

MARCH 1975 35p

Canada \$1.25

# Aeroplane

## monthly



**Fighters of the Fifties No2—V-S Attacker**

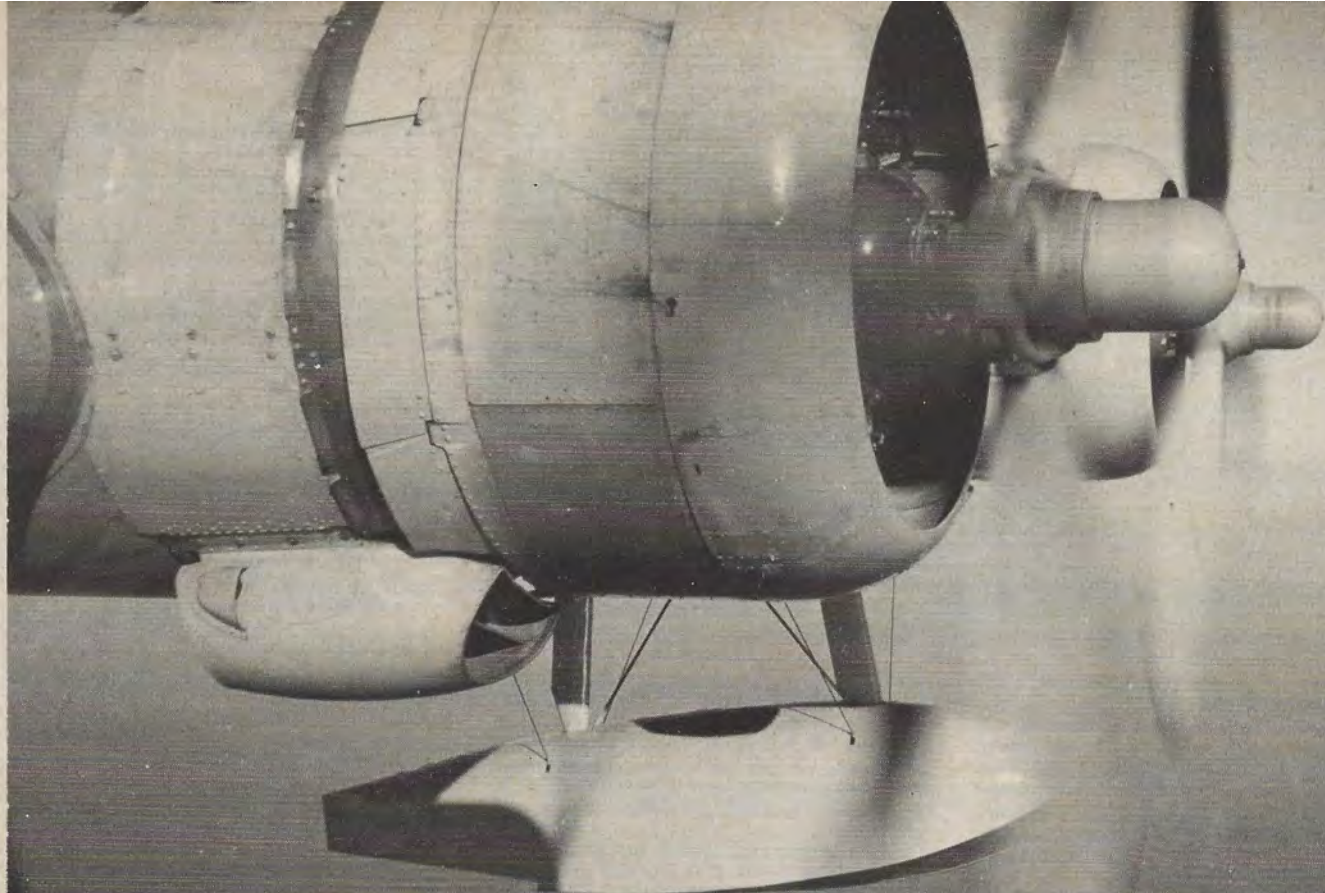
**H.P.42—'the first real airliner'**

**Preservation Profile No23—Vickers Vimy**

**Sandringham flight to the West Indies**

**Life with the Lincoln**





# Voyage to the West Indies

Captain KEITH SISSONS describes his flight from Sydney to St. Croix in a Sandringham flying boat.

"You're cleared to Pago Pago, VFR, turn left after take-off and maintain 1,000ft while in the Sydney Control Zone. . . ." Nothing in this conventional departure clearance gave the hint that this flight was anything extraordinary, but the air traffic controller's routine instructions were the final authority for us to commence the longest over-ocean voyage undertaken by a flying-boat for perhaps a quarter of a century.

That this was to be carried out independent of proper water aerodromes for transit stops, leaving the only active flying-boat base in the world behind us, indicated that this was to be a journey out of its time. However, a seaplane is not dependent upon prepared aerodromes, a virtue it shares with the helicopter.

