

aircraft annual '76

Edited by John W.R. Taylor

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aircraft

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Pacific Passage

WRITTEN AND PHOTOGRAPHED BY KEITH SISSONS

I sat in the small hotel lobby browsing through literature expounding the virtues of "sunny" Sydney. Outside it was a dull drizzly morning, and it had been raining almost continuously since I arrived from England the previous evening. On the other side of the lobby the lift descent light caught my eye; a moment later the doors opened and out stepped a tall, slim gentleman, his dark hair tinged with grey. He smiled warmly as we shook hands, introducing ourselves. Moments later I walked out to the street with Charles F. Blair, navigator and pilot extraordinary, and we made our way towards the "base".

The big Ansett Flying Boat Service hangar, built in 1938 for the "C" class Empire 'boats, loomed beside us. We entered by a side door, and there she was. High and haughty on her beaching gear stood a magnificent Sandringham, looking disdainful of the indignities she was suffering as engineers carried out their intimate work — "changing number two engine" — as if on a dignified old lady undergoing a rather personal operation.

Charles Blair had kept his eye on the two Ansett 'boats for a long time, waiting for them to be declared redundant. They had operated the Lord Howe Island service faithfully and safely for many years, and this particular aircraft for almost a quarter of a century. Then, after many "stop-go" decisions, an airstrip had been built on the island and the two veterans, both of which had once been military Sunderlands, had completed their distinguished career. The flying-boat service had been regarded as a public necessity and had been subsidised accordingly, but a new Australian government

had decided to finish with all airline subsidies.

Charles Blair had seized the opportunity and had acquired both 'boats. The first, *Excalibur VIII*, had already been ferried to far-away St. Croix. Now it was the turn of *Southern Cross*, resplendent in the insignia of Blair's Antilles Air Boats. It was my privilege to be a member of the crew for this great adventure, and time passed on leaden wings until the moment when we embarked for the beginning of the journey.

A final word on the R/T with the control boat, somewhere astern, and Charles Blair eased the throttles forward. Bryan Monkton in the co-pilot's seat confirmed "Take-off checks complete" and opened up the four P & W R1830s while Blair kept a light grasp on the outer throttles, manipulating them to keep the Sandringham straight as she thundered through the water in a swirling cloud of spray. Deep in the water, with an overload of almost 2,000lb for this ferry flight, she accelerated awkwardly at first, but in a moment rose up on her step and gracefully planed across the bay. In about 50 seconds *Southern Cross* had caressed the waters of Rose Bay for the last time and we were sweeping round in a starboard turn — at about 300 feet with the flaps still down. Blair had left them at "take-off" to facilitate a sharp turn in this bowl of a bay with its fringe of hilly slopes. As we completed our "180" Bryan reduced power and raised the flaps, for we had a salutary duty to perform. Levelling off at 500ft we "reduced power" to a cruise power setting and turned another 90 degrees starboard to line up with the Rose Bay Water Airport and Ansett's flying-boat base. Moments later we flew low in a farewell salute before turning onto

course, out into the Pacific Ocean.

This final gesture was not a simple farewell. It marked the end of an era. *Southern Cross*, known previously to the locals as *Beachcomber* of Ansett Flying Boat Services, was the last flying-boat airliner to use the Rose Bay base. This was the final departure.

At 1,500ft Bryan completed the cruise checks, and Noel Holle — one of our two flight engineers — passed forward a slip of paper with the power settings dictated by the long-range cruise policy essential if we were to reach our first destination, 17 hours or so distant. At the jetty we had a total of 2,772 Imp gallons of fuel on board, giving an estimated endurance of almost 20 hours. This promised a range of 2,700 miles, but we could hardly consider ourselves “fat”, for we had 2,392 nautical miles of ocean to cross to Pago Pago.

We had taken off at 17:25 local time, and soon the seven of us on board were getting into an organised routine. The two F/Es conferred over their four charges before Jim Flanagan, the American from Antilles Air Boats (AAB), got his head down. Bryan slipped into the left seat vacated by Charles, who was busy gathering the tools of his trade for the task of navigation ahead. As I took the co-pilot's seat for a stint at the helm, Paul Fagan, the mooring man and general factotum, passed a tray of coffee and sandwiches through the galley hatch. George Alcock, ground engineer, came up the forward ladder to see if everything was under control. Satisfied that all was well he retired to the aft lower cabin for the night. He claimed to be able to sleep in any conditions and a row of seats in a cold and noisy flying-boat was no problem. He had left Ansett to join AAB and work on the two Sandringhams, bringing all his worldly goods with him.

As I sipped my coffee, between manipulations of the autopilot, sea merged with sky and it was dark. Bryan impressed upon me the importance of maintaining our



Above: Blair and Monkton on the flight deck of *Southern Cross*

Right: Refuelling the Sandringham at Long Beach, on December 6, 1974. The task was made easier by ideal wind conditions and little current

Below right: The fuel supplier receives a cheque in payment, passed from Blair via mooring man Paul, while Noel looks out from the main door

range IAS. If the old 'boat dropped off the cruising step we could lose up to 5 knots — not very much seemingly, but on a 17-hour flight that represents 85 miles, or another 40 minutes or so. With fuel reserves well short of plentiful, this was more than significant; so I concentrated on my task. Lord Howe Island, with twin rock towers at its southern end, was almost on our direct track from Sydney to Pago Pago.

Nearing our ETA for the island, we turned down the flight deck lighting and peered through the windscreen. There it was, a two-humped shadow, and the reef-fringed lagoon was soon beneath our wing, reflecting the capricious moonlight. I wondered if any of the inhabitants below thought they were hearing things as we rumbled overhead, for they must know the sounds of the P & W 'four-in-hand' better than anyone. It must always have seemed a happy, hopeful kind of sound — the link with the mainland and





Above: A Grumman Goose amphibian, workhorse of Antilles Air Boats, embarks passengers. *Southern Cross*, the latest addition to the company's fleet, lies at moorings behind, in the harbour at St. Croix

This photograph shows passengers' baggage being taken out to a Mallard amphibian — one of the smaller units in the Antilles Air Boats fleet — at St. Croix





mother country. Now it could be nothing but a sad sound as their old flying-boat faded into the north-east — gone for the last time.

