellington was not a flying boat base, how could anyone there know if it was not fit for a landing by a type of aircraft not used in New Zealand, and the fact that someone was telling me what to do, as in BOAC it was and still is, the captain's prerogative to make the final decision. The reply I got was that landing at Wellington was prohibited. As by now we were at the point where, if we were to go to Auckland, we must alter course. I sent a signal protesting the lack of weather information and saying we were diverting to Auckland and arrived after a flight of eight hours. The whole of this matter was fully gone into on arrival only to find that the Wellington weather although not good, was workable. The Minister also was displeased when the matter was explained to him and he refused to fly in a land plane which had been arranged for him and he said he would fly down the next morning in his own boat, which we did, landing after an hour's flight giving him plenty of time to attend the opening of the Conference on Civil Aviation over which he was to preside.

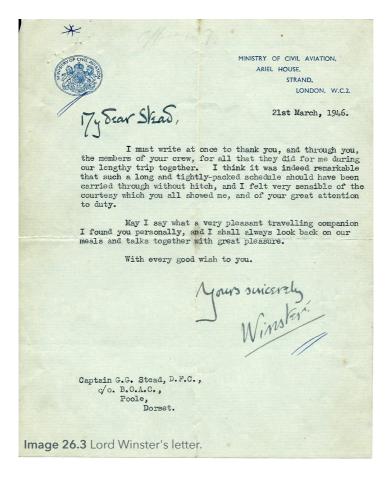


My mother and some other relatives of crew members were in Wellington and the Minister said, as the boat was to wait until he was ready to return to England, to fly them up to Auckland in the boat as his guests. So we flew back via my home town Hastings and then over Lake Taupo where I was tempted to land but thought better of it.



The return to England was not to start until the 10th March, so I went down to see the relatives and managed a couple of days trout fishing on Taupo.

We left Wellington without any trouble and the return trip was uneventful with the only alteration to the route being a stop at Lake Gwalior to the south of Delhi, as the Minister wanted to go there. This is a beautiful small lake with the Palace of the Maharaja built into it where we anchored beside the ivory white buildings. The passengers disembarked and we flew on to Karachi to await their arrival by land plane. The flight back to Poole arrived on 16th March and after a few days of returning I received the following letter:



To add the final feather in my cap, on the 28th March in the House of Lords, the Minister stated during a report on the Wellington Conference:

"I must also mention the name of Captain Stead and Captain Steer and the crew of the flying boat. I do so, not because of their personal service to me, but because, by their professional skill and their attention to duty during an exceptionally strenuous trip, they gave British Civil Aviation a good name wherever we went and demonstrated those qualities without which the finest aircraft in this world will not give you good service."

We are still, as far as I know, the only pilots to have been praised in Parliament and our names recorded in Hansard.

Chapter 27

THE FAR EAST

After the New Zealand flight, life returned to routine services from Poole to Hong Kong and Singapore. A few changes took place including the move from Poole to the special twin docks built at Berth 50 in Southampton for the flying boats and the move from the docks at Karachi to a base on a river estuary to the south-east. Operations stopped at Cairo and moved to the lake at Alexandria.

At one stage the configuration of the boats was altered to allow night flying with bunks for the passengers. One night we were flying between Augusta and Alexandria when one of the young trainee stewards came up to me and said, "Sir, I think there is misconduct going on in the aft cabin. What shall I do?" I gave what I thought was an appropriate reply, "Shut the door." The boy was I think, rather taken aback but no doubt he was to learn tact as he matured into the profession.

The next trip of interest was in October 1947, when I was in command of the service flying the Parliamentary Delegation to China. The Mission was led by Lord Ammon and consisted a mixed bag of MPs from all parties and included Lord Amulree, William Teeling, James Harrison, Frank McLeavy, Martin Lindsay and some others. Also on the aircraft was Sir Donald Banks, the chairman of De La Rue and a very charming man. The first official engagement for the Mission was a visit to the President of Pakistan in Karachi, who at that time was a very well dressed Mr. Ali Jinnah. I felt ashamed of my fellow countrymen when the members of the party left the hotel in the afternoon with two of them in old khaki bush jackets, shorts, ordinary socks and tennis shoes.

From Karachi we flew on to Calcutta, Rangoon and then on to Bangkok. Here they were met by the Chinese Chamber of Trade in Siam and invited to an official dinner that night. To my mixed feelings I was asked as well. We all went together in a fleet of cars and were ushered into the dining room. Down the centre of a perfectly laid table was a row of bottles of Black Label Whisky and a few jugs of water. Servants poured

the scotch into tumblers until one said, "Stop," and if lucky one would get a little water which seemed to be in shorter supply than the whisky. The seating was arranged so that opposite each of us was a Chinese member of the Chamber of Trade who at very frequent intervals would lift their glass and say, "Campai," at which one had to lift our glass, say the same and empty the glass where upon it was refilled. Before we left for dinner, Teeling who knew China well, told me of this habit adopted by the Chinese in the hope that, should they wish to do so, they could embarrass the guests. About halfway through the dinner one member slipped off his seat and was re-seated by two servants but to no avail, for a short time later he fell off again. He was picked up and as he was being taken out, his trousers embarrassingly fell down. The rest of the party passed off reasonably well until it was time to go home when the same member, now with his trousers up, appeared and went up to the Ambassador's wife and kissed her on both cheeks. This according to Chinese tradition is an insult as one does not kiss married women. There were odd smiles from our hosts but no word of criticism was passed.

On returning to the hotel, I was told that a typhoon had developed on the route to Hong Kong which delayed the flight for 24 hours. The Chinese heard about this and the Ambassador asked us all to dinner. After the invitation to the second dinner was received, poor Lord Ammon, who was a most charming person, got all the Mission together and told the culprit of the night before he had to wear braces and from now on was not to drink. Teeling's comment was, "That is a bit hard as the only people who do not drink at an official party in China are those suffering from VD." That night it was very hot and we were invited to take off our jackets. I have been to many official parties and seen strange things but it is the only time I have seen a guest sitting at dinner in his braces. This dinner went off reasonably well except for another little man asking if he could take the chop sticks, which were ivory and very beautifully carved, home as a souvenir. With customary Chinese charm the host said, "Yes." Only a few had the nerve to put them in their pockets.

The sequel to the two dinners was that on arrival in Hong Kong at noon the next day, I was asked by the press to confirm the stories. It was obvious they had been passed up over the official Chinese radio and leaked to the press through their offices in Hong Kong.

My popularity with Lord Ammon and the Mission must have been high because he wrote to the chairman of BOAC the following:

"The Parliamentary Delegation to China arrived here an hour ago. I am expressing their wishes by making my first duty on arrival an occasion to convey to you my appreciation of the whole delegation of the service and courtesy and helpfulness of Captain Stead and the whole crew. I am further requested to ask that if at all possible they would be delighted if their return to England scheduled for 9th November would be under the same captaincy."

In due course I returned to collect the Mission and asked Lord Ammon how the trip had gone and his reply was that they had spent all day apologising for the events of the night before. We flew south with a night stop at Bangkok again, but perhaps for good reasons, there were no invitations this time. The next morning we went across the mountains passing over the infamous railway built by our poor POWs with such a loss of life which included my brother-in-law. On arrival our station manager said we had some VIPs for London. It was the President of the Union of Burma travelling with his chief wife, daughter, secretary and ADC. I was taken into the office and introduced to His Excellency who in his own right was King of one of the Shan States and had been elected as President of Burma in order to get the Shan States into the Union of Burma.

I was introduced to the family and the President, whose full name was Saopha of Yawnghwe, who took me to one side and said, "I want you to take this box and look after it until we get to England." In his hand was a teak box about twelve inches square and three inches deep. He took a key from his pocket and opened the lock and inside was a carved ivory casket. He opened the casket and set out on velvet was the famous Mogok ruby and gold necklace containing ninety-eight stones as big as a thumb nail. It was the official wedding present to the Queen, then Princess Elizabeth. I was a bit rocked on my feet as it was so fantastic. He shut up the box, handed it to me and I took it and went out with the manager. "You might have told me what was coming," I said and he replied, "We were told it had gone last week as no one would insure it on account of the risk and its value." His Excellency told me later this story had been leaked as a safety measure. What should I do with it? Sit on it? Put it on my lap or just walk

off with it at the first stop and not be seen again? A press interview given later in Calcutta said:

"In an interview last night, the Sawbwa told me that he was not taking the necklace with him. For safety's sake he had requested the Government of Burma to send the gift to London separately. He did not know of the arrangements made in this connection but believed the necklace had preceded him to London. He had no idea of the cost of the gift, adding, "Mogok rubies have no fixed value.""

In fact I put it in the navigator's drawer and told the crew that it was a box I had had made in Singapore. Off to Calcutta we went and arrived there on three engines for an unscheduled night stop whilst the offender was put right. Here was a big problem, the box! We used a houseboat on the river for offices and it was obvious that it could not be left there, so I took it into the Great Eastern Hotel where we were spending the night. By the time we got there, I had decided what I hoped would turn out to be the best course of action. Feeling like a James Bond character, I went to the manager and said I wanted to put the box into his safe for the night and that I wanted the key overnight. He agreed and at the same time the safe was to be sealed. He asked what was in it but I would not tell him so he obviously knew it must be very important and played ball. Next morning after a rather restless night dreaming of people grabbing boxes and His Excellency with a big sword with which I was to be executed, I was down early and very pleased to see the seal intact and the manager waiting for his key. It was only on my next stop there that I told him what had been in his safe.

From Calcutta we went to Cairo with only fuelling stops and in Cairo, where we had a big base, I again put the box in the manager's safe and kept the key. At the same time a guard was put on the office door. The next night was at Augusta, but we were by now so far away from any likely cause of trouble, I was not too worried, so into the safe routine again. By now I was on very good terms with the family and His Excellency asked if on arrival at Poole, he could meet my wife and a signal was sent to organise it.



The flight arrived in the afternoon and as we stepped ashore from the launch, two plain clothes detectives showing their cards said, "Where is it?"

I replied, "Where's what?"

"The present."

"Oh that," I said, "here it is," and showed them the box.

"We will take it."

"Not yet," I replied. "First His Excellency must see it and open it to establish it has not been tampered with."

They were not very happy and walked on each side of me to the reception room. I took the box to His Excellency, who was by that time talking to my wife, and I asked if he would please open it and show it to my wife as well as checking that it was intact, and then these two gentlemen will take it over. I introduced the two Scotland Yard officers who had been sent down just to collect it, as there were others for the security of the Presidential party. His Excellency was delighted with what

I had done and asked Marjory and I to dine with them in London, but due to baby sitting problems we were unable to do this but arranged to see them again on the departure of their return flight.

Their daughter Sao Sanda, Princess Sanda, was aged about eighteen and had come to England with the family to continue her schooling and she became better known to us as Janet, a name she used rather than her title.



When we went to see the President and family leave for their return, Marjory and I were asked to look after Janet and to see that all went well for her. This was indeed an honour and over the years when she was at school and Cambridge and ever since, we have been close friends. I used to let His Excellency know whenever I was stopping in Rangoon as I was to stay in the President's House with them. I would let them know of my arrival and would be met by an ADC with an official car flying the flag to be driven to the house where I was given the full pomp of a European

Governor. In the evening, even if I was the only guest, an ADC would collect me from my suite of rooms and take me down to the lounge where we would wait for perhaps five minutes and then, proceeded by his private secretary and ADC, His Excellency and his wife would walk down. I would bow and shake hands, have a drink before dinner and enter a beautiful dining room where, if there were only the five of us, we would sit at a terrific carved round teak table. The food was always Burmese and what flavours! Curries of all sorts and then meat dishes followed by wonderful tropical fruits. After dinner, which always lasted for at least two hours, we would sit and talk until perhaps midnight, when they would get up and leave my company with the remark, "See you next time." There was usually a parcel to take back to Janet and a small gift for Marjory. When His Excellency's wife found out how fond I was of their curries, she had a complete booklet compiled in English of their recipes. We still use it today. They were a most generous family and when, one evening, I mentioned how much working in teak appealed to me, it took a lot of talk to stop a log of teak weighing a few tons being shipped to England. I have regretted my refusal many times since, as there would have been enough wood to plank a boat and today it is worth its weight in gold.

The political situation in the Far East at this time was starting to become very unstable and the Communist take over of Burma was beginning. By the end of the flying boat services to the Far East, the official car and staying with His Excellency was a very doubtful privilege as the car was shot at more than once, although not when I was in it. At night it was not unusual to hear machine gun fire near the house and there was always a strong army unit guarding it. After the Communist take over, the President was gaoled and with the exception of one son, the rest of the family fled the country. Some years later the father was released to house arrest as he was then dying and the son was allowed to live with him, but none of the rest of the family was allowed to return. The end of the saga came one day when for some reason the guards came to question the old man and the son thought they had come to take him away. He tried to object and was shot dead. Very shortly afterwards the old man died from what I am sure was a broken heart. We still see Janet, who now lives in

Spain with her husband Peter Simms, a well know correspondent and writer.

The time I spent in the Far East in the flying boats was, at times, very interesting and Bangkok was still rather a mysterious city and the people were the most charming I know with not a care in the world. For example, BOAC had in the Traffic Department one of the many princes of the land who was a very good friend of mine. During the night stops we used to go to eat in a restaurant cum night club in a building which like so many in that part of the world had a tin roof, which due to age was not very watertight. One night we were there and the beautiful dancing girls were performing their unique Siamese dances. The setting was perfect, the girls in their long Thai silk dresses, good food, well laid tables, soft music and all was well until a violent thunderstorm started and the rain came through the roof. The guests, the girls, the tables were all soaked and before long the dance floor was awash. This was Siam and the evening went on as if the stars were shining.

"It's a bit wet," I said. My host replied, "Yes it is when it rains," and he shrugged his shoulders and continued eating the wonderful succulent shrimps.

Another night I was there with him and the building like so many had a little wall round it but was open to the street. We were just finishing dinner when down came a lot of armoured vehicles at high speed. "What's going on?" I asked. "Oh, probably a change of government," my host said and sure enough this was in fact the case, but the effect on the establishment was nil.

One morning I arrived at the river base to take the flight to Hong Kong and the Chief of Customs came up and said that there may be a delay as they had had a tip off that a Philippine husband and wife were smuggling and that he had brought his wife along to search her. In due course the passengers arrived and these two were taken into the customs office and I stood around watching the result. As usual there were shouts of protest issuing from the room but as we were due to leave, I said they would have to be left behind. Just as the launch was about to leave the pontoon, the husband rushed down, got aboard and off we went. On the return flight I asked what had happened and the Chief of Customs said it was most successful. The husband was released as he had nothing but the wife had

three packets, each containing two gold and diamond bracelets on her body in three very good hiding places. Our station manager said that in Siam there is a rule that an informer gets a percentage of the value as does the customs officer concerned, so I presume all did well out of this haul.