Charles Blair eased the throttles forward. Bryan Monkton in the copilot's seat confirmed "Take-off checks complete" and opened up the four

Pratt & Whitney R-1830s while Blair kept a light grasp on the outer throttles, manipulating them to keep straight as the old Sandringham thundered through the water in a swirling cloud of spray. Deep in the water with almost a 2,000lb overload for this ferry flight, she accelerated awkwardly at first, but in a moment she almost imperceptibly rose up on her step and gracefully planed across the bay, clipping the waves in the short chop produced by a helpful breeze of 18kt or so. The elegant arch of Sydney bridge visibly grew as we roared on towards it, but in about 50sec *Southern Cross* had caressed the waters of Rose Bay for the last time, and we were sweeping round at about 300ft with the flaps still down. Blair had left them at "take-off" position 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. We had a salutary duty to perform before complying with the controller's request. Levelling off at 500ft, we reduced to a cruise power setting and turned another 90° starboard to line up with the Rose Bay Water Airport and Flying-Boat base, and flew low overhead in a farewell salute before turning on to course

and out into the Pacific Ocean.

This final gesture was not a simple farewell. It marked the end of an era. *Southern Cross*, previously known to the locals as *Beachcomber* of Ansett Flying Boat Services, was the last flying-boat airliner to use the Rose Bay base. It was not only a farewell from Sydney to their beloved flying-boat, but also farewell to the base, for never again would the unique Control Boat, operated by the Department of Transport, Air Transport Group, do a water sweep for debris prior to a seaplane alighting or departing, or shepherd the sailing boats and pleasure craft clear. Nor would the old hangar, built in 1938 for the "C" Class boats of Imperial Airways, ever again open its doors to receive a flying-boat.

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 to us reaching our first destination, 17hr or so distant. At the jetty we had a total of 2,772 Imp gal on board. This produced an estimated endurance, at the power settings used, of approaching 20hr, and, more importantly, a range of 2,700 miles. There was

*Colour plate shows Southern Cross moored in an ideal setting at Pago Pago, Samoa. Heading picture, a rare sight today, the view from the pilot's position of the Sandringham.*





2,392 n.m. of ocean to cross to Pago Pago.

We had taken off at 1725 local time, and soon the seven of us on board were getting into an organized routine, as one does with a large crew on a long flight. The two flight engineers conferred over their four charges before Jim Flanagan, the American from Antilles Air Boats, got his head down.

Bryan slipped into the left seat vacated by Charles, who was busy preparing for the task ahead. As I took the co-pilot's seat for a stint at the helm Paul Fagan, the mooring man, ship's purser, chief steward and anything else required of him, passed a tray of coffee and sandwiches through the galley hatch aft of the engineer's station. George Alcock, ground engineer, came up the forward ladder to see if everything was under control and, satisfied that all was well, retired to

*Top left, turning finals into Pearl Harbor with the old marine base on the left of the picture. Below, Antilles Air Boats' other Sandringham, Excalibur VIII, reunited with its companion at St. Croix.*

the aft 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. George had left Ansett, joining AAB and bringing all his "worldly goods" with him to continue to work on the two Sandringhams.

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, flickering moonlight.

We droned on through the night until a lightening of the eastern sky off our starboard bow heralded the dawn. Another power reduction came, and later we eased up to 5,000ft. Eventually Charles appeared through the floor hatch between the pilots' seats and he took the left seat from me as I went below for a spell on the Li-lo.

A change of engine note awakened me. My watch indicated that we had still another 45min to go, but when I reached the flight deck the reason for our early descent was obvious. We were flying into a rainstorm. Bryan showed me the latest weather report from Pago

Pago international airport. They were under a heavy rainstorm, but 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 ocean swell deep into the harbour mouth and reducing the alighting area to the inner elbow, a usable stretch of water of about 5,000-6,000ft. Set in a triangle of mountains reaching to over 2,000ft within a two mile radius, there was no overshoot below about 1,500ft. A complication was an aerial cableway which stretched from one side of the fjord to the other, right across the alighting area from 200ft to 1,680ft at the summit of Mount Alava, which formed the northern wall of the fjord.

#### Waiting for the weather

Charles descended slowly, and by the time we had reached 1,500ft the humid tropic warmth was filtering into the aircraft. Soon cloud breaks appeared, and we got glimpses of the white caps below. Five miles out we continued our descent until, at about 500ft, we were clear of most of the cloud with the approach lights of the rain-soaked runway beneath the nose. At 300ft we broke off over the airport and headed along three miles of coastline to the entrance of the fjord. In the rain and gloom we missed it. We made a 180 and headed back along the coastline. This time we saw it, a cloud-filled, watery valley. Charles considered it too bad to attempt an approach, but as we neared the airport it was evident that a slow improvement was taking place; the rain clouds were drifting northwards and the slight clearance would eventually reach the harbour.

In the meantime we circled around at about 300ft while Charles considered the possibility of alighting in the ocean and taxiing in. Such a landing in an unknown piece of water would not be without risk—the chance of hitting a submerged rock or reef was not a prospect to be regarded lightly, so it was decided we should orbit a little longer to wait the whims of the weather.