My reflective thoughts were interrupted by the need to transmit our position report on HF to Sydney and make a slight alteration of course to head for our next landfall, Norfolk Island. Lord Howe Island slipped away astern, a mysterious lonely spot, half-seen in the shadowy moonlight. Five hours out from Sydney the light winds had changed slightly in our favour. Now, as we approached Norfolk Island, the cloud cleared so that we could see the featureless dark disc of land drift past below us, our passage marked by the Southern Cross canted low in the night sky south of the island. Another position report and we altered course for Pago Pago; 900 miles gone, 1,500 to go. Charles had taken a short rest and soon it was my turn to relax on our make-shift bunk — an inflated Li-lo. With the droning din of four trusty engines in my ears I closed my eyes.

Something woke me — I was none too warm and had slept only lightly. The engine note had changed. "Must have reduced power" I thought; but then the revs increased and the props became unsynchronised. A moment later and they were in harmony again. Someone knocked against my mattress and

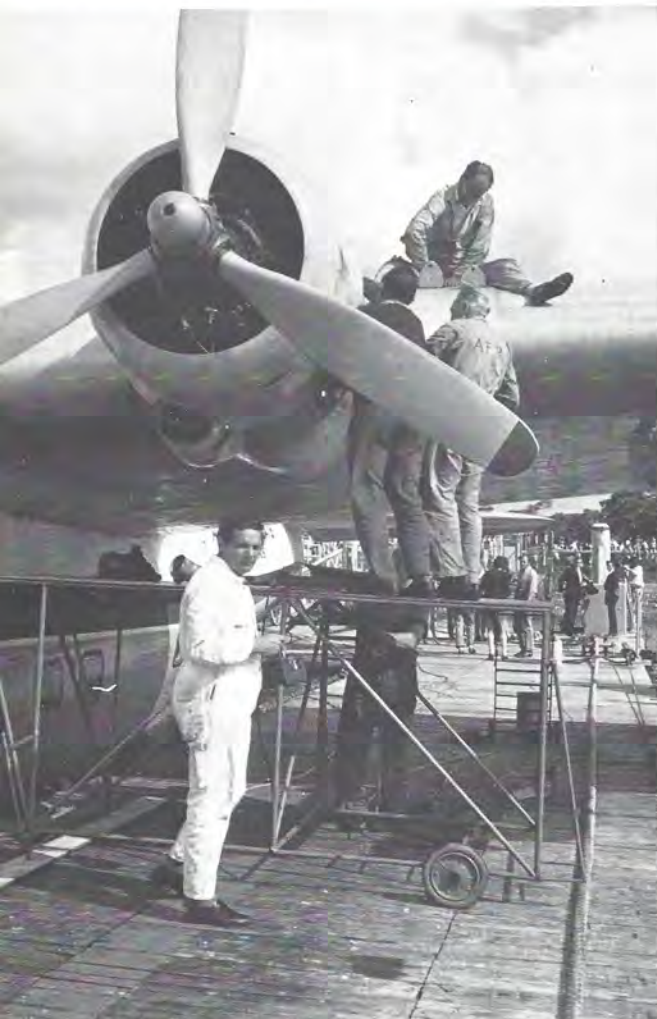
Running up the engines of *Southern Cross* at Rose Bay prior to leaving for the long trans-Pacific flight to the USA

two people scurried past in the shadows. Something was not quite right, so I got up and looked out of the upper deck cabin windows. Eight bluish white flares glowed above the wings, confirming that the now synchronised engines were doing all that was expected of them. Whatever the problem, it had now been resolved and I relaxed once more on my simple couch. We droned on through the night, sometimes among cumulus clouds, sometimes in the clear, and eventually a lightening of the eastern sky off our starboard bow heralded the dawn.

Southern Cross was eased up to 5,000 feet, and the change of engine note awakened me. This time it was a normal reduction of power. My watch indicated that there were 45 minutes to go before the end of our first leg at Pago Pago. When I reached the flight deck moments later, the reason for our early descent was obvious. A grey mass of cloud lay in our path as we flew into a rainstorm. Unfortunately we needed relatively good conditions for our approach into Pago Pago harbour. Situated in a right-angled fjord, the prevailing trade winds blow from the east, bringing the



Left: In dock at Rose Bay, following an engine change, engineers button up the cowling of number two power plant after checking the generator



Below: Sensing the end of a great era of air transportation, citizens of Rose Bay wander down to the dock in groups to take a last look at the piston-engine flying-boat that has been a familiar sight and sound for so many years

ocean swell deep into the harbour mouth. Set in a triangle of mountains reaching to over 2,000ft, there was no overshoot below about 1,500ft, the only way out below this height being via a serpentine gorge, entered after a sharp left climbing turn over a ridge at the fjord's end. A complication was an aerial cableway which stretched from one side of the fjord to the other, right across the alighting area. Good visibility would be helpful.

Charles descended slowly as the clammy clouds enveloped us, and by the time we had reached 1,500ft the humid tropic warmth was filtering into the aircraft. Soon cloud breaks appeared and we caught glimpses of the white caps below. Five miles out we continued our descent and grey-green patches of tropical vegetation appeared briefly through the murk until, at about 500ft, we were clear of most of the cloud, with the approach lights of the shining rain-soaked runway beneath the nose. At 300ft we broke off over the airport and headed along the short three miles of coastline to the entrance of the fjord. In the rain and gloom we missed it. A small island appeared on our starboard side and the large-scale chart of the island which I passed to Bryan confirmed that we had gone too far.

We made a 180 and headed back along the coastline, all eyes seeking the fjord entrance. This time we saw it, a cloud-filled watery valley. Charles considered conditions too bad to attempt an approach, so we circled at about 300ft, awaiting the whims of the weather. With throttles well back we wheeled offshore like some disorientated migratory bird of the ocean.



In less than fifteen minutes a visible improvement had taken place and we could see beyond Breaker's Point, marking the harbour mouth, to the shoreline of the steeply rising mountain buttress beyond the elbow. Good enough! We headed in and dropped to 100ft as we passed beneath the lowest wisps of cloud. The water was a flat calm inside the fjord, enabling us to make our approach from seaward. The upper end was obscured completely in cloud and rain, which precluded any chance of an overshoot; we were committed. Reaching the elbow, Charles banked round in a left turn, aligning with the length of the harbour as Bryan confirmed that landing checks were completed. He levelled and throttled gently back, relinquishing the last few feet of altitude to stroke the surface in a landing perceptible only by an increasing swish of rushing water against the keel. Power fully off, the old sea-bird slowed and subsided gracefully into the soft embrace of warm tropical water. Sixteen hours and 52 minutes after leaving her home waters of Sydney, *Southern Cross* had arrived in US territory, her new country of adoption.