About this time we arrived back in Poole from a trip and were in the customs room. We had had as a passenger a King's Messenger and I had been curious about a large bag of golf clubs he had carried himself. A customs officer asked him what he had and I heard him say, "Nothing," and he was asked to open the bag of clubs and he declined on the grounds that he had a diplomatic passport but was told, "That does not work in your own country." The bag was opened and the inside was full of rice and in the rice were bottles of whisky and packets of cigarettes. The papers the next morning carried the headline, "King's Messenger caught smuggling at Poole" and one presumes he lost his job for we never saw him again.

On this same flight a young First Officer I had was asked if he had anything to declare and he declared a few small items. The customs officer dealing with him was a grand old man called Tom Bugler and he looked at this lad and said, "Don't be silly. What about the ring you bought in Bangkok?" The arm of the customs service is very long when it wants to be.

The Crown Prince and Princess of Siam were also passengers with me on one flight to Poole and very charming people they were. Before arriving in Poole he presented me with a very attractive silver powder compact for my wife and which she still uses today.

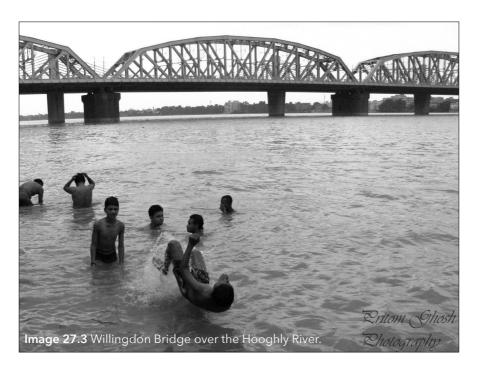
At Bangkok I had organised for the return flight a pair of geese and a small pig to be brought down to the dock and when we were ready to leave they would be killed and put into a sack. At this time meat was still rationed in England and poultry very short. It was touch and go if the meat would reach home in good condition such that if there was a delay in the flight and depending on the aroma coming from the sack, there would be a "burial at sea" somewhere near Augusta. Still, it used to be worth the effort to see the family which now included four kids tucking in.

Flying in the Far East was easy. Where possible, we would avoid storms by flying round them and with big harbours and rivers to land there were few problems. Hong Kong was the most interesting place due to the small area of water which surrounded by the high hills of the New Territory and Hong King Island often had a cover of cloud on it. If these conditions prevailed, the flight would come in on top of the weather over a radio beacon in the Kowloon Gap then fly east out to the sea, descending and then back again homing in on the beacon. If it was too thick in the harbour, we would land outside and taxi in avoiding the many junks fishing in the area.

Only once did I have a problem with a boat and that was taking off at Singapore. We had taxied out of the dock area into the bay, had opened up the engines and started the run when the starboard float collapsed. The immediate action for the emergency was to stop all engines and immediately have the whole crew out on the other wing tip to stop the boat rolling over on the damaged float and perhaps sinking. We did this and were towed back to the dock. Why the float collapsed was never known as the sea was calm and there was no drift-wood in the area. Perhaps it had been strained on a previous landing.

The worst take off we had on this route was in Calcutta on the Hooghly River. The prevailing wind is from the east and this meant taking off towards a formidable obstacle, the Willingdon Bridge some 100 feet high. Before the start of the run we would get as far up river away from the bridge as possible and then with a high temperature outside and calm water, the struggle would begin.

Full power and praying that the cylinder temperature would not go off the clock, we rushed towards the bridge and in the end staggered over it. Sometimes the Engineer Officer would close his eyes as the temperature reached the limits but no one ever came to grief. Sometimes the take off would be stopped and a second try made but this was usually when there was a slight cross wind and full power had to be restricted at the start on one of the outer engines to stop the swing. I had, from the start, made a mental note that if I lost an engine at the point where I could not stop, I would fly under the bridge as there would be just enough room but I thank the Lord it was never necessary to put this into action.



During the monsoon season, apart from violent thunderstorms, one could also encounter very vicious line squalls over the sea. One day after leaving Karachi for Bahrein one of these lines of low black clouds appeared ahead, so I decided to fly under it. Approaching the edge at about 500 feet, which by the look of it would keep us just under it, all seemed well and there was a strange calm with no turbulence. Then, without warning, we were shot up vertically about 1,000 feet and dropped down again out of the cloud and into the sun again. What sticks in my mind about this incident is looking down at the control pedestal where I had a cup of tea sitting, as we went over the "bump" seeing both the cup and saucer in mid-air and the next second both were back on the pedestal intact. The Engineer Officer said the lid of his tool box opened and all the tools became airborne and then back into the box and the lid shut again. It was really one of the better bumps of my life.

Life by now had settled into the routine of route flying with no outstanding events apart from the usual changing of the aircraft configuration. The bunks and night flying were given up and the ordinary seats and night stops were started again. A new boat, "The Plymouth",

was introduced in 1947, which was the old faithful Sunderland hull and wing, but in place of the nose and rear gun turrets, streamlined skin sections had been fitted. New American Pratt & Witney engines were also fitted which were a little more powerful but a lot more noisy and tended to spoil the comfort of the flight. In these boats someone dreamed up the idea of installing a dining saloon on the top deck behind the flight deck. It was a good sales point and made a pleasant break for the passengers and if you were lucky there was a seat at the captain's table. But the whole set up was really a waste of payload and in the end the boats reverted to the normal seating plan.

There is a rather nice little story of a passenger who joined me at breakfast one morning at the Captain's table together with two other people. We were eating freshly cooked bacon and eggs and I noticed he was leaving all the bacon, so I asked him if he did not like it. The reply from this Englishman, a rubber planter from Malaya, was that he was a Mohammedan. The next night stop at Alexandria I saw him in the bar and he offered me a drink. Now this was interesting as Mohammedan do not drink, so I asked him why he was drinking Scotch and this was his reply,

"I wanted to become a Mohammedan as it is so much easier to get rid of your Malayan wife if you are of that faith rather than a Christian."

"But what about the drink?"

"Oh, when I went to see the priest he asked me if I drank and I said about two bottles a day. The priest replied that I obviously required it on medical grounds but try and cut it down to one bottle, and this I try to do."

It seems to be the most obliging form of religion.

Chapter 28 SOUTH AFRICA

During the later part of 1948, Short Brothers in Belfast produced a new and bigger boat called the "Solent" and we were to receive a fleet of these. The first arrived at the beginning of 1949 and conversion training started. Training by now was no longer the pre-war six take offs and landings plus an oral technical exam. It was now a full blooded technical course with a series of written exams at the end. Pilots had to pass the same technical exams as the Flight Engineers which, to the end of my flying days, was the case and always seemed a little strange. As well as the exams, we were examined in Flight Planning, Practical Flying including seamanship and finally all the crews had to pass a test in the emergency drills for ditching, use of dinghies, forced landing on land and fire. When all this had been completed and the necessary ministry forms signed, your licence was sent to the then Ministry of Civil Aviation for endorsement. Finally a trip down the route with a pilot qualified on the type was undertaken with him acting as a safety or check captain.

The Solent was a lovely boat to fly and for the passengers the last thing in comfort. The centre attraction was an excellent bar towards the rear where you could stand or sit and look out of the large picture windows on both sides. The boat was put into service on the route to Johannesburg which we were to take over from the old "C" class boats which had been operating from Durban since the war.

The new route was "Luxury Travel to South Africa" and so it was. Passengers came down to Southampton the evening before departure by train in special Pullman coaches which departed from BOAC's own platform at the Airways Terminal in Victoria Station. Coaches would collect them in Southampton and accommodation at a very good hotel at Lyndhurst in the New Forest was the first night's stop. The next morning the flight departed from Berth 50 at 08:30 and flew direct to Augusta arriving in the early afternoon, so that passengers could spend the

afternoon sight seeing or just sitting in the sun on the edge of a perfect blue sea at the delightful ex Italian Naval Mess which we used there.

Next morning was an early start at 06:00 with breakfast after leaving and only stopping to refuel at Alexandria before turning south to fly down the Nile to Luxor. The landing here was always interesting as by the time we got there about 3pm, the afternoon wind blowing across the very narrow river had started. The method for landing was to come up river on the up wind side, "crabbing", to allow for the drift and just as the boat was about to touch the water, line up with the river. After the landing, as speed was lost and the rudder ceased to be effective, the outer engine would have to be used on the up wind side to keep the boat from weather-cocking into the wind and into the bank. The departure in the early morning was no problem as the wind then was only very light. The stop here was always popular as the boat would tie up outside the very good hotel and as entry formalities had been dealt with in Alexandria, passengers and crew just walked ashore into the hotel and could go off to see the sights of ancient Egypt which abounded at Luxor.

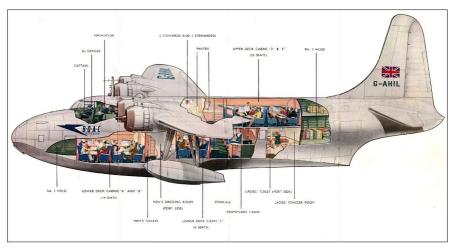


Image 28.1 BOAC Solent Flying Boat.

From here we flew down to Khartoum in the early morning, a flight of about four and a half hours. At this time of day the air was calm and we would fly at only a few hundred feet over the Aswan Dam to make it interesting for the "customers". A quick refuelling at a rather dusty and uninteresting stop and off to Port Bell, a short flight of two hours. Port Bell is the port for Kampala on Lake Victoria in what was then Uganda. The lake is 3,700 feet above sea level and the stop was always a pleasant break after the heat in summer of the Mediterranean and Nile. The evenings were always cool and as usual the hotel was excellent.

On the sector to Port Bell we flew over the Upper Reaches of the Nile and always came down very low over the vast swamps so that the passengers could see the hippos, elephants and other wildlife inhabiting the area. Then on down the river to the Murchison Falls, dropping down 103 feet into Lake Albert. Then across the National Park still flying low to see the wildlife before landing in the Port Bell inlet of this very large lake some 200 miles long.

The next morning on down south crossing Lake Tanganyika, one of the longest lakes in the world at 400 miles. Then across the high and not very interesting interior to Livingston and to a landing on the Zambezi River a few miles above the famous falls. The part of the river we used was very beautiful and surrounded by jungle.



Image 28.2 BOAC Flying Boat on the Zambezi River.

On the drive from the base to the Victoria Falls Hotel on the edge of the falls, it was not unusual to pass elephants and the whole area was alive with apes of all types. In fact they were a menace if you happened to be sitting on the hotel terrace having tea or breakfast as they would come and take the food off the plates. They were really very amusing and a great attraction to the passengers. The flight arrived here at noon and the afternoon would be spent walking along the face of the falls and through the rain forest. This was the name given to that part of the falls where the spray descended again in the form of rain. During the season of the high river, the spray cloud could be seen from up to 100 miles in the clear atmosphere. The sight of the falls, discovered by Livingston in 1855, as it falls into a long chasm 250 feet deep was inspiring and to stand on the railway bridge above the chasm and look down and along was for those not liking heights, frightening. The stop here was perhaps the highlight of the trip, which by now was in its fourth day out of England and passengers and crew were one happy family.

The final day was just the one sector on to Johannesburg, a short flight of three and a half hours. The only area of water was at the Vaal Dam about fifty miles south of the city in the middle of a vast, almost barren veldt. Transport into Johannesburg was by a very big air conditioned coach which used to take just an hour and at times were travelling at 70mph along the straight dirt road.

The flight back to England was the same only in reverse.

On one trip home I picked up a passenger at Victoria Falls. He was such a character that I gave a cocktail party for him at Kampala and this is an extract of his life as told to me.

He was born at Colchester on the day the Indian Mutiny began. He sailed to South Africa at the age of 26 to have a look around. The ship took 104 days. He marched with the column which put down the Matabele Rebellion in 1896. He became bookkeeper, storekeeper and hotelkeeper. He met a girl of 28, met her again and married her. He was 71. He was 73 when his son was born and 75 when his daughter was born. He became a little ill at his home near Bulawayo, Rhodesia, and was advised to have an operation. He flew to England in four days and arrived saying, "From now on I shall fly when I get the chance." He could not be met by his

mother who had died aged 105, but was met by his sister from Bexhill who was 82. He was 91.

He rolled a cigarette and said, "The best part of the trip was being the guest of honour at the cocktail party in Kampala during a night stop. A very fine party!"

His name was Frank Symons-Brown, one of the Boys of the Old Brigade. I asked him what he attributed his long life to. "Drinking S.A. Brandy since the day it was first made," was his reply.



Chapter 29

A NEW ERA

Late in 1949, the Solent route was extended to the Middle East and I flew the first flight into Kuwait, at the north end of the Persian Gulf then a rapidly expanding oil city. His Excellency, The Sheik of Kuwait, came aboard the boat during the refuelling stop and had coffee with me. By this time the base outside Bagdad had been given up and the operations was through Basra on the River Euphrates and not far south from where, according to some schools, the Garden of Eden is meant to have existed.

It was becoming obvious by now that the days of flying boats were numbered due to the cost of maintaining the bases and the fact all the other nations were using land planes and as a result of the war there were good airfields in most parts. So in December 1949, as the boats came to rest for the last time I went off to do a course on the Hermes, a four engined low wing monoplane built by Handley Page, but it was sad to see the fleet of more than a dozen flying boats swinging at moorings both at Southampton and Poole. Some of the Solent boats were new with only a few hours flying time and the ones at Poole I watched for more than a year, until finally they were pulled up the beach and cut up. An era had passed and in many an opinion, the luxury and pleasure of flying when every flight was a cruise par-excellence. Before giving up I tried through my friend Squarey, a director of Thomas Cook, to start a company doing Mediterranean cruises with the boats, but the finance was not forthcoming.

So it was back to wheels after ten years and nearly 8,000 hours of continual flying from the water. I could raise very little enthusiasm for the Hermes, coupled with the fact that I had not been feeling too well during the last period with the boats. By the time the flying side of the conversion training was due, I became really quite ill with amoebic dysentery and it was only after a long spell in the RAF hospital at Halton and four months' further recuperation was I cleared for flying again. The RAF specialists recommended that I should keep off the Eastern routes, but the director

general of medical services for BOAC, retired Air Vice Marshal Sir Harold Whittingham, overruled the RAF's opinion and sent me back to the Hermes fleet. I completed the training and started flying the route to Nairobi and one down the West Coast to Accra. They were both dirty and dusty with poor accommodation and food, compared with the old boat stops, and the captains did not exercise the authority we had done. Still this was the life then. I was getting on in years and there was a pension scheme at the end, so for one who had often rebelled in the past, I did not react too violently.