We, of course, had still to cope with mooring, one of the trickiest parts of seaplane handling, especially with older flying-boats such as the Sunderland which do not have the refinements of reversing propellers that can be so useful in confined moorings.

Over Sydney Harbour during final check flights on November 28, 1974, the day of departure on an 11,400 mile flight at a slower cruising speed than that at which most large airliners leave the ground

Charles inched towards the buoy as slowly as possible, calling to Paul in the open bow hatch to stream the drogues which assist in reducing speed. The outer engines died, and as they coughed to a stop we slid silently the last few feet in this quiet land-locked harbour. Charles judged it well, and in a moment Paul was able to grab the buoy with his boathook, giving a "thumbs up" to indicate that we were made fast. Four more sectors like that and we would be in the Carribean!

A motor-boat came alongside and we pushed off to the nearby jetty, leaving *Southern Cross* swinging on her buoy, and displaying proudly her ensigns: the red and blue of the Stars and Stripes and the yellow flag of the Virgin Islands. Behind them glimmered her anchor light, atop a small white mast glinting on the ripples in our wake. With her flags and light she seemed as much a ship of the high seas as any ocean-going liner.

The comfort of the typical American hotel was welcome, but all too soon it was morning and we faced the major task of replenishing the 2,540 Imp gallons of fuel expended during our long flight. Slowly and tediously the *Southern Cross* was warped towards the jetty, where a long fuel hose was hauled out on a

light line. Engine oil had to be taken out in small cans by motor boat, and the wearisome task of refuelling and the long tedium of filling the engine oil tanks occupied the engineers for several hours. By early afternoon the job was completed and the Sandringham was back on her buoy.

While refuelling was under way, Charles had been considering our take-off. There was only one possible direction for this, due to the terrain, and it required any wind to be from the east or south. All morning it had been blowing defiantly from the west. By lunchtime this was causing concern, and Charles had even considered taking-off lightly loaded with fuel and ferrying across to an island outpost 100 miles or so distant, where there had been at one time an excellent flying-boat base. The local PanAm station engineer, who had taken us under his wing, suggested we consulted with a local charter pilot who knew the place well and could advise whether or not he thought the old alighting area was still clear. His advice was simple — don't even try, because he doubted whether the New Zealand authorities would permit a landing there. We waited impatiently in the hotel, glancing frequently at the flying-boat's ensign for any sign of the breeze abating.

At 3pm local time there was a definite drop in the wind, and the wavelets on the water became mere ripples. Charles decided to board without delay; but in the short time it took us to reach *Southern Cross* in the motor-boat the light wind had dropped to nearly zero and then increased again. So, by the time we were aboard and secure there was a breeze of perhaps three or four knots from the wrong direction. Should we wait for the wind to drop completely, or get under way with the little breeze there was and try to get off with the few knots of tailwind? A difficult decision, but the experts reckoned that the old girl would do it. Confirming all hatches secured, apart from that of the mooring-man, Charles called "Cast off", and in a moment we were

adrift.

The heavy seaplane hardly moved in the still water, and the wind's puny strength took time to exert any effect on the flying-boat's inertia. Very slowly the distance separating us from the buoy increased as we sailed almost imperceptibly astern. The two pilots, anxious to get going, agreed that if number one was started we would turn starboard sharply enough to avoid over-running or hitting the buoy with the port float. The order was given, and with a puff or two of blue smoke the port outer burst smoothly into life. We started to move forward and swung gently to starboard, clearing the buoy by half a span.

With open water ahead of us, number four was started and we now had control of our direction. Using the throttles Charles turned to port and taxied deep into the harbour. The inboards were fired up in quick succession. As soon as they were running smoothly the outers were quickly run-up, the propellers exercised and ignition checks completed, as we wormed our way into the congested end of the harbour between huge buoys, barges and sail-boats. Similarly, the inboards proved their serviceability with a minimum of fuss. The pre take-off checks were done as we reached the limit of navigable water, and a final check of all hatches was made as we began to turn about in this narrow stretch of water.

High power was required on the outer engines alternately to steer the heavy ship, but as we manoeuvred into a "roller" type take-off only partial power could be used initially on the inboards, to keep our momentum down amongst the clutter of the upper harbour. We swung past a large buoy, having at the last moment to take it on our starboard instead of our port side because our cumbersome charge was unable to slew sharply enough, then continued our starboard turn past a huge barge off our wingtip, before swinging slightly port to avoid another obstruction. Now we had more open water ahead of us, and Blair called for full power as



A once-familiar sight to British airline pilots — the port outer Pratt & Whitney engine, with its threshing propeller, and sturdily braced wingtip float.

have looked like some furious and frantic bellowing sea monster trying to escape as we charged through the harbour, our bow wave curving back past the cabin windows.

We had forty knots now and steady full power. Blair eased the control wheel back slightly and then forward, but the combination of high weight, glassy water and three knots or so of tail wind dictated a higher water speed before the combined efforts of water pressure and wing lift could raise her up. At 45 knots he eased the wheel back very slightly, then forward again, and she rose sedately onto the "step". At last we were planing, but we had used up half the straight run and the ASI read only 48 knots.

Slowly, oh, so slowly, she gathered speed. At 50 knots we still thundered on. Noel, sitting behind the captain, flicked a finger towards Blair's ASI, now reading 55 knots, concerned that the pilot might not have noticed it. He need not have worried - there were eight eyeballs riveted to it as Blair felt expertly through the elevators for that fine angle which produces the minimum of water drag on the hull.

he weaved to the right to clear a half-sunken wreck. Bryan wound up the inboards fully to 48 inches, leaving the outers for Charles to manipulate dexterously to steer us through this obstacle course of a "runway".

We were doing about 35 knots by now, pointing straight for the tuna fishing fleet moored at the canning factory jetty. As we cleared the last of the hazards Charles swung a few degrees right, the engines surging as he played the outer throttles, and the fishing-boats passed to our port. At last there was nearly a mile of clear water ahead; beyond, the almost vertical wall of Rainmaker Mountain, rising to 1,700ft. Our acceleration was abysmal, and with a third of the straight run used she was still not on the "step". Bryan opened the "gate" and pushed the throttles to the contingency limit of 52 inches. We must

With the airspeed reading only 65 we were still firmly on the water. Now the almost vertical mountain ridge which formed the shoreline was little more than half a mile ahead, becoming a new source of interest and vying with the ASI for the attention of our swivelling eyeballs. On our present course we would have to abandon this take-off, but Blair had a contingency plan. On reaching the elbow he very carefully applied some right rudder, and we started to turn slowly starboard; 70 kts — and now there was more water ahead of us and the ridge slightly lower. Blair continued this gentle "step turn", carefully maintaining the wings level with aileron to keep the wingtip floats clear of the



water.