What I had feared, as did the local BOAC doctors, occurred in August and I was sent to the School of Tropical Medicine in London with a second attack of amoebic dysentery and this time it was bad, as the old wounds in the intestines had not been given time to heal properly and were now reinfected. This time I really did rebel and had an interview with the chairman at which I threatened to sue the DMS and BOAC if as a result my licence was not renewed on medical grounds. It was not until seven months later and after many medical boards that with a certain amount of reluctance, that the RAF Central Medical Board, which carried out all Air Ministry examinations, passed me fit. Perhaps it helped that the president to the board disliked Sir Harold Whittingham.

BOAC now made no objection to my request for transfer to the Atlantic routes and I was sent down to Filton at Bristol, the base for training on the Constellation 049. This aircraft was the first post war American plane and the one BOAC had started the North Atlantic route with soon after the war ended. No one else was doing the course at the time so I worked on the paper side by myself and then completed the flying in a matter of five days. This was a new type of flying at quite high altitudes for then and a long range of 2,500 miles across the Atlantic.

The route operated with the Constellation fleet was, London - Lisbon - Santa Maria (Azores) - Bermuda - New York or Barbados - Trinidad. These were pleasant routes with few problems. The field at Santa Maria was on top of a high cliff 300 feet high and if the wind was from the east, the approach was over the cliff edge and always at night. It was strange to approach a flare path with the aircraft's landing lights shining on the cliff face and waiting for the down draft as the face was reached. The crews slept here and it was an interesting place to stay as the main feature was

the whaling station. I still have a souvenir whale's tooth presented to me by the manager.

Bermuda was very much the same as it is today and the only thing that stands out in my memory was one day just after I had arrived, and was standing talking on the tarmac to our manager I watched one of the American Air Force early twin-engined supersonic aircraft take off. He went down the runway away from us, took off, then turned and came back to beat up the field. When he was about halfway down the field coming towards us and going very fast, there was a terrific explosion and the aircraft disintegrated instantly with balls of fire going over our heads to fall into the sea about half a mile further out where they exploded in a plume of smoke like an atom bomb. The AAF went out in their rescue boats and kept all other boats away for some time until they had recovered the pieces. It was incredible that such an instant disintegration could have taken place.

The approach into the New York area was then child's play compared to today. The only companies using Idlewild were the overseas operators, but as it was not fitted with all the sophisticated electronics it now has, the approach was more or less left to the pilot using standard approach practice on the single instrument approach over the water.

I had one, shall we call it "interesting" time, when one night about half-way between Bermuda and the Azores, we were flying at about 17,000 feet in cloud and in very calm conditions. It was dark and all the passengers were asleep when without warning all four engines stopped. By a freak of nature, all four carburettors had at the same moment iced up. The engineer was on the ball and on went the alcohol spray and hot air. After what seemed a life time, but was perhaps only a minute, we had all four engines going again. What is still clear in my mind today, was the complete silence with only the outside wind noise. My immediate reaction had been to take out the auto-pilot and go into a shallow glide, at the same time telling the radio officer to send out an SOS. He was still trying to contact control when we were back in business again. The passengers I am afraid received rather a fright, not when the engines stopped but when they started again. When the engines failed, all the constant speed props went into "fully fine" and then as the power came back on again with

some force, the RPMs went very high causing the props to "scream" until the controls increased the pitch and reduced the revs.



Carburettor icing was quite a common occurrence in piston engined aircraft but it usually started with a surging of power and gave sufficient warning to allow plenty of time for corrective action to take place. The failure I have just described created a considerable amount of interest at the time and could perhaps have been the cause of some of the aircraft lost without trace over the oceans or crashed on land with complete loss of life. The reason for this unusual failure was never established but my own theory is that there must have been some freak moisture conditions in the cloud at one point to cause the sudden loss of all motors. These problems are now a thing of the past as jet engines do not have carburettors and the operating temperatures rule out this problem.

In the middle of 1952, all the Constellations were converted to a new form of travel, "Tourist", the forerunner to the now established "Economy" and the era of mass air travel had started. The mid-Atlantic routes were stopped and the new Boeing Stratocruiser started to operate

on the northern route and was delightful both from the crew's and passengers' point of view.

The north Atlantic routes posed no problems which were new to me and as usual the captain made the final decisions on the route, unlike the practice of the US operators where ground staff, called flight dispatchers, laid down the route to be flown. British pilots have had many battles over the years to keep their system which I am certain led to far greater efficiency in the pre and early post war days. Perhaps today with the strict control on the ocean flying due to the density of traffic plus the long range of the aircraft, the advantages of a ground control of the flight might be an asset.

The early days of the Atlantic route, the range of the aircraft was insufficient for a non-stop flight even as far as the east Canadian coast and this created the problem of how best to get to the other side. The first item was the weather pattern, and by that I mean the positions of the depressions and anti-cyclones. It would often pay to fly north or south of the Great Circle Track (the shortest distance between two points of the earth's surface) so as to stay in areas of less head wind when going west or more following wind coming east. To this factor had to be added the weather forecast for the terminal on the other side plus the weather at the alternate airport. A flight was not allowed to operate unless there was sufficient fuel for the flight based on the forecast winds, plus fuel to an alternate aerodrome, plus reserves for other factors such as not being able to fly at the planned altitude thereby using more fuel. Another factor which had to be considered not only at the aerodrome but also en route, was a very serious weather condition called "Freezing Rain". Under certain meteorological condition the clouds at a certain air temperature could contain super-cooled water which as soon as it was disturbed by an aircraft passing through it, would freeze to the aircraft at a very fast rate. This could force the plane to descend due to loss of the correct flow of air over the wing, coupled with the increase in the plane's weight. Whenever these conditions were forecast for an area, the route would be planned to avoid it. Finally the question was "Could we take the load as planned and still get across or did some of it have to come off or should the flight be delayed for better conditions?" These last three points would be discussed by the captain and the commercial department whose final decision it was.



Let us take a flight on a Constellation or for that matter, a Stratocrusier, as the problems were the same except that the "Strat" had a slightly longer range. Four hours before the departure time the Flight Planning Officer would phone the captain at his home or if he lived too far away, at the hotel near the airport where he was staying. Before phoning he would have received all the Met reports and forecasts for the period required and analysed the fastest route. The captain would then be told the fastest route, terminal and alternate aerodromes, weather, fuel required for the flight and fuel available. He then had to decide how best to complete the whole flight. Perhaps it would be:

London - Iceland - Boston - New York, or

London - Glasgow - Gander in Newfoundland - New York or

London - Shannon - Gander - New York or

London - Iceland - Goose Bay in Labrador - New York

Perhaps if lucky some stops were omitted, but if really unlucky even more were required. For example, on more than one occasion I have had to fly London - Glasgow - Iceland - over the polar cap of Greenland to Goose Bay - Boston - to get to New York. This would entail a flight from start to finish of over twenty-four hours. My record was four days, delayed in London with fog, delayed in Glasgow with engine trouble, delayed in Iceland with weather, and finally having to divert from New York to Montreal due to weather at New York and then when it improved return to New York. On this occasion all the crew received a letter of appreciation for their efforts from the Manager. Today this would not be permitted due to flight time limitations even if the pilot had the energy to do it.

Having settled the route over the telephone, the Flight Planners would go ahead and prepare the flight plan for the first sector and when the pilot arrived some two hours before departure he would check it then visit the Met Forecasters for a briefing on the latest weather. Occasionally after this it was necessary to re-plan as forecasting is not always correct and the movements of weather areas are always uncertain. While the captain is finalising the flight plan, the rest of the crew have gone to the aircraft and are carrying out the pre-flight checks which will take over an hour. Finally the captain will sign the load sheet, passengers will go on board and then the "ship's papers" will be handed to the Chief Steward. Next the Tower will be called and permission to start requested. The reason for this was so as not to waste fuel in case there was any delay due to other traffic. When permission to start was given, the engines would be started and the route to taxi to the duty runway would be received. It might be a fine night, or snowing, or foggy or raining, but providing visibility was above the laid down minimum for a take off, permission to proceed to a holding point near the runway would be given and at this point the engines would be run up and a final check of instruments carried out. Control will call you and give the route clearance, perhaps something like this:

"Speedbird 740 cleared to Keflavik (Iceland) via Amber One to Prestwick Flight Level 15 then 60N 20W to Keflavik after 10°W F.L. 17. After take off climb to and maintain 2,000 feet on R/W heading wind 270/15 kts."

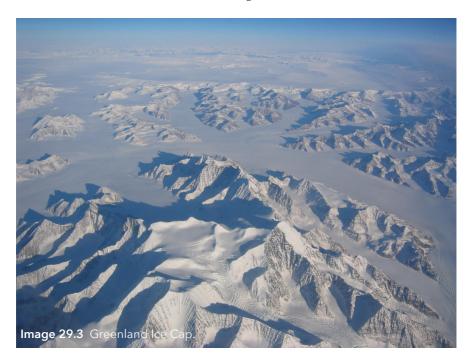
This would be repeated back and if the R/W was clear, the tower would then say, "Cleared to line up and take off." You would then proceed on to the runway and without delay start the take off. During

flight planning two speeds used during take off would have been calculated using the wind speed and direction, temperature, humidity, weight of aircraft and runway length. The first of the speeds was the speed below which, if an engine failed, the take off could be stopped and the aircraft brought to rest on the remainder of the runway. After this speed was reached the aircraft could continue on three engines and take off. This factor was called "V1 Speed". The second or "V2 Speed", was the speed the aircraft would take off at. During the run the first officer would call these speeds to the captain. As soon as you were airborne, the captain would order "Gear up - climb power." The Tower would call and say, "Speedbird 740 off at..., cleared to..., Departure Control." Then you would be told to proceed at different heights and over various beacons to keep the flight clear of other traffic until established on the Amber One Airways. The phrase Flight Level 15 in the clearance meant a height of 15,000 feet with the altimeter set at standard pressure of 1013 MBS. During take off and landing the pressure of the aerodrome was used but, so that vertical separation during flight could be maintained, everyone flew on the standard setting. The flight would proceed as cleared and after passing over Prestwick would be handed over by Airways Control to Oceanic Control who were at Shannon in south-west Ireland. On arrival at Iceland, control would be passed to them. On the way up, the weather covering the ocean, Iceland, Canadian east coast as well as behind us would be broadcast every hour. This had to be watched in case your terminal or alternate went below the permitted landing limits. If this happened the flight would have to be re-planned in the aircraft as you were not permitted to continue unless other bases could be used. Once in a Stratocruiser I was over half way between Shannon and Gander in Newfoundland when for these reasons I had to return to Shannon as I had reached the point of no return.

On approaching Iceland you would be given lower levels to fly and finally cleared for landing using a landing system, which in the days of the Constellation were the old fashioned Radio Range and not the present day Instrument Landing System or ILS. Iceland was an AAF base with a civil side used for refuelling only. The onward sectors, perhaps to New York, were similar and after an elapsed time of around twenty hours you could be touching down at the new Idlewild airport, now named

Kennedy. During the winter the snow banks on either side of the runways on the northern aerodromes made taxiing a bit difficult at times as the surface could be covered with ice and only a small slide would put a prop into the snow.

The flights via Iceland and the Ice Cap were interesting as it was in the Aurora area and some wonderful sights were to be seen. The view over the 9,500 feet high Cap was fantastic, but the thought of forced landing on those frozen mountains made a shiver go down the back.



In December 1952, I was appointed Flight Captain of the Constellation Fleet. This involved me in an office chair for the administration but also flying the route and keeping the pilots happy.

It was shortly after the appointment to Flight Captain that I had the only real difference of opinion with BOAC and it was due to poor maintenance which I must add is a thing of the past. It had always been a pet subject of mine and when time and time again the Captain's Voyage Reports spoke of trouble and bad workmanship, I was worried. Then one day I arrived at Prestwick and the local engineer came to me and said that

two fire doors were missing off one engine. I telephoned London and the doors were found on the hangar floor. This was enough! On my return to London, I asked for an interview with the chairman and was asked to see the Technical Director, a retired Air Vice-Marshal, Sir Victor Tate. He said to leave it to him and all would be well but I said, "No," and stuck to my guns and in the end I did see the chairman. This upset a lot of people but it had the desired effect and there was a great improvement in the servicing of the aircraft.

BOAC decided to buy two more Constellations and with a crew we were sent out to Burbank in California to carry out the acceptance tests and deliver them back to London, which was a nice break from the routine of life. One of the aircraft was owned by the famous Howard Hughes and had been locked in a hangar of his on the field for over two years and apart from the original test flights after building, had never flown. Hughes was reputed to have new aircraft in hangars all over the USA.

1953 was the year of Queen Elizabeth's II coronation and BOAC were allocated three pairs of seats in the stand outside the Abbey. All the staff we eligible for these seats so a ballot was arranged and against very high odds, I was to draw one pair of tickets priced at £6 each, free to us. Marjory was very good and let my mother who was home from New Zealand accompany me. In exchange mother gave the family a television so they could watch on that. It was a pity there was no colour picture in those days. It was a long but wonderful day and one never to be forgotten as the seats were only two rows back from the street where the whole procession passed, both going to and returning from the Abbey. What a pity the weather was so bad. It was a coincidence that Queen Sālote of Tonga, who I had met and been on her staff during the war, was to stop beside us in a open carriage with the Sultan of Zanzibar on their way from the service. It was raining and she just sat there looking serene and waving but at the same time she must have been very wet and cold. She was a great person and so charming. Mother and I also attended the Spithead review of the Fleet on the 15th June and spent three good days aboard the TSS Captain Cook.

In January 1954 I was granted a Master Air Pilot's Certificate. This certificate was awarded by the Guild of Air Pilots and Air Navigators on



Image 29.4 Stratocruiser interior..



behalf of the Air Ministry for "Recognition of skill, experience and service in the profession of aviation". It was a very sought after document. In 1957 after the Guild was granted Livery in the City, I was to become a Freeman of the City of London.

A charter I did in January 1954 and one I was pleased not to have to repeat, was thirty-five wives and forty-three children from London to Georgetown in British Guyana. The aircraft was chock-full with the noise and an aroma left to the imagination. London, "round the houses", to Jamaica is a bit over twenty-four hours, then a night stop and on the next morning to deliver them to their soldier husbands and fathers. The only good part was when I went to lunch in the officers' mess on arrival and was asked if I would like some rum to take home. Naturally I said, "Yes please," and paid the vast sum of 1/6d a bottle. Empty bottles were in short supply and if I had had empty bottles I could have taken all I wanted. It is the cheapest "booze" I have ever laid my hands on and in the mess rum sold for 1d a large tot! The conditions under which the troops lived out there were pretty awful, so I think they were entitled to the cheap drink.

The only other highlight of the year was another charter flight with the well known German children's choir, "The Happy Wanderers", who had been on tour in the USA. I flew them from New York to Hanover and on arrival was presented with an album of their recordings.