At 80 knots we were still slewing steadily to starboard with more usable water opening up ahead of us with each degree of turn. As the flying-boat rose higher on the step, the wings grasped at the air and began to take hold. At last she began to feel like an aeroplane instead of some crazy power-boat. 85 knots and Bryan gave his hand a slight movement, indicating to Blair that she should be ready to come off. Back came the control wheel slightly and the clammy waters of Pago Pago relinquished their last desperate hold. Out she came like a proud old lady, gracefully taking her leave, and we swept past the low headland out into the open ocean. We relaxed and grinned at each other like a bunch of kids, completing the most impressive take-off I have ever experienced.

We soon settled down into our previous routine, and after an excellent supper of tuna fish salad, roast beef and coffee the "off shift" got ready for some sleep. The light gradually faded from the cloudy sky, and with Charles waiting for the first welcoming stars to obtain a celestial fix I went below.

It was several hours later that I retraced my steps and climbed the short ladder to the flight deck. Bryan was the first one ready for a break, and as I slid into the co-pilot's seat he brought me up to date. Pointing out the power settings, he explained that number

three engine was set two inches of manifold pressure below its colleagues due to a possible cylinder head crack. Apparently, when it became dark, he had noticed an erratic bluish flaring within the cowling, which looked like an ignition problem such as a loose lead but could be something more fundamental as an ignition check had not isolated the problem. As a precaution we had been flying for the past four hours with reduced power on number three, compensated by higher power than would normally be required on the other three engines, in order to keep our airspeed up. The result was an overall higher fuel consumption than planned.

In this part of the world, the winds away from the influence of storms are always light and our forecast had prophesied a north-easterly trade drift of ten knots, increasing to fifteen from a more easterly direction, resulting in a flight-planned airborne time of eighteen hours and ten minutes. Naturally we hoped that the winds would prove lighter than the prognosis, but were more concerned that they should not be stronger. According to Charles's last celestial check things were running much as planned, apart from the slightly high fuel consumption which was reducing our range. Thus briefed I sat for the next hour or two, often glancing at the dancing will o' the wisp within my adjacent engine cowling. But there was no other sign

Left: Sixteen hours and 52 minutes from Sydney, *Southern Cross* rests peacefully on the warm tropical waters of Pago Pago harbour, the approach to which had looked so hazardous at first sight

Right: Starting the tortuous passage through marine obstructions that made take-off from Pago Pago a memorable experience. To starboard, large concrete barges; a fish factory and boats dead ahead. Intended path is in line with the co-pilot's left ear, to head out finally between two ridges on the right



of trouble, the engine's smooth running reflected by the gauges registering that all was well within.

At forty minutes to midnight local time and seven hours out of Samoa we crossed the Equator, an invisible line more of academic interest than navigational. Of more significance was the inter-tropical front, somewhere ahead, and an hour later the first large cumulus could be picked out in the moonlight. Half an hour or so of being jostled slightly by the eddying vertical movements of air as we dodged the larger clouds, and we were through this docile interface of air and moisture.

Dawn found us flying sedately on, over an empty ocean, the odd white cap confirming our suspicions that the wind had not lessened and still had a large headwind component. When the sun had risen clear of the horizon Charles climbed to the astro-dome and raised his favourite fighter-type sextant to measure the angle of the "red ball in the sky". In a very short time he announced that we were now only ten miles starboard of track with six hours to go. At 05.30 Samoa time the flight engineer informed us that we had 750 gallons remaining and that at our present consumption of 124 Imp gallons per hour we had six hours endurance. Our revised ETA of 12.00 Samoa time (23.00 GMT) left 4½ hours to go, but it could well have been five. Jim offered the comforting advice that if we did get a bit thin on fuel there were 40 gallons "unusable", much of which could be coaxed out of the tanks if we got the nose well up!

At 20.30 GMT we pulled the revs back to 1,750 and set the manifold pressure at 29 inches, our final power reduction, and rumbled on, almost able to see the propeller blades as they churned slowly through the air. Two and a half hours yet to the haven of Pearl Harbor. At last the outline of the island appeared behind some puffs of cumulus. When we requested an initial descent from 5,000ft, the controller directed us to turn starboard for a radar identification, onto a heading which hardly took us any nearer our destination. We wondered impatiently how long we would have to maintain this course, which did little other than burn up valuable fuel, but eventually we were allowed to turn again towards the island and were cleared to descend. I was almost heaving at the heavy controls to turn this incredibly stable old aeroplane, making a weaving descent to 1,500ft before sweeping in over the coast and the fine anchorage of Pearl Harbor.

Bryan took over for the approach and final checks as we turned in past the old US Navy seaplane base with its fine slipways. The light breeze rippled the blue water of this natural harbour as we dropped the last few feet; then the murmur of the ripples on the keel told that we had arrived. Blair left some power on and let her run on the step to save a long taxi run. As the throttles came back on the stops the time was 22.55 GMT, 17 hours 40 minutes

since we roared through Pago Pago harbour. Paul appeared in the bow hatch and streamed the drogues, boathook at the ready; past our port wingtip a large launch overtook us, the words "Harbor Patrol" declaring its authority. At its open stern a large board incredibly ordered us to "FOLLOW ME", making us smile at what we almost considered an intrusion into our voyage of a bygone age. I asked the engineers our fuel state and was advised that we had a conservative 90 gallons left. We could have stayed in the air for another hour — perhaps a little longer!

Nearing our round orange "day-glo" buoy, the idling outers were shut down. The last few feet we drifted in silence, propellers dead, ensigns flying, savouring the peaceful moments at the end of the voyage — moments which are unique to sea-going craft and part of the magic of flying-boat travel. Paul reached out for the buoy's floating grab-line and raised his hand in a "thumbs up". Made fast!