An extract from a paper cutting at this time shows we still had our problems "getting across" when the dice were loaded:

"Seven passengers waiting at Prestwick for a Canada bound BOAC Constellation from London saw it arrive overhead, circle and return to London twice. Mechanical trouble prevented it from landing the first time. It was low cloud the next time. And last night the seven waiting passengers were flown by another plane from Renfrew to London. There they joined the other 46 passengers, and the Constellation took off a third time for Canada but this time to fly the southern route through the Azores."

Originally we had left London on 18th December and returned with engine failure on the 19th. Left again for Prestwick but returned due to the weather there. On the 20th flew to Prestwick but then the north Atlantic weather closed in, so I went south to the Azores and on up to Gander,

then due to weather at New York, to Boston eventually arriving in New York on the 23rd with all the passengers still with us and still on speaking terms.

By the beginning of 1955 the life of the Constellation was coming to an end and it was time to look for a new mount once more, so I applied for transfer to the Stratocruiser fleet and in August started the technical training.

Once again I was on my own, but this aircraft had a Simulator Trainer which had a flight deck identical to the real aircraft and into which all the conditions and emergencies of flight could be fed. This greatly helped in training and cut down the number of hours on the aircraft. The actual flying conversion was carried out at Shannon, the reason being was the cost of fuel and landing fees were much less than in England.

While at Shannon two of us hired a car one afternoon to drive up the coast to a village renowned for its oysters. The afternoon was spent in a tiny pub eating oysters, local brown bread and butter washed down with a draught of Guinness and a very pleasant afternoon it was. On the way home we stopped at a little garage for some petrol but could get no answer to the bell. All we could see was a cat walking forwards and backwards across the window and crying. Just as we were about to leave a boy walked down the road and said, "You will get no petrol today, he's dead."

I said, "What about the poor cat?"

"Oh, it's locked in to keep the rats away until the funeral."

"Where's the body?" I asked.

"In there," was the reply.

It could only happen in Ireland.

My new mount was one of the nicest planes I have flown. It was luxury for both passengers and crew, even to the extent of bunks and toilet on the flight deck. The pilot's view was unique as the seats were right in front of a big transparent nose.

The range of the Stratocruiser was longer than the Constellation so the problem of how to "get across" was less and by the time the Britannia 312 and the Boeing 707 appeared, was at an end.

The routes were extending. From New York we flew to Bermuda, Nassau, Jamaica and Trinidad. From Boston to Detroit and Chicago, plus the Canadian service to Montreal and Toronto.

Two interesting aspects of the Atlantic and in particular the northern route or Polar Curve as it was called, were going west in winter if you left London in the dark. It would be a very long night and some eighteen hours could elapse before the next dawn, whereas in summer going east, the period of night was only a few hours and even then there would be a glow in the sky.

Another first was to come my way here at the start of the Boston - Detroit - Chicago service when I spent a couple of weeks living in Boston supervising other captains over the route before returning to general route work.

In January 1957 I was forced one night to make a very hurried decision which goes to prove that the calculated speed for abandoning a take off really works. I was commanding the "Canadian Monarch", which was the nightly luxury service from Montreal to London. We were fully loaded for the prevailing take off conditions and it was snowing. The take off started and all was going well. The Engineer had called "Full Power" and as the First Officer started to call V1, the Fire Bell rang. The E/O called "Fire warning No. 4." I slammed all throttles closed and called, "Abandon take off. Full flap. Fire drill No. 4," and put No. 2 and No. 3 engines into full reverse power and as much as possible on No. 1 and still kept going straight, for by now No. 4 was stopping in the Fire Drill. Putting the two inner engines into reverse and full power had created a problem as it blew the snow forward and made visibility nearly nil. While all this was going on I was applying the brake as much as possible and we were slowing up nicely but were getting very near the end of the runway when there was a big bang. We had burst a tyre which in fact was an asset as it helped to slow us up and the other wheel on the same side kept us up. Finally we stopped at the end of the runway and had just enough room left to turn. When I called, "Abandon take off and full flap," the F/O called the tower declaring an emergency and by the time we turned back down the runway to taxi, there was a fleet of fire engines, police cars and ambulances tearing up the runway towards us. I spoke to the passengers

on the public address system and apologised for what had taken place as it could not have been very nice in the cabin. The fire drill on the engine included the discharge of extinguishers and from what could be seen there was no fire in the engine. If there had been I would have had to order, "Abandon aircraft," and evacuate the passengers on the runway using the emergency chutes from the doors.

Amongst the passengers were General Sir Archibald Nye, High Commissioner to Canada and the famous Canadian business man, Mr Garfield Weston, and while the engineers were sorting out the reason for the fire alarm and fitting a new wheel, I was asked by the manager to take these two passengers to dinner in the restaurant at the local hotel. By the time we had finished dinner it was discovered that the fire warning had been a false alarm due to an electrical fault and just one of those things sent to try us at times. About three hours late, we took off again and landed in London eleven hours later. The outcome of this flight was that Mr Weston asked my wife and I to lunch at Fortnum & Mason which was part of his empire. We started off sitting in the boardroom eating wonderful fresh caviar on little strips of Ryvita, another of his products. Then to lunch in his own round dining room served by a personal servant who had been on the staff of Prince Philip. After lunch we were taken from top to bottom of the store by the great man and introduced to the head of each department and they were told we were to have staff rates from then on. Later I met other members of his family in different parts of the world and they were one of the most charming families I have known.

About this time I also had the privilege of flying the great actress, Dame Sybil Thorndike, into Montreal to see her daughter. That night the flight from London was not very full and Dame Sybil was travelling in Economy Section and out of appreciation for her work, I told the Chief Steward to move her into a First Class seat. She so appreciated this gesture that, when some time later she and her husband were in a play in New York, they sent me tickets and asked me to come up and see them backstage. They were a truly wonderful couple who have done so much to promote the good name of British theatre.

Perhaps some readers may remember the replica of the Mayflower being built and sailed across the Atlantic during the summer of 1957. The ship was commanded by a friend of mine, that great writer and seaman, Commander Alan Villiers. I was in Bermuda waiting to pick up a flight to Nassau in the Bahamas and from reports in the local press realised the Mayflower was very near my track, so I decided to try and find her. I told control what I was going to do and flew out to a position I thought she would be at. The weather was perfect and out of shear luck, there at 29°49′N and 68°23′W at 15:40 GMT on 5th June, I found her. The passengers were told and down we went to have a close look and take photographs. The story I sent back to New York together with film and excellent photos was used for publicity and the chairman of BOAC, Sir Basil Smallpiece asked for an autographed copy.



Talking of BOAC chairmen, we have had some very strange ones in the form of retired Service Officers of high rank, and other political appointees. In my humble opinion there have only been two who were really any good for the Corporation. They were Sir Miles Thomas and Sir Basil Smallpiece, who were never too busy to listen to a captain's opinion. Today and much too late, the Corporation has what it should have had long ago, a chairman who over a lifetime has worked from the bottom to the top and really knows what it is all about. Keith Granville is now that chairman and long may he stay there.

To amplify my remarks about Chairmen I will tell you the story of the night I arrived in Iceland in a Stratocruiser and of being cleared into the landing pattern where I was given the local altimeter setting which should read zero when on the runway. The weather was bad with total cloud cover down to the permitted minimum of 500 feet. It was snowing and there was a strong, gusty wind, in all not an ideal night. There are two altimeters on the pilot's panels, plus one for the Navigators and these were all, as usual, set to the pressure given by the tower. In the landing briefing given by the captain before every landing to the F/O and E/O is the instruction to, "Call minimum altitude on the approach." We started the approach by coming over the beacon at a safe height to clear the hills and then turned out to sea on a given bearing, descended to 1,500 feet and then turned back again on a given radio bearing to bring us over the end of the runway and in line with it. I eased the power back and started the final let down to either the minimum of 500 feet or, if we were then below cloud, on down to land. With 700 feet on the altimeter I broke cloud and very close under us was the sea and the loom of the runway lights. "Landing check," I called and in no time we were down with 500 feet still on the altimeters. We had been given a setting so far out that if the cloud had persisted, I could have flown it into the sea and no one would have known what had happened and in the end it would have been "Pilot Error", understandable but unjustifiable.

I was mad by the time I arrived at the terminal and rang the AAF Control and said, "What the hell!" but they denied the mistake. A Pan American captain who had arrived just before me came up and said, "What setting did you get?" I told him and he said, "I got the same and told the Control they were wrong." We decided to tell our companies to take this up at top level. On arrival in New York I found our chairman Sir Miles Thomas was there so I went and saw him. He asked me for a full report and then went to Washington and in no mean terms, dealt with this very serious error, which according to the AAF had been a typing error.

The chairman received a full apology from the AAF and I a copy. On return to the UK I gave a copy of my report to our accident branch for information and the reply from them was to the effect, "Would I be less direct with the Chairman in future as it upset their organisation." I was so mad with this letter that I sent it to Miles Thomas and for ever after some people would not speak to me for upsetting their "Little Empires".

During the year I did a charter from New York to London with the whole of the Royal Ballet from Ashton and Dame Margot downwards. We left late at night and most of them changed into night attire and dressing gowns as it was to be a long, non-stop flight with just enough fuel if the winds were as forecast. About three hours after leaving we were losing so much time I decided a landing in Canada would be necessary and as Gander was closed due to weather decided on a not often used stop at Stephenville in Nova Scotia. We arrived at this rather primitive terminal and all the passengers got off dressed in their night attire. As I walked past the police at the door he said, "J.... C..... Captain, where did you get that load of dames?" I don't think anything like that had happened to him before. It was a very interesting trip and I spent a lot of time talking to both Ashton and Margot, both very knowledgeable people. While on the subject of ballet, I have also carried Dame Alicia Markova, who was another wonderful character.



Image 29.7 Stafford with police officers.

The next interesting passengers were of a different kind. Two Scotland Yard detectives and their prisoner Stafford. Stafford had escaped from jail and had been living in Trinidad where he was moving in the top of society and was very popular until the Yard got to him and Sergeants Mullins and Huntley were sent down to arrest and bring him back. The first day we flew up to Bermuda for a night stop and

then direct to London, a flight of twelve and a half hours. Stafford was a charming passenger, well dressed with a pocket full of cash with which he purchased drinks for quite a lot of the passengers, as he was only handcuffed when getting on and off the plane he was free to walk about during the flight. I think a lot of the passengers must have had a surprise when they read the headlines in the papers on their return and saw the photo of the person who had had more than one hundred friends to see him off at Trinidad.

To conclude the time on the Strats, I must tell the story of my "Drunk". The flight was to New York and was due to stop at Shannon for fuel and while this was being carried out, the passengers were to have dinner in the restaurant. Before we got to Shannon, the Chief Steward approached me to say there was a passenger creating a spot of trouble and that as he was drunk and if I agreed, he should be off-loaded. So I signalled ahead and asked for our Station Manager and the airport doctor to meet the flight. By the time we landed he really was the worse for wear. The other passengers left the aircraft and I asked the doctor to certify him as drunk but the doctor being an Irishman and not wanting any trouble, had a long talk with him and said that if he would use one of the bunks, of which there were a dozen in the cabin, he could go on and this he agreed to do. The idea did not please me for in my opinion he was still going to create trouble and he would get the use of the bunk without paying the extra fare for it. Still, if the doctor would not help, there was nothing I could do.

We left Shannon after an hour and a half and he got into the bunk as agreed but no sooner than we were airborne, he was out demanding a drink and insulting lady passengers as well as swearing. Now here was a problem, because on all long distance flights take off weight is a much greater weight than can be landed at. If for any reason a landing is necessary, fuel must be dumped reducing weight down to the maximum for landing and this cost a lot of money as it would amount to a few thousand gallons and took time. I now committed one of the errors of my life and told the Steward he was not to be given a drink and that I would come and see him when the climb was finished and we had established cruise. In the back of the plane there were two seats on a raised platform and looked perhaps rather like thrones. All was well, try to picture a long cabin full of passengers with the two seats at the end, our friend in one of

them and the aircraft very quiet. I open the door from the flight deck. Our eyes meet and he breaks into a broad smile and at the top of his voice shouts, "Well Captain, you can f... off for a start." This was a new situation for me, so I admitted defeat and did just that to think the matter over, rather than have a vulgar scene in the cabin. The Chief Steward arrived and we decided the best thing was to give him a couple of very big, mixed drinks and get him to pass out. This worked like a charm and he was soon out like a light. The flight time to Gander was nine and a half hours and I asked for the manager to meet me on arrival as I was offloading a passenger due to insulting behaviour. On arrival I had him brought into the office and told him he was to be off-loaded for insulting and disorderly conduct and told him exactly what he had done and said. He took the wind out of my sails by replying, "Captain, I quite agree with you but if you will take me on I will apologise to you in front of all the passengers, and also to the passengers for my conduct." By now it was nine hours since he had had a drink and sober he was a charming person. So it was agreed to take him on and he kept his promise and turned out to be a retired, very senior RAF officer on the staff of the British Embassy in South America.

Chapter 30

THE JET AGE

1958 saw the start of a new era, that of the Turbo-prop engine and BOAC were to have a fleet of long range Britannia 312s fitted with this power unit. It seemed to me that this was going to be a good plane which would fly over most of the weather and have enough fuel for a direct flight at least as far as maritime Canada under any conditions, so I applied for a posting and at the beginning of February after yet another technical course started flying them.

On my last trip on the old Strat, I did the one and only non-stop from London to New York in 15 hours 10 minutes and think it was a good finish to 1,542 hours in command of the aircraft over a period of two years.

We had gone on living down at Poole after the end of the flying boats and by now had acquired a large house and a family of three girls and two boys plus a boat. I used to commute to the London airport by either car, train or coach, depending on the season or how I felt.

There are two nice little stories about travelling by train. I was on my way back to Poole in a first class seat in uniform and was as usual asleep. There I was minding my own business when through my dreams I heard a voice say, "May I come in?" I opened my eyes and there in the doorway was a beautiful girl dressed for a garden party when the train was stopped in Winchester. Naturally I said, "Please, do." By the time the train left she told me she was on her way to a weekend house party outside Brockenhurst and that she lived near Winchester. The train had only just left the station when the ticket collector appeared and said to the girl, "Ticket please," and she produced a third class one. All the collector said was, "Out," and pointed his thumb over his shoulder and she got up and left. I said, "You might have left her with me."

"Oh," he said, "She is one of the local prostitutes who works this train between Winchester and Southampton hoping to make a pick-up." and the old saying, "Never judge a book by its cover," again rang true. The other story refers to the catering staff on the trains. This time I was having lunch on my way down and it came to the question of a dessert. There was no menu and I was told there was apple pie and custard or ice cream. My reply was for apple pie and ice cream. "You can't have that. One's hot and the other cold," was the response to which my retort was, "A la mode to you," but they won the day. I was brought apple pie and ice cream covered with railway custard, which only goes to show that you can't win all the time.

Another thing that took place that year was when I received an invitation to the Flying Squad Annual Dinner and Dance at the Park Lane Hotel. It was a fantastic evening and during which I spent some time talking to the Commissioner of Police. This invitation was the result of flying the criminal Stafford home and the help I gave to the two police officers. I was presented with a truncheon with an engraved silver plaque recording the flight. I came out of the hotel about 2am and found such a thick fog I could only just see across Park Lane. Still I had to get back to my hotel near the airport so I set off in the car. After a while I came to a large crossroads and stopped to try and see where to go when a policeman appeared and asked if he could help. I told him where I had been all evening and he said, "If that's the case sir, follow me and I will show you the right road." Perhaps it is just as well there were no little bags to blow into at this time. By the time I crawled into bed I had made a mental note not to repeat the exercise but to stay in town next time.

It was quite a social year and one of the highlights was the Guild of Air Pilots and Air Navigators banquet at the Mansion House in London where I met HRH Prince Philip and the Lord Mayor. It was to be only about a year later that I would command a Royal Flight from Nassau to London with the Duke on board.

The arrival of the Britannia 312 with a full load weight of 140 tons, a cruising speed of 350 knots and a range of 4,000 miles at 25,000 feet, began the new era and with it a new conception of long distance flights. Forgotten were all the problems of how to get across, of having to avoid weather, and the discomfort of turbulence. These were now all things of the past. We flew over the top of it all and nearly always non-stop to the destination. BOAC at this time were the only operators using turbine engines and as we flew away above the piston engined aircraft we had the

world to ourselves. We would listen on the radio to the competitors down in the weather and trying to find airfields open so they could land for fuel while we were up in the clear and wished them luck. Sometimes one would pick up the microphone and say, "Come up and see us sometime."



I was cleared for flying the Britannia at the beginning of February and was sent on a proving flight for the aircraft to New York - Washington - Philadelphia and back. For the rest of the month I was route clearing a number of other captains who had joined the fleet from the Eastern Routes and who knew next to nothing of operating in high density traffic areas. So round and round the New York - Washington - Philadelphia circuit I went creating new problems for the Control Centres as we would ask for clearance up to 20,000 feet for a training flight of perhaps one hour for the pilots. It was also helpful to the Control Centres as it was the start of the problems they were to have to solve when in the very near future the pure jet aircraft was to be flying at 35-40,000 feet.

In March another first was to come my way when I was sent to fly the first non-stop Chicago to London service. My arrival in Chicago was also to be used to open the new terminal and we were to be met by the mayor

and all the powers to be. The mayor proclaimed the day to be "Britannia Day" and we were presented with documents to record the event. The flight took 11 hours 45 minutes and was a record.



One interesting outcome of us "high flyers" was that it upset the Early Warning Radar Network across northern Canada. We were asked to do turns so that we could be identified as "friendly" and this was not a joke but deadly serious, as on two occasions at the start, I had AAF fighters on

Image 30.3 BOAC Poster.

both wing tips just making sure we were not carrying a red star.

The next trip was again a first. London - Montreal - Detroit - Chicago and after I was to stop in Montreal for a month training pilots on the Detroit - Chicago sector.

It was during one of these trips that we were caught in a blizzard in Chicago. The flight arrived there in the morning and was due to leave again at 5pm. The crew had gone off to a local hotel for a sleep and I was awakened by a phone message to say that a bad front was coming in and they would try and get the flight out in front of it.

So we went back to the airport about 2pm and could see a great front of black cloud to the west. The air temperature was then below freezing and the Met said the front was preceded by the dreaded freezing rain. The engineers were doing their checks but it was too late. The rain started and in ten minutes the aircraft was covered in ice and with icicles hanging from it. Then came the snow and it was obvious we would not be able to de-ice the aircraft, so we called a delay for the next morning and the passengers and crew left in a Greyhound coach to spend the night in the city. When it snows in Chicago, it really snows! It took over an hour to get into town and when about half a mile from the hotel, the coach could go no further, we had to walk carrying our bags through more than a foot of snow in blizzard conditions. The storm passed during the night and the next morning it was bright and sunny but the city was silent, covered by two to three feet of snow with the ploughs at work clearing the streets. The airport was closed with clearance of the runways and taxi paths underway. The aircraft was covered with ice and frozen snow which with the temperature well below zero would not melt off. The method for deicing an aircraft is by using what looks like a petrol tanker with a fire hose on top. The tank is filled with alcohol and this is squirted over the aircraft in considerable amounts until all the ice is melted. It was not until later in the afternoon that the airport was open and we were free of ice and able to leave. These winter storms in the mid-west of the USA are known for their violence and at times can be real killers.

Up to this time, pilots had had to pass both a medical and a check flight every six months to ensure the body and the ability to fly the type of aircraft were being maintained. The main reason for the check flights, which were not done on the simulator, was to practise the emergencies which in normal flying were, we hoped, never needed, but at which crews must be proficient. The volume of traffic was increasing and the main terminal airports becoming very busy and it was essential that the crews flying in to them did not commit any errors and to this end it was decided to appoint Route Check Captains who would fly as supernumeraries and watch the crew at work. I was made one for the Britannia Flight and had to go to the Ministry of Aviation School and pass the exam for an Instrument Rating Examiner which was essential if I was to report on other captains' ability. Now my route was one trip in command, then two

trips in the new role and periods in Montreal supervising on the Detroit - Chicago sector.

On 26th June, yet again another record for a west bound flight; 8 hours 27 minutes from Prestwick to Montreal and I see from a paper cutting that we flew at 28,000 feet and averaged 304 knots against unusual head winds.

There was only one problem introduced by the heights we were now flying at and one that was unpredictable as at this time very little knowledge was available. This was "Clear Air Turbulence" and it was usually associated with the "Jet Streams" which are a narrow belt of very strong winds flowing from west to east in temperate latitudes and exist usually above 25,000 feet but at times lower. The problem was to increase with the pure jet age and could at times cause havoc in the plane. There is no indication of the presence of this phenomenon until suddenly you are in a very bumpy area of a short hard type, much like driving a small speedboat at high speed in a short, steep sea. The immediate reaction was to slowdow and switch on the seat belt sign but this could often be too late and if a meal happened to be in progress the mess in the cabin and on the passengers could be unpleasant. At times you might have a little warning when the aircraft would feel like driving down a cobbled street. Anytime you were getting very high wind speeds above 70 knots, it was time to look out but nothing is certain and you can fly down a jet steam one day in absolute calm and the next in turbulence.

North America was now very interested in high level flight as the Boeing Company were about to produce the well known 707, and a conference of Canadian and USA Controllers and operators was held in Toronto where I was asked to read a paper on the jet stream problems. Public speaking has never been my strong point but I worked hard on the paper and given the long period of questioning afterwards must have created some interest.

The Caribbean routes were now to be extended and I was on the first flight into the strange airport at Caracas in Venezuela. The airport had only one runway ending at one end in high ground and at the other, a cliff over the sea with marked slope in this direction. As there was no chance of an instrument approach and unless the runway could be seen, the minimum height we were allowed to approach was 16,000 feet. We used

to night stop here and drive up the highway into the city to the famous hotel of the same name. Politically the country was unstable and we were warned not to go out in the evenings. It was not unusual for shootings to take place not far from the hotel and we did have a First Officer and Engineer beaten up one night.

The Americans had now established a Jet Airway across the States and from press releases by BOAC, I was the first to use it on 14th November on a direct flight from New York to San Francisco. This airway was to handle all traffic flying above 27,000 feet. An extract from the press release reads:

"The Britannia flew at 34,000 feet and Captain GG Stead, veteran BOAC pilot cited three advantages of using this route, 1) Flights are above the weather, 2) Fuel consumption is lower, 3) Flying above domestic traffic."

The last part of this does not of course apply today as all traffic is up in these areas.

During April the Flight Manager sent for me and offered me command of a Royal Flight which was the top honour as far as pilots were concerned and there has been only about six of us. The flight was to bring HRH Prince Philip from Nassau to Bermuda and on to London. There was a pretty complicated procedure for Royal Flights, now all carried out by the RAF, and it was something like this. The crew is selected and all the names are then submitted to MI5 for security checks and the Captain is seen personally by one of the MI5 heads. This is followed by special Ditching Drill and the use of special portable radio equipment in dinghies. Special route planning is undertaken because when the Royal Family are in flight, the areas ahead and behind them is cleared for about 150 miles and for 4,000 feet above and below. This is called a "Red Airway" and is used by all countries which the flight passes over. At the airports all traffic is kept clear of the area while the flight arrives and departs. Special radio channels are also available. The aircraft is completely refitted with a private cabin and facilities aft, a private drawing room and bar forward of this. The forward cabin is fitted with first class seats for the remainder of the party. BOAC kept a set of special catering equipment for these occasions and when the aircraft is all set up, including flowers in silver vases, it looks really beautiful. From the time the aircraft is selected a

security guard is put on board and no one is allowed near it without a pass. This applies during all the special fitting of the interior and engineering. We were to take the aircraft empty to Nassau via New York so that it could be seen there and we left London on 26th April with just the crew and two security guards, arriving after 10 hours 30 minutes before departing again an hour later for Nassau. While in New York, the NY police also guarded the aircraft and only I gave permission to anyone who was required to go on board. We were to spend two days in Nassau before departing and during that time the aircraft was polished by the troops until it looked better than new.

HRH had been on a round the world trip in the Royal Yacht Britannia and was to fly home in the Britannia aircraft. As we came in low over the town that evening, the yacht looked very good in the blue sea in her usual immaculate condition. I had taken a complete set of daily papers out and they were delivered to Government House by 5pm, which was not bad service.

Departure was for 10:00 and the crew were at the airport by 07:30. The special catering was all checked by the Chief Steward and when he was satisfied with the state of the interior of the aircraft, I carried out a final check. During this time the Engineer Officer and First Officer were carrying out their checks and then I did a visual check of the outside of the aircraft. Also the flight plan had to be checked and the departure procedure agreed with the airport manager as everything must go to an exact timetable. By 09:00 the Guard of Honour was drawn up in two lines from the Terminal to the aircraft with a band and all the officials who had come to say goodbye. The public balcony and enclosure were full and there was a special area in front of the Terminal for invited guests.

The departure procedure I had arranged was that I would meet HRH at the door of the aircraft and when I nodded my head the second steward would tell the F/O by internal phone, to start the two port engines. The starboard ones had been started as HRH walked from inspecting the Guard to the boarding steps. After welcoming him aboard I would ask if he would like to join us on the flight deck for the departure and then escort him up with me. It all worked out as planned, except he was a little late boarding, but all engines were running just after 10:00. Prince Philip shook hands on coming aboard and accepted my offer, so we proceeded to

the flight deck and I introduced him to the rest of the crew and put him in the spare seat behind the captain. By 10:05 we were taxiing for take off and without stopping rolled onto the runway and took off with an unrestricted climb to 27,000 feet with a flight time of three hours to Bermuda. HRH spent most of the trip with us except when he went off to lunch and to change as he had come aboard in a lounge suit and was to "go ashore" in the uniform of Admiral of the Fleet. He was on the flight deck when we arrived over Bermuda a little ahead of time. This is the most difficult part of the flight, as we were due to stop engines at 14:00, and that meant exactly and not plus or minus a minute or two. At the same time the AAF, who own the airport, could not stop their flights for long so I told them I would commence my approach at 13:45 and touch down at 13:55. It all worked out and with HRH sitting behind me asking a lot of details about the islands, dressed in uniform except for tunic, sword and regalia. As the second hand of the clock in front of me came up to the 2 o'clock position, the brakes went on and I said, "Stop engines." The Prince got up and I looked into the cabin to see his staff standing there and as he walked down, the last of his dress uniform was put on. He stepped out as soon as the steps were in position and the door opened, without any delay at all. The band played and he walked up the line of officials shaking hands. It must be very hard for a super intelligent person, as he certainly is, to have to put up with this nonsense as half the people he was introduced to were really of no importance except on this little island.

We also had with us a Squadron Leader of the Queen's Flight as the RAF representative and he stayed in the same accommodation as we were. I was also responsible for the "Standard" which was flown at all times HRH was aboard and the aircraft was on the ground. It was the Third Pilot's job to see the flag went up after touch down and come in as we turned onto the runway for take off.

The whole of the next day was spent in Bermuda with a departure at night for an after lunch arrival in London. I was asked to Government House to watch a flying display by the AAF Aerobatic Team which had flown to the Islands for the occasion. It was a superb display of flying and equal to our famous Red Arrows. The highlight was two aircraft flying at

supersonic speed in opposite directions below the cliff top where we were standing.

The departure was set for 23:00 and while we were preparing for this in Bermuda, London was starting to prepare for the arrival which was to be a full state occasion with the Queen present. Also the Airway Controllers were arranging the flight pattern to feed us in with the special safety measures required. We did not do a state departure as had been done in Nassau and there were only a few officials and the Governor's dinner party guests to see the flight off. We were away at 23:10. The route of a Royal Flight is not made known as is for a normal scheduled flight when the clearance details include the co-ordinates of the track. In this case, again for security reasons, we were "RCH cleared Red Airways to London as flight planned." After leaving and reaching the assigned altitude of 27,000 feet I went back to see that HRH was being looked after and was asked to join his party in the drawing room where supper was being served. The drink I had to decline but the caviar of which I am very fond was delicious. Then he retired to bed and I to the flight deck where the Navigation Officer from the other Britannia was acting as assistant navigator. He was very good fun and we spent most of the night talking and at the end I was asked to lunch on the Royal Yacht when she returned to Portsmouth.

The flight was to arrive at 14:00 and we were over the Isles of Scilly with time to spare, so arranged with Control to do a bit of a dog-leg to fill in time while still out of the way of other traffic. There was no problem during the arrival as the weather was perfect and we were again exactly on the dot. We shut the engines down outside the VIP lounge in a special part of the terminal.

One of the perks of this flight was the personal invitation from the Lord Chamberlain to the crew's families to attend and a small enclosure near where we stopped had been made available and alongside which the Royal Party would walk. After stopping the engines, the whole crew lined up at the rear of the wing and on the other side of the red carpet to where the ministers and airport officials were. While we were getting into position the Queen and Prince Charles had gone aboard to welcome Prince Philip. The whole of the proceedings was being broadcast live on television with Richard Dimbleby doing the commentary.