An enjoyable interlude of forty-eight hours as tourists was broken only by the need to refuel, which occupied Captain Blair and the engineers for some time the day after our arrival. The engineers had discovered that number 3 engine's "illuminations" were due to a plug lead becoming loose at the plug end, much as expected, and rectification was simple. While this was being done the pilots looked up the weather man at the airport, who provided an unexciting prognosis for our next leg to Long Beach. The winds looked as if they might be unfavourable to begin with, but more co-operative after the first one thousand miles. There we could expect to come into the influence of a depression lying out in the ocean, west of San Francisco. A cold front associated with it was expected to provide an area of cloud, rain and possible thunderstorms during the last third of our flight, which Charles estimated to be around seventeen hours.

Our situation seemed rather ridiculous and

certainly incongruous as we sat in the minibus, fuming while we waited motionless in the exhaust fumes of a mile-long traffic queue — the late afternoon build-up which one can hardly avoid anywhere in the world nowadays, not even in the exotic Hawaiian Islands. There were more than two thousand miles of ocean waiting to be crossed and we were impatient with these earthbound creatures, hemming us in with their mobile metal boxes. Eventually we were aboard the motor launch, with the sea breeze in our nostrils as we sped across the harbour to the flying-boat. While we waited for Bryan to come out on the next boat shuttle, after filing our flight plan at the airport, Jim and I got the pre-starting check list completed.

All on board, and with a minimum of formality and fuss we slipped our mooring. The vital ritual of engine and propeller checks was finished quickly, accompanied by the now-familiar healthy clamour of our radial engines, and then our wingtip float was sweeping past some fish-trap stakes as we turned sharply into wind. Cleared for take-off by Honolulu Tower, the throttles were opened to the normal limit of 48 inches and we were thundering through the water in a cloud of spray. No problem getting "on the step" with this breeze, and with ample space ahead we skimmed across the surface, the atmosphere on the flight deck very different from that during our previous departure.

The flying-boat rose in the water until she reached her flying speed of 82 knots, then clipped the crests of the rippling wavelets as she left the water. Almost immediately we started a gentle turn to starboard. The sun was dipping low in the western sky, treating us to a fabulous display of colour in all shades of amber and gold, as if to ensure that we would not forget the beauty of Hawaii. As we headed east, night approached and soon we had only the stars for company.

The weather forecast obtained before take-off was a little more optimistic than the earlier

one, although there was still bad weather to the east of our route. In general the winds would assist us, and we anticipated covering the 2,277 nautical miles of this sector in less than the eighteen hours we had planned originally. There were some slight differences between this, our third and last long trans-ocean sector, compared with the previous two, for it would pay us to fly a great circle route. From Sydney to Samoa it had made sense to use the navigational fixes of Lord Howe and Norfolk Islands, which were almost on track, at the expense of a fractional increase in mileage. On both of those sectors there were odd islands and atolls not too far from the track and in the lee of which a reasonable alighting could be made if a bad situation arose, such as losing an engine. On this leg to Long Beach, there was nothing between it and Hawaii, except water; so an emergency arising midway would probably be of more significance.

Five hours out from Honolulu I noticed some winking lights high in the sky ahead — another aircraft coming towards us. This intruder into our domain of night and stars reminded us that there were others who were transient inhabitants of the sky — no doubt Martini-drinking tourists eager for their “Kodachrome” holiday in Hawaii. As the blinking red and green points of light rushed silently overhead, its flight path confirmed that Charles’s sextant was a match for the sophisticated avionics of the other aircraft, and that we were on the centre-line of route Bravo.

We droned on steadily through the night with no alarms. By then eight hours had gone and we were at 5,000ft, the propellers turning over slowly at 1,900 rpm. At an economic cruise setting, with fuel flow reduced, our reserve had improved and we had nearly eleven hours in our tanks. It was a peaceful and magic moment in time as we gazed out at the clear night, watching our companions — a cavalcade of stars — moving across the



Turning on to final approach at Pearl Harbor, with the old US Navy seaplane base to the left, just out of the picture. The scene could not have looked much different to the pilots of Japanese carrier-based combat aircraft making a similar approach in the last seconds of peace nearly 32 years earlier

A Harbor Patrol launch, bearing a “FOLLOW ME” sign, shows that Pearl Harbor can still produce its surprises



heavens in the opposite direction. The Plough, or Big Dipper as Blair called it, spread out above us its long handle, pointing down to Arcturus, that strange star scintillating red and white as it lifted above the invisible horizon beyond our nose. A few minutes later we passed my estimated three-engine critical point; soon we would be going "downhill" on the other side of our imaginary bridge across the Pacific Ocean.

Nine hours out and Charles calculated our latest ground speed from his most recent celestial position line — 137 knots. A few minutes later there was a heavy thud on the flight deck floor. Charles had dropped his valuable, almost vital, sextant. Picking it up he looked glum to discover that the essential integral light had failed. Grave minutes went by before his face became a reflection of the sextant's beam; Noel had fixed it.

Charles was anxious to get another "celestial" before the expected clouds separated us from our heavenly signposts. Low stars in the sky ahead were already being diluted as the first warning clouds of disturbed air beyond the horizon drifted like a veil across them. Charles got two more quick "shots" through the broken clouds before putting his sextant back into its case. Arcturus, the Big Dipper, Polaris and, finally, the Moon bade us farewell, vanishing behind a curtain of cloud. But they had served us well and we could now manage to find our way without their assistance.

Ten hours out, it was my turn "off watch"; so down below I went to try to sleep in the cold lower cabin.

Sleep came in snatches, as it was too cold, even under a pile of coats, to rest properly. Nonetheless, four hours elapsed before I awoke fully and climbed to the more cosy flight deck. It was daylight, but all that could be seen outside was a dull grey and white opalescence. We were immersed in a mass of damp and dismal layer cloud, and it was still cold. A look at the altimeter and I could see

one of the reasons for this — we were at 7,000ft, with temperature near zero. The clock said 17.45 GMT — fourteen hours out from Honolulu. Bryan told me that the winds had helped us a little more, and that we should be on the water in less than 1½ hours. The latest weather report gave a cloud base of 2,500ft, with visibility of more than ten miles.

Fifteen hours after take-off the clinging clouds began to break as we began a slow descent, the Ventura Vortac giving us our continuous position. Ten minutes more and we were breaking through the overcast, with a grey sea below: off to port we could glimpse the coast of America. The Pacific was behind us, Charles pointed to a large hump of land bulging out of the ocean in the mist to starboard, like a great sleeping whale. Catalina Island, which only a few years ago boasted a unique flying-boat service, using the one remaining Vought Sikorsky VS44A Excalibur four-engined seaplane. Blair now owned it, and it lay in the US Virgin Islands. Its useful life ended, it remained only a monument to the famous American "Clipper" flying-boats.

We were over the eighteen-mile wide San Pedro Channel, separating the island from the mainland, sweeping into a huge bay by Long Beach, a seven-mile long breakwater forming a vast harbour. The untidy paraphernalia necessary to modern man's way of life was scattered below us — docks, blocks, roads, railways, bridges, chimneys and pylons. Suddenly I was cheered by a familiar shape rushing past the starboard wing, as we straightened up on finals — the black hull of the *Queen Mary*, a contemporary of the Sandringham, her glistening white superstructure surmounted by those three famous black and red funnels. She looked splendid moored at her permanent quayside final anchorage.

Blair eased *Southern Cross* gently down to skim the small wavelets created by a light breeze, and the patter of water against the hull announced our arrival. There was the usual flurry of activity as we made for our buoy,



terminated by a firm “thumbs up” from Paul as he made us fast, fifteen hours and three-quarters after slipping our mooring in Honolulu. Going ashore in the small boat I considered the cool breeze and overcast an untypical Californian welcome and a poor exchange for the sunshine we had enjoyed in Hawaii the day before.

Captain Blair had planned on a two day “layover” in Long Beach, but the engineers’ plans to do a 60-hour check next day were thwarted by the weather. The eddying depression of which we had been wary brought strong moisture-laden winds in from the ocean, with masses of grey nimbo-stratus; but in twenty-four hours this weather had passed and the engineers set to work. The three sectors we had flown had taken fifty flying hours, and the trans-continental sectors to Miami would amount to another sixteen; so the check was brought forward because our planned refuelling stop at Eagle Mountain Lake, Fort Worth, would not be suitable for such work.

The following day was December 6, set aside for the major undertaking of refuelling. The only suitable jetty was deep in dockland, about six or seven miles away; so the engines were fired up and, led by a small motor-boat, the old Sandringham got under way. It could not possibly have been a better day for

Salute to another queen of a bygone age. Finals at Long Beach, California, take the Sandringham past the once-famous Cunard liner *Queen Mary*, now a floating hotel and conference centre moored permanently at the water’s edge

this precarious exercise; there was only the slightest breeze and the sun shone from a real Californian sky as the odd procession entered the dock area. The boat went ahead, to discover that the fuel bowser had not arrived, and came rushing back to the flying-boat like a worried little maid. The boatman yelled the news to Charles, who promptly turned about for an open area of water in the middle of the harbour basin, where he shut down the engines and streamed the drogues. The murmur of wind had died completely; there was no current or tidal stream and the flying-boat just sat on the oily, mirrorlike surface like a patient old lady.

Eventually the bowser appeared at the top of a high bank above the small jetty, and after what seemed ages of manoeuvring the Sandringham was secured near the bank. The specially-requested long fuel hose was dragged down and hoisted onto the flying-boat by light line, and the long job of transferring 2,160 Imp gallons of avgas started. In the confines of the dock *Southern Cross* seemed far from home, hemmed in by wharfs,

cranes, huge tanks, derricks, a great metal road bridge and all the junk of dockland. This was not her place. The confines of Pago Pago harbour had been different, with the fjord's lush green steeply-sloping walls. That's where she belonged — not here in this disorderly jumble of metal and concrete — the sooner she got out of here the better!

Despite the surroundings she was, unknowingly, in good company. Behind the jetty a tall boxlike windowless metal building loomed, looking as if it should be at Cape Canaveral instead of in this harbour, complete with security floodlights and a sort of watch building surmounted by a miniature lighthouse. The clue was the slipway immediately in front of the building, with a huge vertical shutterlike door at its face. Behind those locked doors, inexplicably in great secrecy, was stored a mysterious and incredible eight-engined wooden flying-boat — the Hughes Hercules.

Eventually, the job of refuelling and oiling was done. The little motor-boat, acting as a miniature tug, roared its engine bravely. The small propeller churned the water as it endeavoured to pull the big flying-boat astern. Gradually she eased her way out, turning so that the Sandringham was headed towards the open basin. There being no wind,

Charles ordered her to cast off as the flight engineer prepared for start-up. Number four propeller turned over smartly; a few puffs of blue smoke drifted back over the wing and the engine rumbled into life. Immediately the seaplane began to move forward, slowly turning to port as number one propeller began to move. It turned, and kept on turning, but no sound of life burst forth from the engine.

By now the aircraft was pointing at an angle towards the adjacent wharf. Charles swiftly opened up number four to ensure that the circling movement would take her clear of the obstruction. When she had turned through 180 degrees another attempt to start number one was made; but to no avail. Once again a blast of power from number four kept the circle tight, but this time the starboard wingtip was noticeably nearer to the concrete wharf. As she came round, facing upstream, a large pleasure boat coming downstream added to the hazards; still the reluctant engine refused to start.

A situation had developed which required quick decisions from the pilot. A seaplane

December 4, 1974. Drifting on lifeless water, awaiting the arrival of the refuelling bowser. Commercial paint-scheme and cabin windows cannot disguise the Sandringham's descent from the military Sunderland for anyone with memories of 1939-45



without reversing propellers can do only one thing when an engine is running: move forward. If the thrust is assymmetric it also turns. *Southern Cross* was demonstrating, only too well, her obedience to the rules. Continuing her turn, and by then well across the channel, number one propeller churned away without sign of life from the engine. To those watching from the jetty she was visibly closer to the wharf; if she went round again without hitting, it seemed certain she must collide with the pleasure boat, now almost on top of her. Charles would have to decide either to cut number four and hope the momentum would not take her into the wharf or pour the coals on again and hope to get round.

By this time the nails of those ashore were almost down to the proverbial quick. The flying-boat was at the point in her turn where she was once again pointing downstream. Almost miraculously a puff of blue smoke was seen over the port wing; then another, and with little enough time to spare number one engine coughed into life. Charles immediately opened it up a little to stop the turn and *Southern Cross* was heading down the channel, once again a manageable mount instead of an obstinate mule. The feeling of relief was almost visible; only the furrows on the brow of the engineers indicated that, once on the buoy, they would have to set to work to cure the starting trouble.