First to come out of the aircraft was Prince Philip, then the Queen and Prince Charles. This unusual precedent was because it was Prince Philip who was being received on his return to the country. He shook hands with the Ministers and then came over and did the same with the crew and thanked them. I was asked to go with him and was presented to the Queen and Prince Charles. Prince Philip went off to talk to the Chairman of BOAC and for about ten minutes I was left talking to the Queen and what a charming person she was to talk to. She asked about the flight and the aircraft, about my family and were they there, and how she had almost been late due to traffic on the way from Windsor. The royal party then left and I was asked by the Chairman to bring my family into the VIP lounge where most of the passengers were gathered. Quite a few drinks later and a final goodbye, we left for home and returned to a normal life again.



A month before the royal charter I had been appointed by the Ministry to sit as a member on a Public Enquiry chaired by Justice Phillimore into an accident at Heathrow in which a Viking aircraft had crashed into a street after take off. It was a very interesting case and a lot of the methods

used by the charter companies operating on a shoestring were brought to light and I like to believe we were perhaps responsible for improving the safety of flying, even if it was responsible for some of the small operators giving up. At the end of the war there was a large collection of aircraft available and these were acquired by ex RAF pilots with the idea of making some quick money in the charter business but with very little thought to maintenance and safety.

The remainder of 1959 comprised of routine flying and the checking of other captains. I was not immune from this check myself and every six months checked by another Route Check Captain and vice versa. We were required to do other checking when a vacancy for a captain came up and a First Officer was to be promoted. He was required to do at least three trips in command under the supervision of an appointed captain and the final check for his suitability to command was by a Check Captain and it was our signatures which released his command and this was not done lightly, as a lot of lives depended on our signatures.

The routes were now established and life was very monotonous with very little of interest in 1960. My old friend Jimmy Jeffs who had before the war been manager at Croydon and later been in charge of London Airport since it opened, decided to retire. This was a sad loss to the pilots as he understood our problems and the civil servants who were now taking over did not.

In March I flew Douglas Fairbanks from New York to London and he spent a lot of time on the Flight Deck talking to us and I was given an invitation to go and see him in Hollywood, but I am afraid I never made it.

The only other thing of interest was in January when landing one night at Gander in Newfoundland. There was a slight thaw during the day and then a hard freeze. Just before I was due to land, the wind changed and I was given a runway that had not been used that day. We touched down and I put the engines into reverse, touched the brakes and then the fun began. We started to slide. We were on ice with a slight cross wind. I played the throttles like organ stops trying to keep straight as the brakes and nose wheel steering were useless. We were more or less under control and slowing up well when for some reason the aircraft started to slide towards the left of the runway and in no time was in deep snow at

the side of the runway where it stopped. As I saw what was going to happen I called, "Engines off," and "Propeller brakes on," to save damage if the blades hit the snow. So here we were stopped on the side of the duty runway in snow on a very dark night. The tower was told of the predicament we were in and asked for help. I then made a tactical error. At each entrance door to the aircraft there was a knotted rope for a crew member to go down in case the emergency exit chutes had to be used for the evacuation of the aircraft. I decided to go down the forward one and see the position from the ground. When well down the rope I realised I had no coat on, it was very cold and underneath me was about two feet of soft, dry snow and I only had shoes on. Into the snow I went and up my trousers it went to above the knees. Oh boy was it cold! Still I struggled on to the runway much to the amusement of the ground staff who by now had arrived. A snow plough was sent for and the deep snow in front of the plane was cleared and I climbed back aboard, the engines were started and very slowly we taxied back onto the runway and to the terminal. No damage was done and after a check of the aircraft we continued on to Montreal. The tower apologised for putting me onto an ice covered runway as they had not realised the extent of it.

The next year, 1961, was even less interesting as nothing other than route flying took place without even any fun in the snow. BOAC had now started using the Boeing 707 so I decided to make a change and asked for a posting to the 707 Fleet. The 707 was the first of the big time jets to go into service and our fleet was fitted with the Rolls-Royce Conway engines. In the middle of November I was back at school hoping it would be the last technical course I would have to pass. Including this course I would have over the years passed a full technical on fourteen different types of aircraft to say nothing of some fifty types I had flown privately. A good centrally heated classroom was not a bad place to spend November, December and most of January that winter as I see from my diary that there was heavy snow on 31st December and the temperature at the airport was -15°F.

In the middle of January the Ministry exams were passed using the new type of paper with four alternate answers which just required an "X" in the right box. This must have saved the examiners a lot of time and in my case having to read my appalling handwriting. The jokes about

doctors' writing is nothing compared to mine. While waiting the results of two papers, periods of exercises were completed in the simulator-trainer and later in the month we went to Shannon airport in south-west Ireland for the flying training. Why go to Ireland? Well by some quirk of HM Customs in the UK, all fuel used for training in England was subject to tax and as many thousands of gallons were used, it paid BOAC to go to Shannon and pay the cost of hotels for the crews and still save on the duty, plus the landing fees were cheaper. Also there was very little traffic so more landings and take offs could be carried out in a period.



The first time I took the new "beast" off it was empty apart from a "fuel to land weight" of about 50%. It is interesting to know that a modern aircraft's wing is virtually one fuel tank and that the take off weight is well in excess of the maximum landing weight due to the fact that on take off as the speed and stresses increase, the weight is increasingly taken by the wings whereas the reverse takes place on landing. I opened the throttles of the four big engines designed to get a full load into the air. We shot down the runway and in no time at all were in the air and climbing at 4,000 feet per minute. I called, "Climb Power" and I had the beast under control. It

was a fantastic experience and one I always looked forward to whenever my hands were lucky enough to get at an empty plane. The training program took the usual pattern with take offs, landings, one and two engine failures, emergency drills, instrument flying and by the end of it all, everything the instructor could throw at you had to be coped with. It was a lovely aircraft to fly and treated correctly a very docile one, but it had to be flown in accordance with the book and the margins of error, especially when "heavy" were small. My flying time at Shannon was thirteen hours including night flying and on 16th February after completing the Flight Planning Course, I left for New York with my first service. My first transatlantic flight in a Constellation had taken a bit over 24 hours with three stops, this one took 7 1/2 hours non stop, what a difference!

We climbed out of London, "BA510. Cleared to climb to flight level 38 to 10W then FL 41 to New York." This meant 38,000 feet on an Atlantic setting of standard pressure of 1013 MBS to longitude 10W then to climb to 41,000 feet. This was an ideal clearance because it meant that as the fuel load decreases we could go up to the more efficient level, but often due to traffic this was not possible and to cover these times an extra fuel allowance was added to the flight plan.

One of the different techniques required for the 707 was having to anticipate descent orders from the ground and not arrive in these areas going too fast. A 707 cruising at 40,000 feet at about 600mph would, if all engines were throttled back, carry on for 15 miles at the same height before speed would reduce to an approach speed of about 300mph. The reduction could be speeded up with the use of the air brakes or spoilers, which were a form of flap fitted to the wing to spoil the airflow over it, but these tended to cause vibrations in the aircraft which was unpleasant for the passengers. Nearly all flying from a few hundred feet after take off until just before touchdown was by the autopilot. The plane was on auto flight either coupled to a radio beam, being radar vectored by control or by setting the heading on a gyro compass. Across the ocean the flight was controlled by two computers coupled to the radio system and the combination of these two would keep you on course. In fact physically there was very little to do, but a close and continuous watch on the

instruments was essential as at just below the speed of sound, things happen very fast.

In the early days of the 707 an American operator nearly lost one for this reason. The captain was in the cabin and the First Officer was writing down weather while the Third Officer was on the engineering panel. Very slowly the autopilot put the aircraft into a slight nose down attitude which was undetected and before anyone realised what had happened, they were in the sound barrier. The F/O was not strong enough to pull the aircraft out and the captain had great difficulty getting forward again and into his seat. The two of them did finally just pull out of the dive and back into level flight. A landing was made at Gander due to possible structural damage and it was found that a large percentage of the rivets in the wings had failed. After this, all operators issued instructions that two pilots were to be in the pilot seats at all times. We live and learn by experience. As the pioneers of jet transport with the first of the Comets, no one could foretell the problems until they happened. Now vast sums of money and a complete aircraft is set up in jigs at the Royal Aircraft Establishment and vibrated, heated and cooled to all extremes in an endeavour to make sure



the problem cannot arise in future types. With Concord these problems are naturally far greater.

In front of and beside the two pilots there are about 48 dials, 42 warning lights, 16 switches, to say nothing of the 40 radio and radar switches. In addition there was the separate main engine control panel, plus another vast overhead panel between the pilots.

When at home between trips, we were, as a family quite active sailing and by now we had acquired a 32 foot sloop with a good diesel engine, as I could not afford to get stuck anywhere away from home. In January 1962 I was made commodore of the East Dorset Yacht Club, an appointment which was to last until 1971 and during which time I was to supervise the rebuilding of the club house.

1962 progressed monotonously, comprising of all route flying to a standard pattern. The only flights of interest were the nonstop Los Angeles to London which took between ten and ten and a half hours and stretched the fuel to the limit. The take off was usually controlled by the restriction on the undercarriage wheel speed, which over a certain rpm could throw the tread. Los Angeles was as far as I know, the only place where this was the controlling factor on its very long runway. The take off speed would be around 200 mph and the aircraft, very heavy and full of fuel, required careful handling and after a westerly take off, it would be perhaps five minutes before height and speed were sufficient to allow a turn back of 180° to the east and on course. The problem was the departure at about 8pm when the ground had started to cool and all was well until just becoming airborne you crossed the coast out over the sea, the rising hot air caused the aircraft to lose a lot of its climb. The flight would be planned on a great circle track which would take you up over Winnipeg, Hudson Bay, Greenland and south of Iceland, then in over Northern Ireland. Often the flight could not be planned nonstop due to all the required reserves and would be re-planned en route as the reserve requirements became less. In summer it was a fascinating flight as there was no night and the area around Northern Hudson Bay and Greenland was lovely. At this time we also operated a nonstop San Francisco flight. On the outward trip a stop was always made at Toronto due to the prevailing westerly winds and it was only these which made the direct return possible.

During the year the Corporation started the Lima flight from New York via Jamaica and this unusual service after leaving Jamaica crossed over the Isthmus of Panama and then flew down the coast with the sea on one side and the Andes on the other. The arrival was around 11pm and the coastal plain was well know for its low cloud at night. Someone had been really intelligent in laying down the runway as it lined up with the route down the coast so you could couple onto the landing system a long way out and descend direct. Unless well established, the question of flying in the area below 30,000 feet was not to be recommended as the airport was right under the foothills of the Andes. There was a diversion airfield but this was very poor and lay a long way from Lima.

Lima is at the coast end of the famous Trans-Andean Railway and the other end is on the high plateau on the east side of the mountains and is one of the wonders of the world and on one stopover I took the train up to the top at 15,688 feet. The building of the railway was started in 1868 and after many problems was completed in 1908. It starts at the Port of Callao and rises to 450 feet by the time it reaches Lima and from there crosses 59 bridges, enters 66 tunnels and uses 19 reverses and after 105 miles and nearly five hours reaches the highest station in the world at Galera. The



sight as the train climbs up the steep, barren valleys and ravines with the track clinging to the rock face is indescribable.

In places the train attendants come and pull down thick blinds on the inside windows as rocks have been known to fall down through the windows. The powerful and English made little oil fired steam engine snorts its way up and up with frequent stops at the wayside stations. The locals are the Indians of South America and all look very picturesque in their native costumes. Very few of the people living at the higher levels ever go to live down on the plain as their lungs are unaccustomed to the increase in atmospheric pressure which causes TB and they very soon die. The only animal seen in any numbers is the Llama and is a maid of all work. There is a road climbing up in the same direction as the railway and at 10,000 feet every driver has to stop and change the jets in the carburettors. Another unique performance above 10,000 feet is by a medical attendant who walks up and down the carriages and under his arm a big red balloon with a length of rubber hose attached. If any passenger looks like passing out due to lack of oxygen, he puts the tube in



their mouth and gives a couple of squirts of oxygen from the balloon. It went from one mouth to another without even a wipe in between.

I felt fine and at the top got out to wait the half hour for the down train and as I started to walk I realised that at this height, walking is not easy. I wanted to change a film in the camera and although I knew what to do, it took a good five minutes from lack of co-ordination between my mind and hands. The trip down was all free wheeling as far as the engine was concerned and I am told that the whole train uses a complete set of brake shoes on each trip. During the winter the cold is so intense that the fuel oil has to be kept heated by steam to avoid it becoming semi solid. The trip was one of the more fascinating I have made and reminded me of the smaller Darjeeling Railway.

In October one of the perks of flying for a company like BOAC matured and that was a free trip round the world for myself and the family and as I was senior staff this would be First Class subject to seats being available. So, myself, Marjory, Richard, Margaret and Frances took off on a 707 with no other first class passengers for New York and Los Angeles. We had two stewards and two stewardesses to look after us, and some of us made beasts of themselves with the amount of goodies there were to be eaten. Our first stopover was Los Angeles where we had some very good friends, Gordon and Kathie Jones who had moved out of their apartment and given it to us. We were wined and dined, went to Disneyland, Marine Land, and Knott's Berry Farm, by the end of which we were ready to drop. From here we flew to San Francisco and took in the sights there. Then out to Honolulu for a couple of days before flying on to Tokyo where we stopped long enough to see the sights of the city and visit the Nikko National Park where the maple trees were at their peak of autumn colour. Bangkok was the next stop to buy Thai silks and visit the beautiful temples and the floating market. To visit the market we hired a local taxi boat and spent most of the morning going up and down small canals with boats fitted out as shops on each side. Now a back pedal to Hong Kong to get the local Chinese tailors to make up the silks into dresses. Then a direct flight to Sydney, a change of planes and on to Auckland the next day. The next three weeks were spent on a round of visits to relations and friends before leaving Auckland for Sydney and Singapore. In Singapore we called on the monkeys in the Botanical Gardens which were great fun as they are all wild but come and hold hands as you feed them peanuts. We did not stop after that and arrived back in London on a cold and snowy day early in December. It was a fantastic trip and had we been obliged to pay fares, it would have cost over £4,000. Needless to say after the time off I was scheduled on the routes for both Christmas and New Year. In fact, I flew the London to New York flight on Christmas Day and it was fun with the cabin decorated with streamers and balloons and an excellent lunch. New Year's eve I spent in Honolulu and there could have been worse places to spend the end of the year. It is interesting to note that given the speed of modern planes and although I only flew 373 hours in the year, I had covered nearly a quarter of a million miles.