The intention was to depart next day. The FAA's permit for the ferry flight stipulated a daylight-only VFR crossing of the North American continent; but as the direct sector time was over fourteen hours it could not be done in one daylight leg. On the previous trip, with the Sandringham *Excalibur VIII*, Blair had night-stopped on Eagle Mountain Lake, near Fort Worth; but refuelling had been so difficult that he was reluctant to repeat the experience. Accordingly, he was badgering the authorities to permit him to fly at night. It was in vain, for although the FAA gave their approval the weather prevented



Refuelling a veteran flying-boat is very different from pressure-fuelling a landplane with a supertanker. In Long Beach dock, there seem to be lines, ropes, hoses and people everywhere

our departure, due to cloud and thunderstorms over the inland mountains. Apart from the VFR restriction, high mountains and icing clouds at night are no place for a heavy old flying-boat without de-icing equipment. So we returned to our comfortable motel for another night in a real bed.

Sunday December 8 dawned windy but bright. The bad weather of the previous day had gone to bother someone else, so the flight was on. The water of the open anchorage was a bit rough for the little motor-boat as it splashed us through the waves out to our flying-boat which, by contrast, seemed to sit serenely on her buoy. Bryan and I got started on the departure check lists while waiting for Charles and the others; by the time we were

through with this I was more than ready to get going, the movement of the flying-boat in the chop making a decided impression on the land-lubber inside me. Eventually the motor-boat bobbed into view and the rest of our little party were soon aboard. After the usual pre-departure preparations we were all set, and Charles called to Paul to cast off.

We quickly sailed astern, clear of the buoy, in the twenty knots or so of wind, and with Paul still hauling in his mooring warp the engines burst into life. While the engines warmed up they propelled us through the water at a good fifteen knots, and we moved up and down the wide harbour in a series of sweeping turns to clear a few inquisitive sailing craft and power-boats. With all as it should be and, pre take-off checks completed, we turned into wind close by the old *Queen Mary*, her black hull towering above our starboard side. Charles eased the throttles forward and called for full power. As we accelerated slowly, ploughing through the choppy white-capped waves, showers of spray splashed up into the inboard propellers for a moment or two until our bow wave receded aft and we were "on the step". At 82 knots she lifted out, water streaming from her wet hull. It was 13.26 local time when Blair called for climb power and for the flaps to be raised as we settled into a slow climb. Crossing over Huntington Beach we banked to port, turning our back on the Pacific. We had taken off in one ocean and would be alighting in another — the Atlantic. In the meantime there was a continent to cross.

We had left on a carefully calculated schedule, the intention being to get right through to the Virgin Islands without a "lay-over", which meant that to arrive before darkness we would have to reach Miami at daybreak and refuel in about two hours. We climbed slowly away from the sea and towards the mountains, the sky clear and the sun shining down onto the untidy coastal plain. An airfield with some huge old blimp

hangers drifted below our starboard float, and then we were climbing over a small range of mountains reaching to nearly 6,000ft. Ahead, across our path, lay the mountains of San Gorgonio and San Jacinto, high enough to be capped in snow. Between them was a pass, and we made for this as we levelled out at 9,500ft.

The terrain was badly arranged from our point of view, as the highest ground was on the first half of the flight when we were heaviest; on the latter portion it was largely near sea level. However, at least some of the highest mountains would be traversed in daylight. The bare rugged rocks of Mount San Jacinto, its 10,800ft peak above the starboard wingtip, drifted impressively past. To port, the cap of snow on the softer peak of 11,500ft Mount San Gorgonio glistened in the sun, and then we were in the valley beyond, opening up into a wide plateau.

Celebrated Palm Springs basked in the sun, and as we crossed the airfield we recognised a familiar white silhouette — a Catalina. But this was no ordinary 'Cat'. It had four engines! It was the unique Bird Innovator owned by Dr Bird and fitted out as an aerial surgery. To provide an element of four-engine safety, it has two Lycomings fitted outboard of the standard engine installation. The result is quite a ship!

Paul appeared on the flight deck with some welcome hot minestrone soup and biscuits. In spite of the cold, Charles was reluctant to use the fuel-burning heaters; with a consumption of 10 Imp gallons per hour, they used too much valuable fuel to squander this early in the flight. The sun was already dipping. Below, a mountain ridge bared its ragged teeth as the unwelcome night approached. We and the Sun parted company, to race each other round the globe. In the meantime we missed the comforting warmth, and more importantly the light, as we flew inland over America with no night-time alternative landing site should we run into a problem. The

outside temperature gauge showed minus 10 degrees, and light broken cloud silently deposited a thin film of ice crystals to decorate the windscreen, wing leading-edge and floats; but the rime was not enough to concern us.

Five hours out we entered Texas airspace, welcomed by Orion climbing into the night sky ahead of us. Oil flares flickered in all directions, as if to make it clear where we were. Some coffee appeared, and we were told that the freezing passengers were playing cards with gloves on! This was a hint for Charles to put the heaters on — and it worked.

Droning on over Texas, watching the lights of flares and towns drifting by, it seemed that every small town had its airfield, a ribbon of tell-tale parallel lights at the fringe of each one. This must be very comforting for lightplane pilots flying at night — assuming they have rubber tyres on which to land! Although we were on normal air routes between VORs and beacons, we had seen only one other aircraft and the R/T was surprisingly quiet.

Nine hours gone and Orion was almost overhead, being led across the black bowl of night by the seven sisters of Pleiades. It reminded us that our accomplice in tonight's epic — the Sun — was also racing round the heavens westwards to meet us in five hours time. Then the glowing lights of Houston appeared ahead, the Space Center just a mass of bright lights from our viewpoint. Bryan, who had been viewing the spectacle from over my shoulder, exchanged places with me, and I turned in to try to sleep.

I rested for only a couple of hours before climbing back to the warmer flight deck. A crescent moon was rising over the nose and shining down onto a layer of stratocumulus beneath us, concealing the waters of the Gulf of Mexico so that we were suspended between the stars and a Christmassy snowscape of cloud. The heavenly procession

of stars passed on its way, with Orion slipping behind our tail; and as daylight crept gradually over the ground we started our final descent, rumbling in over the tall white buildings of Miami as the city awakened to begin another day.

Charles brought the Sandringham round in a wide curve to line up with a straight broad canal, flanked by wharfs on one side and a main road running along a causeway on the other. Just entering the channel was a splendid-looking liner in a livery of ivory white, with her name in dark letters on her bow — *Flavia*. We flew sedately past her, a few feet above the water, to softly stroke the lightly rippled surface "in the manner to which we were becoming accustomed". The *Southern Cross* ran on a little, leaving a widening wake as Charles closed the throttles and let her subside in the usual flurry of foam, her navigation lights still on — two thousand and sixty-nine miles, and fourteen and three-quarter hours from Long Beach.

A powerful motor-boat was waiting for us, with a line from the ramp quay, and Charles eased slowly towards it. The line was none too long, and to bring the flying-boat's bow close to the boat meant that the starboard float was very close to some rocks and rubble at the side of the slipway. There was little wind, but a slight current complicated the issue. As we inched closer Charles shut down number one engine, leaving the starboard outer idling so as to prevent the bow swinging into the quay. We were beyond reach of the boat but someone threw a line. It missed, just as Charles shut down the remaining engine, and there was an anxious moment or two before Paul had the bow secured.

Now we were at the end of a line from a boat, which was itself at the end of a line from the quay, and the current moved us steadily sideways until the starboard float was worryingly near the slipway debris. Another boat eventually got a line on our stern and we were pulled round into a safer position, with

the powerful boat on our stern holding us across the channel and with our bow moored directly to the quay. Now refuelling could get under way and the hose was brought out to us by motor-boat.

George got the APU going to pump out the bilges, for Noel had found that during take-off from Long Beach we had shipped a few gallons through the main entrance door, in spite of the ten or so clamps which secure it for flight. The piston-engined, petrol-driven APU seemed just as much an intrusion to us as does the modern screaming jet type, and I was glad when George had got the task completed. Noel also drained the port float, which had taken on some water and which no doubt was the cause of the float's excessive tendency to drag in the water during take-off.

Refuelling took longer than the allotted two hours, even though we took on only a little over 1,400 Imp gallons, not requiring full tanks for the six-hour flight to St. Croix. By the time it was completed, the final leg home was in jeopardy. However, Charles decided to leave and the flight plan was filed by telephone. We all worked with a will to save precious minutes and were soon out in the channel with all checks completed.

Without further ado Charles opened the throttles, handing them over to Bryan to set his 48 inches, and we were pounding down the water runway of this dockside canal. The acceleration seemed as slow as ever, but after manipulating the throttles to keep us on the centreline, Charles had us on the step, to lift gracefully from the water in about forty seconds — the shortest take-off yet. Below our starboard float two Grumman Mallards sat on their attractive waterside ramp, with the odd shining bulbous form of the Goodyear airship *Mayflower* behind them. Power was reduced as we banked to port over the flashy buildings of Miami, to turn onto course. With a six-hour flight and an easterly change of longitude ahead, we should be pushed to make St. Croix before dark. But the

sun was shining and the blue Atlantic stretched away before us, with the promise of colourful Caribbean islands steeped in a history of turbulence and legends of pirates, rum, whales and buried treasure. With these pleasant thoughts I settled down for sleep, it being my turn "off watch".

When I came to, we were running through the southernmost Bahama Islands — a clutter of scattered bits of land of various sizes and all shapes imaginable. We were near Georgetown, on Great Exuma, and Bryan was concerned about our ground speed. By the time we reached the Caicos Islands we were extremely doubtful about getting to St. Croix. At 19.10 GMT we crossed Grand Turk Island and our ETA was 22.13 — 22 minutes after sunset. Charles decided that we would have to go into St. Thomas, which was forty miles nearer, and where he had a base. At 21.30 GMT we started our descent from 5,500ft, having advised the San Juan (Puerto Rico) controller of our intention, and Charles called for the descent and finals checks as we came steadily lower. Low down, skimming the water, we entered the inlet with green sloping hills on either side. Keeping a fair amount of power on, Charles let her sink slowly; as soon as he heard the first swish of water on the keel he reduced power, keeping on enough for us to run on the step and turn into another narrower inlet which then opened up into a wide harbour — Charlotte Amalie. We taxied slowly into harbour, ensigns flying, and faced the Antilles Air Boats slipway, and base. We had arrived in the Virgin Islands, but we were still not quite home.

After a good night's rest, enjoyed by all except George — who had been voted unanimously "anchor man" and had spent a very warm night on board as a precaution against the seaplane dragging her anchor — we congregated at the seaplane base for the final leg home. As we clambered into the little boat, Grumman Mallards and Geese — or



should it be Gooses? — came and went, buzzing up and down the slipway as frequently as a bus service, which they almost were. Antilles Air Boats is a commuters' airline, providing high-frequency highly-patronised links between the various local islands.

For the last time the checks were done, and the ritual of engine testing completed as we bellowed around in tight turns; then, with a great surge of power, we raced across the harbour, with the stern disappearing between two fountains of curving water. Almost immediately we were on the step, curving to the right as demanded by the shape of the harbour. Charles stopped the step turn to run straight briefly and we lifted off. Twenty-five minutes later St. Croix lay below us. As we banked over the seaplane base, almost in the town, a very familiar shape was silhouetted on the blue water — our sister ship, *Excalibur VIII*. Moments later the throttles were closed and in a brilliant white tumult of foam we arrived at our final destination. We taxied past *Excalibur VIII*, which had been waiting, sitting on her buoy, for her sister ship for over two months. A line of green growth on her hull was evidence of her protracted vigil.

Our flight had been remarkable — remarkable for its being relatively straightforward. It had been accomplished almost independently of aviation terminal surface

Journey's end. Southern Cross and Excalibur VIII reunited at St. Croix in the Virgin Islands, home base of Antilles Air Boats

facilities, and we had encircled nearly half the globe in an aeroplane which was at least thirty years old, and which cruised at a speed less than that at which most large airliners of today leave the ground. In $71\frac{1}{2}$ hours we had covered 9,900 nautical miles (11,400 statute miles) and suffered only one small mechanical problem — the loose ignition lead. It had been an unforgettable voyage, truly out of its time. The sheer joy and pleasure of alighting in a lovely bay or lagoon, free of acres of concrete and blocks of buildings, is a unique, delightful and fascinating experience. When transport aviation gave up its flying-boats, the sacrifice of the pure pleasure of travel was in some ways a poor exchange for the facilities of speed and standardisation.

We had witnessed the end of an era. Watching the two beautiful old Short flying-boats swinging contentedly at adjacent buoys in their tropical island bay, I could not help wondering whether this might be the beginning of a new era of travel by water-borne aircraft. Perhaps ours would not be the last long over-ocean voyage by flying-boat after all.