Chapter 31

LAST DAYS AND RETIREMENT

So we come to 1963 and what was to be the last year of my flying life. There was now only one real thing of interest this year and that was during January. I had flown from London with a Montreal flight and on the flight plan the alternative destination was New York. By the time we arrived in Montreal it had just closed due to heavy snow as were all the other airports in that part of Canada. There was a very severe cold front moving east which could be in New York before long so I was hell bent to precede it, I hoped. According to the weather report it was approaching fast and when I was cleared to land the cloud was at 300 feet with visibility 1,000 yards and snowing. With the temperature well below freezing point, I came down the ILS and just as I broke cloud and the end of the runway was underneath me the Tower said, "BA 605. Go round again. The aircraft in front of you is still on the runway." By now I had full flap out and the gear was down as was the speed with the power well off. In split seconds the throttles were opened, but turbines take time to build up rpm and it seemed an eternity before we got full power. "Flaps to T/O but slowly," I called and "Gear up." We were back in the clouds again and the Tower said, "Sorry about that." I felt like saying a lot more in reply but there was no time. "Climb to 1,000 and steer 090°," came from the Tower and I was vectored round into the approach again and by then the Tower said, "Weather at approach end of runway. Cloud 250 feet visibility 800 yards." The first thing we saw were the lights at the end of the runway shining up through the prevailing heavy snow. I was very pleased to feel the wheels touch and as we slowed so did my pulse rate. This is one of the problems of operating into a high density airport where at the peak periods one plane can be over the end of the runway while the last is just clearing the other end on the high speed turn off, which if missed there is a delay until an ordinary turn off is reached, which must be taken very slowly. The high speed turn offs are taxi ways which leave the runway at a very shallow angle so can be entered at a fairly high speed.

I have often been asked if an aircraft will crash if struck by lightening. I know of no case where this has happened and on the odd times I have been struck, no damage at all has occurred. Before the war and in the days when radio was less efficient, we used to trail a long aerial which was wound up onto a drum before landing. If this aerial was out when struck there would be a flash, a bang and smell of burning as it was the aerial which seemed to attract the lightning and would be burnt off. When about to fly into this type of weather and if you had the time, you would call on the radio and say that you were winding in as the small, fixed aerial between the tail and wings gave a short range only. There was a chance of whoever was in the process of winding in and earthing the wire at the time of a strike, being burnt but the odds were long and it would in any case not be fatal.

Once in a Stratocruiser, I was flying in very bad storms between New York and Boston when I was struck. In this aircraft the buildup of static electricity was always heavy and very often you would be flying for hours with St. Elmo's Fire playing round the windscreen and with blue circles round the propeller tips. On this occasion this was going on and as it was dark the lightening flashes could be seen and we were trying to dodge the bad areas. I had put on a pair of dark glasses in case of a strike, as the odds were good, when we were surrounded by a blinding flash and a big bang and it felt as if someone had kicked the aircraft very hard in the side. The F/O called control and said we had been struck and it was a bad one and I talked to the passengers over the intercom and told them not to worry. A quick check of the two decks was carried out in case of damage but none was found and a little later on we flew out of the storm and all was peace and quiet again. "Ladies and gentlemen, we are now out of the bad weather (never say "Storm") and I apologise for the delay in serving dinner which will now take place," and I went on to explain about being struck. In the modern jet age the heights are such that you are over the main cloud tops and can dodge round a bad top by going up and coming down. Control with its radar will keep you out of the very bad weather.

Only once was I in really bad weather in a 707 at cruising altitude and that was over Panama on the way up from Lima. A very big build up of cloud could be seen and the flashing of it showed up on the aircraft radar. I asked for permission to climb to 42,000 feet and still there was solid

cloud as far as could be seen in front of us. Watching the radar and switching on the seat belt sign, we went into it and the turbulence, to say the least, was bad and at that particular moment I had the one and only failure of an autopilot in a 707. To try and fly a high speed aircraft at this altitude is very nearly impossible as the mental reaction time between the instruments, the brain, hands and controls is too slow. With the autopilot and associated computer the response is immediate. I tried to keep a reasonable altitude but in the end had to ask for an immediate descent to 30,000 feet due to the autopilot failure. Once down at that level, all was well and before long we were out in the stars again. The saying, "Sometimes I sits and thinks, more often I just sits and very seldom I work like hell." sums up a pilot's life.

Sometimes there is a passenger on board who is really terrified of flying and if you talk to them it's nearly always because they don't know what is happening on the flight deck and believe there is a continuous state of chaos with everyone working like mad all the time. I had a cure for this and it was always effective. I would take the "problem child" up to the flight deck door, open it, go in first and then ask him in. Watch his face as he sees two pilots with their feet up, perhaps drinking coffee and smoking, an engineer entering a log or reading a manual. The expression is usually one of utter surprise. Spend some time explaining it all to him and if possible let him sit in the spare seat behind the captain's and give him a pair of headphones for a landing. I have never known the remedy fail and a very good case to quote was that of the Marchioness of Blandford, the ex Tina Onassis. She and the Marquis were flying up from the Bahamas and I was talking to them when he said, "My wife is terrified of flying, even though she does a lot of it." "Has she ever been on the flight deck of a modern jet?" I asked and she said, "No, I would be frightened to do that." After talking for a while I said, "Come up with me and have a look around." She reluctantly did and so was fascinated by the quiet and peace up there that before long was asking questions and in the end she sat behind me for the landing into New York. Both were so pleased with the result that I was asked to dinner that night. So one very intelligent and beautiful lady had no further fear of flying.

I was now getting very tired of the stereotype of flying introduced by the jets and I found it extremely boring. My family suffered as I used to become bad tempered when the day came to go off again and the young pilots of the future were not of the same type as the one co-piloting with me for so long. They were intense and serious young men, good at their jobs, watching instruments, checking flight plans, working radios, interpreting rules and regulations never, as we had done in the past, breaking them to keep the show on the road, reading check lists and flying by the book. This was all very necessary with the new era of aircraft where the pilot must not think and act as he considers best but must act in accordance with an operating manual and a series of check lists. Those of us who had been through the age when you got from A to B by your own initiative found this very difficult and frustrating.

As well as all this, the youngsters were becoming very union minded and the word "strike" came into the pilot's vocabulary for the first time. We had always considered the passengers first, then the Company and then ourselves with the result that there had been complete co-operation between all. There were many arguments but never a threat of industrial action. I had always considered myself a well paid professional man and on many occasions became very cross with all the "union" talk when the young co-pilots would start on about what we should do to improve conditions, but in my opinion, all they have done is to lose their status and the respect of the public. Agreed the salaries are fantastic, when I retired as a top salaried captain the pay was a little over £5,000 and today it is £10,000 plus and they still ask for more with no thought for those of us on a pension and trying to double that.

In the middle of 1963, BOAC decided that they had a few too many captains and offered a three year increase in pension and a small handshake if any of the "aged" would like to accept. A quick word with Marjory and on 2nd September, I was the second to accept.

"Ask for clearance to start," I said to the First Officer.

"Kennedy Ground Control, this is Speedbird 510 clearance to start."

"Speedbird 510 cleared to start, no delay expected."

"Start engines," to the Engineer Officer and a couple of minutes later, "Taxi clearance."

"Ground Control from 510, taxi clearance please."

"510 cleared to holding point runway 22R."

"Speedbird 510 is cleared to London via airways to Gander, Great Circle to Shannon and airways to London. After take off climb to 20,000 and call radar on 118.4."

I taxied out along the familiar taxi tracks to the area at the start of the runway.

"Take off clearance." I asked as we approached, "Kennedy Tower 510 ready for immediate take off." "Speedbird cleared for take off. Radar after take off."

We rolled onto the runway and I realised that was the last time I would open the throttles and release the immense power of those four Rolls-Royce engines and feel the surge as speed built up.

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"Airborne at 21:45, cleared to 118.4."
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For six hours instead of sitting there being bored, my mind went back over my life. It was a sobering thought, this was the end of a career lasting for the best part of 40 years during which I had spent the equivalent of two years in the air and flown some 4,250,000 miles. My journey from a stage coach to jet coach was complete.

I drove home that day perhaps slower than usual for time with the family was not so precious any more as there were now 365 days in the year to do what we wanted and this was another first for me.

We sailed that autumn, picking the weather and the two of us took off to spend the winter in New Zealand and see if we would like to retire out there, but we still live today in beautiful Dorset.

[&]quot;Roger Tower over to 118.4."

[&]quot;Radar Speedbird 510 heading 210 and climbing."

[&]quot;We have you 510 turn left heading 040 climb to flight level 250."

[&]quot;Roger left onto 040 and cleared to flight level 250."

[&]quot;Climb power," I asked the E/O and we were on our way.



Image 31.1 What better way to spend one's retirement.

Chapter 32

VOLCANIC DUST CLOUD

George Stead's account of hitting a volcanic dust cloud at 37,000 feet in June 1982.

We were about an hour and a bit out of Kuala Lumpur and just stretched out to sleep after a good dinner topped off with a liqueur when the seat belt sign came on and the PA said we were in clear air turbulence and there was a feeling like driving down a cobbled street. Then everything went quiet and down came the oxygen masks, so we all put them on and the aircraft did some odd manoeuvres, but nothing at all violent.

One of the stewardesses whispered in my ear "we have lost all four engines." Not a happy thought and certainly not conducive to sleep. All the lights went out except the emergency and "seat belts on" and these were flickering. There was no feeling of an emergency descent, although it was not long before one of the girls said to me, "We are at 15,000 and have one of the four going again and diverting to Jakarta." Shortly after, number 3 restarted, but number 2 just farted and barked. Now the thoughts which went through my mind at this stage were firstly that all that goes up must come down and in this case either over land or sea, being tropical and full of sharks, and the chances of surviving either were not very good. If it had come to this, Marjory and I had decided we would sit with our backs towards the forward bulkhead. The second thought was that although 1, 3 & 4 were again going they had obviously been damaged and the pilot had to do an approach with engines that to my way of thinking could stop again. There was a little smoke in the cabin with a smell like burning lava. On the subject of lava, I was told in Auckland that this cloud would have consisted of volcanic glass crystals which on impact with the engine rotors would have exploded and this would have caused the smoke and smell. It is interesting to note how high these

clouds go as we were at 37,000 feet. They must come out of the volcano at one hell of a speed.

It is just as well I did not know that the cockpit windows had been sandblasted and that the pilot had very little forward visibility. In fact, it was so poor the aircraft had to be towed in to the ramp, and when we got off the aircraft you could see the normally polished leading edge and engine surrounds were a matt finish. Still the captain did a fantastic job and I wondered if I should have offered him my spare pair of underpants! We were all in the terminal waiting to find out what was going to happen. By this time I had decided I did not like the place, it was midnight with the temperature at 94°F. As we had been in first class the traffic staff obviously thought we were paying and we were asked, as were the other two first class passengers, if we would like to get on a French 747 just leaving for Sydney, so we went for our lives and got on it. They did not know we were staff until after the doors were shut when they asked to see the tickets. They were very good but we were demoted from first to economy. Still we were in Sydney seven hours later, where I did a press interview for British Airways and in return got a free trip on Continental leaving in an hour to Auckland. We finally arrived only six hours late and were met by daughter Margie and her husband Bill who were very pleased to see us, as at that time no one really knew where we were because we were moving faster than the messages were being sent. We stayed at the new hotel at the airport where the bar bill was not too bad, considering, and drove home the next day. Marjory and I are about returning to normal now and are going to Whakarua on Monday to take the bits down for the family. Of course the baggage was not with us but turned up two days later with Air NZ in Taupo having been passed through Customs without difficulty, so really "it's an ill wind..." We are not worried about going flying again as it won't really happen again and I gather the first time it has ever happened. In fact I am going to fly to Taupo with a friend in a "little job" and then going gliding with him. In conclusion I thought at one time we were going to shake hands with the chap outside the window but I think he was looking after us after all. Bless his Heart.

PLANES FLOWN

Land Planes

Avro 504. The Avro 504 was a First World War biplane aircraft made by the Avro aircraft company and under licence by others. Production during the war totalled 8,970 and continued for almost 20 years, making it the most-produced aircraft of any kind that served in the First World War, in any military capacity, during that conflict. More than 10,000 were built from 1913 until production ended in 1940. https://en.wikipedia.org/wiki/Avro_504

Avro Avian. The Avro Avian was a series of British light aircraft designed and built by Avro in the 1920s and 1930s. While the various versions of the Avian were sound aircraft, they were comprehensively outsold by the de Havilland Moth and its descendants. https://en.wikipedia.org/wiki/Avro_Avian

Avro Cadet. The Avro Cadet was a single-engined British biplane trainer designed and built by Avro in the 1930s as a smaller development of the Avro Tutor for civil use. https://en.wikipedia.org/wiki/Avro 643 Cadet

Avro Tutor. A.V. Roe's Type 621 Tutor was a two seat British radial-engined biplane from the interwar period. It was a simple but rugged initial trainer that was used by the Royal Air Force as well as many other air arms worldwide. https://en.wikipedia.org/wiki/Avro_Tutor

Avro X. The Avro 618 Ten or X was a passenger transport aircraft of the 1930s. It was a licenced version by Avro of the Fokker F.VIIB/3m. https://en.wikipedia.org/wiki/Avro 618 Ten

AW Atlas. The Armstrong Whitworth Atlas was a British single-engine biplane designed and built by Armstrong Whitworth Aircraft. It served as an army co-operation aircraft for the Royal Air Force (RAF) in the 1920s and 1930s. https://en.wikipedia.org/wiki/Armstrong_Whitworth_Atlas

Beechcraft. The Beechcraft Model 17 Staggerwing is an American biplane with an atypical negative wing stagger (the lower wing is farther forward than the upper wing). It first flew in 1932. https://en.wikipedia.org/wiki/ Beechcraft Model 17 Staggerwing

Blackburn B2. The Blackburn B-2 was a British biplane side-by-side trainer aircraft of the 1930s. Designed and built by Blackburn Aircraft, 42 were built. https://en.wikipedia.org/wiki/Blackburn B-2

Blackburn Blue Bird. The Blackburn L.1 Bluebird was a British single-engine biplane light trainer/tourer with side-by-side seating, built in small numbers by Blackburn Aircraft in the 1920's. https://en.wikipedia.org/wiki/Blackburn Bluebird

Blenheim. The Bristol Blenheim is a British light bomber aircraft designed and built by the Bristol Aeroplane Company (Bristol) which was used extensively in the first two years and in some cases throughout the Second World War. https://en.wikipedia.org/wiki/Bristol Blenheim

Boeing 707. The Boeing 707 is an American mid-sized, long-range, narrow-body, four-engine jet airliner built by Boeing Commercial Airplanes from 1958 to 1979. https://en.wikipedia.org/wiki/Boeing 707

Bristol Fighter. The Bristol Fighter was a British two seat biplane fighter and reconnaissance aircraft of the First World War developed by Frank Barnwell at the Bristol Aeroplane Company. https://en.wikipedia.org/wiki/Bristol F.2 Fighter

Britannia 312. The Bristol Type 175 Britannia was a British medium-to-long-range airliner built by the Bristol Aeroplane Company in 1952 to fly across the British Empire. https://en.wikipedia.org/wiki/Bristol_Britannia

Comper Swift (Gipsy III & Pobjoy). The Comper C.L.A.7 Swift is a British 1930s single-seat sporting aircraft produced by Comper Aircraft Company Ltd of Hooton Park, Cheshire. https://en.wikipedia.org/wiki/Comper_Swift

Constellation. The Lockheed Constellation ("Connie") is a propeller-driven, four-engine airliner built by Lockheed Corporation between 1943 and 1958 at Burbank, California. The Constellation series was the first pressurised cabin civil airliner series to go into widespread use. Its pressurised cabin enabled large numbers of commercial passengers to fly well above most bad weather for the first time, thus significantly improving the general safety and ease of air-travel. https://en.wikipedia.org/wiki/Lockheed_Constellation

DC 2. The Douglas DC-2 is a 14 seat, twin-engined airliner that was produced by the American company Douglas Aircraft Corporation starting in 1934. https://en.wikipedia.org/wiki/Douglas DC-2

- **DC 3.** The Douglas DC-3 is a fixed-wing propeller-driven airliner that revolutionised air transport in the 1930s and 1940s. Its lasting effect on the airline industry and World War II makes it one of the most significant transport aircraft ever produced. It has a cruise speed of 207 mph (333 km/h), capacity of 21 to 32 passengers or 6,000lbs (2,700 kg) of cargo and a range of 1,500 mi (2,400 km). https://en.wikipedia.org/wiki/Douglas_DC-3
- **Desoutter**. The Desoutter is a British monoplane liaison aircraft manufactured by Desoutter Aircraft Company at Croydon Aerodrome, Surrey. https://en.wikipedia.org/wiki/Desoutter_Mk.II
- **DH 60 Moth.** The de Havilland DH.60 Moth is a 1920s British two seat touring and training aircraft that was developed into a series of aircraft by the de Havilland Aircraft Company. https://en.wikipedia.org/wiki/De Havilland DH.60 Moth
- **DH 80 Puss Moth.** The de Havilland DH80A Puss Moth is a British three seat high-wing monoplane designed and built by the de Havilland Aircraft Company between 1929 and 1933. It flew at a speed approaching 124mph making it one of the highest performance private aircraft of its era. https://en.wikipedia.org/wiki/De Havilland Puss Moth
- **DH 83 Fox Moth.** The DH.83 Fox Moth was a successful small biplane passenger aircraft from the 1930s powered by a single de Havilland Gipsy Major I inline inverted engine, manufactured by the de Havilland Aircraft Company. https://en.wikipedia.org/wiki/De Havilland Fox Moth
- **DH 84 Dragon.** The de Havilland DH.84 Dragon is a successful small commercial aircraft that was designed and built by the de Havilland company. https://en.wikipedia.org/wiki/De Havilland Dragon
- **DH 86**. The de Havilland Express, also known as the de Havilland D.H.86, was a four-engined passenger aircraft manufactured by the de Havilland Aircraft Company between 1934 and 1937. https://en.wikipedia.org/wiki/De Havilland Express
- **DH 89.** The de Havilland DH89 Dragon Rapide was a 1930's short-haul biplane airliner accommodating 6-8 passengers. It proved an economical and durable craft despite its relatively primitive plywood construction. https://en.wikipedia.org/wiki/De Havilland Dragon Rapide

DH 90. The de Havilland DH90 Dragonfly was a 1930's British twin-engined luxury touring biplane built by the de Havilland Aircraft Company at Hatfield Aerodrome. https://en.wikipedia.org/wiki/De Havilland Dragonfly

Fairey Battle. The Fairey Battle was a British single-engine light bomber designed and manufactured by the Fairey Aviation Company. It was developed during the mid-1930s for the Royal Air Force (RAF) as a monoplane successor to the Hawker Hart and Hind biplanes. The Battle was powered by the same high-performance Rolls-Royce Merlin piston engine that powered various contemporary British fighters like the Hawker Hurricane and Supermarine Spitfire. https://en.wikipedia.org/wiki/Fairey_Battle

Fairey III F. The Fairey Aviation Company Fairey III was a family of British reconnaissance biplanes that enjoyed a very long production and service history in both land plane and seaplane variants. First flying on 14 September 1917, examples were still in use during the Second World War. https://en.wikipedia.org/wiki/Fairey_III

Fairey Gordon. The Fairey Gordon was a British light bomber (2 seat day bomber) and utility aircraft of the 1930s. It was a conventional two-bay fabric-covered metal biplane. It was powered by 525–605 horsepower (391–451 kW) variants of the Armstrong Siddeley Panther IIa engine. Armament was one fixed, forward-firing .303-inch (7.7 mm) Vickers machine gun and a .303-inch (7.7 mm) Lewis Gun in the rear cockpit, plus 500 pounds (230 kg) of bombs. The aircraft was somewhat basic; instruments were airspeed indicator, altimeter, oil pressure gauge, tachometer, turn and bank indicator and compass. https://en.wikipedia.org/wiki/Fairey_Gordon

Fokker F.III. The Fokker F.III was a single-engined high-winged monoplane aircraft produced in the 1920s by the Dutch aircraft manufacturer Fokker. It could carry five passengers. The aircraft was also built under licence in Germany as the Fokker-Grulich F.III. https://en.wikipedia.org/wiki/Fokker_F.III

Hawker Demon. The Hawker Demon was a fighter variant of the Hart light bomber. During air defence exercises the RAF's Siskins and Bulldogs were often unable to intercept the new Hart bombers, which were sometimes instructed to restrict their height and speed in order to give the fighters a chance, which prompted the development of a fighter variant of the Hart. https://en.wikipedia.org/wiki/Hawker_Hart#Demon

Hawker Hart. The Hawker Hart was a British two seat biplane light bomber aircraft of the Royal Air Force (RAF). It was designed during the 1920s by Sydney Camm and manufactured by Hawker Aircraft. The Hart was a prominent

British aircraft in the inter-war period, but was obsolete and already side-lined for newer monoplane aircraft designs by the start of the Second World War, playing only minor roles in the conflict before being retired. https://en.wikipedia.org/wiki/Hawker_Hart

Hawker Tomtit. The Hawker Tomtit is a British training biplane from the late 1920s. https://en.wikipedia.org/wiki/Hawker Tomtit

Hermes. The Handley Page HP.81 Hermes was a British civilian airliner built by Handley Page in the 1940s and 1950s. Closely related to Handley Page's Hastings military transport, the Hermes was a low-wing monoplane powered by four piston engines. Twenty-nine were built, serving briefly with BOAC in the early 1950s and later with several charter airlines. https://en.wikipedia.org/wiki/Handley_Page_Hermes

Hurricane. The Hawker Hurricane is a British single seat fighter aircraft of the 1930s–40s that was designed and predominantly built by Hawker Aircraft Ltd. for service with the Royal Air Force (RAF). It was overshadowed in the public consciousness by the Supermarine Spitfire's role during Battle of Britain in 1940, but the Hurricane actually inflicted 60 percent of the losses sustained by the Luftwaffe in the engagement, and it went on to fight in all the major theatres of the Second World War. https://en.wikipedia.org/wiki/Hawker Hurricane

Klemm. Klemm L.25, later Klemm Kl 25 was a successful German light leisure, sports and training monoplane aircraft, developed in 1928. More than 600 aircraft were built, and manufacturing licences were sold to the United Kingdom and the United States. https://en.wikipedia.org/wiki/Klemm_Kl_25

Lysander. The Westland Lysander (nickname the "Lizzie") is a British army co-operation and liaison aircraft produced by Westland Aircraft used immediately before and during the Second World War. After becoming obsolete in the army co-operation role, the aircraft's exceptional short-field performance enabled clandestine missions using small, improvised airstrips behind enemy lines to place or recover agents, particularly in occupied France with the help of the French Resistance. British Army air co-operation aircraft were named after mythical or historical military leaders; in this case the Spartan admiral Lysander was chosen. https://en.wikipedia.org/wiki/Westland_Lysander

Miles Hawk. The Miles M.2 Hawk was a 1930s British two seat light monoplane designed by Miles Aircraft Limited. https://en.wikipedia.org/wiki/Miles Hawk

Monospar. The General Aircraft Monospar was a 1930s British family of touring and utility aircraft built by General Aircraft Ltd (GAL). https://en.wikipedia.org/wiki/General Aircraft Monospar

Parnall Elf. The Parnall Elf is a British two seat light touring aircraft of the 1920s. Built by George Parnall & Co. the Elf was the last aircraft designed by Harold Bolas before he left the company to go to the United States. https://en.wikipedia.org/wiki/Parnall Elf

Percival Gull. The Percival Gull was a British single-engined monoplane, first flown in 1932. It was successful as a fast company transport, racing aircraft and long-range record breaker. It was developed into the Vega Gull and the Proctor. https://en.wikipedia.org/wiki/Percival Gull

Percival Q6. The Percival Q.6 was a 1930s British communications aircraft built by Percival Aircraft Limited at Luton. Originally, the Percival Q.6 was a civil transport but it was used during the Second World War by the Royal Air Force and Royal Navy as a communications and liaison aircraft.[1] It was a twinengine, low-wing monoplane with a tailwheel undercarriage. https://en.wikipedia.org/wiki/Percival_Petrel

Scion. The Short S.22 Scion Senior was a 1930s British four-engined nine-passenger floatplane built by Short Brothers. https://en.wikipedia.org/wiki/Short_Scion_Senior

Spartan. The Spartan Arrow is a British two seat biplane aircraft of the early 1930s, built by Spartan Aircraft Limited. https://en.wikipedia.org/wiki/Spartan Arrow

Spitfire. The Supermarine Spitfire is a British single seat fighter aircraft used by the Royal Air Force and other Allied countries before, during, and after World War II. https://en.wikipedia.org/wiki/Supermarine Spitfire

Stratocruiser. The Boeing 377 Stratocruiser was a large long-range airliner developed from the C-97 Stratofreighter military transport, itself a derivative of the B-29 Superfortress. The Stratocruiser's first flight was on July 8, 1947.[3] Its design was advanced for its day; its innovative features included two passenger decks and a pressurised cabin, a relatively new feature on transport aircraft. It could carry up to 100 passengers on the main deck plus 14 in the lower deck lounge; typical seating was for 63 or 84 passengers or 28 berthed and five seated passengers. https://en.wikipedia.org/wiki/Boeing 377 Stratocruiser

Tipsy. The Tipsy was a small sports two seat monoplane designed by E.O.Tips, and built in both Belgium and the UK. A total of 42 was built, and a few are still flying. https://en.wikipedia.org/wiki/Tipsy B

Vickers Vimy. The Vickers Vimy was a British heavy bomber aircraft developed and manufactured by Vickers Limited. Developed during the latter stages of the First World War to equip the Royal Flying Corps (RFC), the Vimy was designed by Reginald Kirshaw "Rex" Pierson, Vickers' chief designer. https://en.wikipedia.org/wiki/Vickers_Vimy

Vickers Virginia. The Vickers Virginia was a biplane heavy bomber of the British Royal Air Force, developed from the Vickers Vimy. https://en.wikipedia.org/wiki/Vickers_Virginia

Wellington. The Vickers Wellington is a British twin-engined, long-range medium bomber. https://en.wikipedia.org/wiki/Vickers Wellington

Sea Planes

Catalina. The Consolidated PBY Catalina, also known as the Canso in Canadian service, is an American flying boat, and later an amphibious aircraft of the 1930s and 1940s produced by Consolidated Aircraft. It was one of the most widely used seaplanes of World War II. Catalinas served with every branch of the United States Armed Forces and in the air forces and navies of many other nations. https://en.wikipedia.org/wiki/Consolidated_PBY_Catalina

Lerwick. The Saunders-Roe A.36 Lerwick was a British flying boat built by Saunders-Roe Limited (Saro). It was intended to be used with the Short Sunderland in Royal Air Force Coastal Command but it was a flawed design and only a small number were built. They had a poor service record and a high accident rate; of 21 aircraft, 10 were lost to accidents and one for an unknown reason. https://en.wikipedia.org/wiki/Saunders-Roe A.36 Lerwick

PB2Y. The PB2Y Coronado is a large flying boat patrol bomber designed by Consolidated Aircraft, and used by the US Navy during World War II in bombing, antisubmarine, and transport roles. https://en.wikipedia.org/wiki/Consolidated_PB2Y_Coronado

Plymouth. A variant of the Short Sandringham. The Short S.25 Sandringham was a British civilian flying boat produced during the Second World War by the demilitarised conversions of Short Sunderland military flying boats previously operated by the Royal Air Force. The Plymouth was converted for BOAC,

accommodating 22 day or 16 sleeper passengers. https://en.wikipedia.org/wiki/Short_Sandringham#Variants

Short "C" Class. A variant of the Short Empire flying boat, a medium-range four-engined monoplane flying boat, designed and developed by Short Brothers during the 1930s to meet the requirements of the growing commercial airline sector, with a particular emphasis upon its usefulness upon the then-core routes that served the United Kingdom. https://en.wikipedia.org/wiki/Short_Empire

Singapore. The Short Singapore was a British multi-engined biplane flying boat built after the First World War. The design was developed into two four-engined versions: the prototype Singapore II and production Singapore III. The latter became the Royal Air Force's main long-range maritime patrol flying boat of the 1930s and saw service against the Japanese with the Royal New Zealand Air Force during the Second World War. https://en.wikipedia.org/wiki/Short_Singapore

Solent. The Short Solent is a passenger flying boat that was produced by Short Brothers in the late 1940s. It was developed from the Short Seaford, itself a development of the Short Sunderland military flying boat design, which was too late to serve in World War II. The first Solent flew in 1946. New Solents were used by BOAC and TEAL, production ending in 1949. https://en.wikipedia.org/wiki/Short Solent

Sunderland I, II and III. The Short S.25 Sunderland was a British flying boat patrol bomber, developed and constructed by Short Brothers for the Royal Air Force (RAF). Developed in parallel with the civilian S.23 Empire flying boat, the Sunderland was developed specifically to conform to the requirements of British Air Ministry for a long-range patrol/reconnaissance flying boat to serve with the Royal Air Force. https://en.wikipedia.org/wiki/Short_Sunderland

Walrus. The Supermarine Walrus (originally known as the Supermarine Seagull V) was a British single-engine amphibious biplane reconnaissance aircraft designed by R. J. Mitchell and first flown in 1933. Designed for use as a fleet spotter to be catapult launched from cruisers or battleships, the Walrus was later employed in other roles, notably as a rescue aircraft for aircrew in the sea. The Walrus continued in service throughout the Second World War, with the Fleet Air Arm (FAA), Royal Air Force (RAF), Royal Australian Air Force (RAAF), Royal New Zealand Navy (RNZN) and Royal New Zealand Air Force (RNZAF). https://en.wikipedia.org/wiki/Supermarine Walrus

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