In less than 15min a visible improvement had taken place, and we headed





Over Sydney during initial check flights on November 28, 1974, the day of departure.

in and dropped to 100ft as we passed beneath the lowest wisps of cloud. The water was a flat calm inside the windless fjord, enabling us to make our approach from seaward. Reaching the elbow, Charles banked us round in a left turn to align us with the length of the harbour. We levelled and gave up the last few feet of altitude to stroke the mirror of water in a landing only perceived by the increasing swish of rushing water against the keel. Power fully off and the old sea bird gracefully slowed and settled into the warm tropical water in a white flurry of froth and foam. Just over 16½hr after leaving her "home waters" of Sydney *Southern Cross* had arrived in USA territory, her new country of adoption.

One of the trickiest parts of seaplane handling is mooring, and the older flying-boats such as the Sunderland do not have the refinements of reversing propellers which can be most useful in confined areas, so Charles had to inch towards the buoy as slowly as possible and call to Paul, by now in the open 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. He had judged it well, and in a moment Paul had grabbed the buoy with his boathook and was holding his free arm up in a firm "thumbs up", indicating that we were made fast. Four more sectors like that and we would be in the Caribbean!

#### A take-off to remember

While refuelling was under way, Charles began considering our take-off. There was only one direction for this, due to the terrain, and this required any wind to be from the east or south. All morning it had been blowing defiantly from the west and by lunch was causing some concern. Charles had even considered taking off lightly loaded with fuel and ferrying across to a New Zealand island outpost 100 miles or so distant—where there had been at one time an excellent flying-boat base—and topping up there from the local airport. The local Pan Am station engineer suggested we consult with a local charter pilot who knew the place well. His advice was simple—don't even try, because the New Zealanders were unlikely to co-operate and most probably would not permit the exercise anyway. So we watched impatiently for any sign of the 15kt breeze abating.

At 1500 local time there was a definite drop in the wind, and the wavelets on the water were mere ripples. In the short time it took us to reach *Southern Cross* in the motor-boat the wind had dropped to nearly zero and

Right, *Excalibur VIII* at St. Croix and above, *Southern Cross* approaching the jetty at Long Beach for refuelling.



increased again, so that, by the time we were aboard and secure, there was perhaps three or four knots from the wrong direction. However, the experts reckoned that the old girl would get off in spite of that and the glassy water condition at the upper end of the harbour, which would impede her getting "on the step". Charles called "Cast off!" and in a moment we were adrift.

With a puff or two of blue smoke the port outer burst smoothly into life and

we swung gently to starboard. With open water ahead of us number four was started, and now we had control over our direction. Using the throttles, Charles turned to port and taxied up deep into the harbour as the inboards were fired up in quick succession. With the inners running smoothly the outers were quickly run-up, and we wormed our way into the congested end of the harbour.

As we cleared the last of the hazards



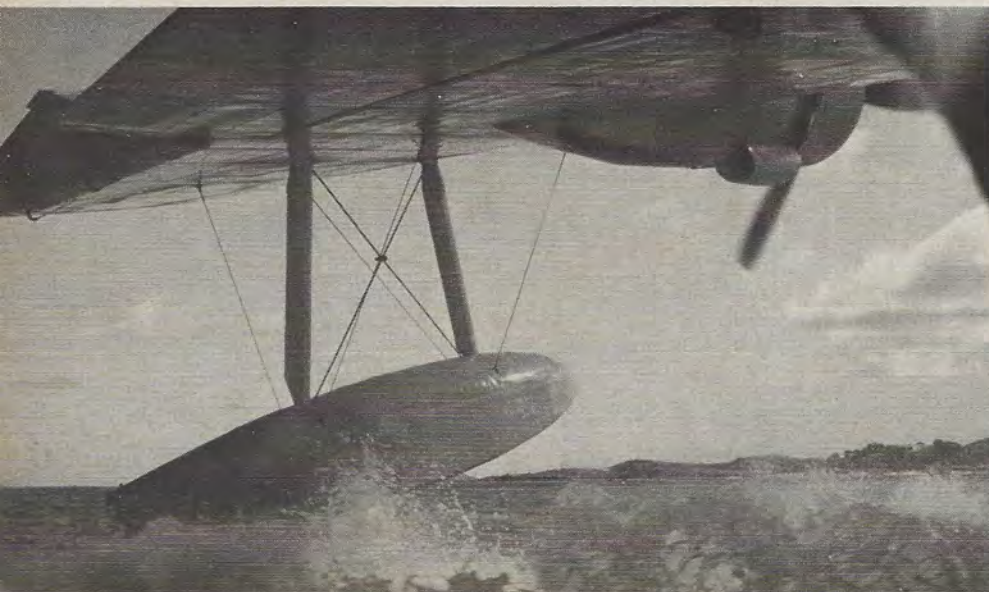




Charles swung a few degrees right, the engines surging as he played the outer throttles. Our acceleration was abysmal, and with a third of the straight run available already used she was still not on the "step". Bryan opened the "gate" and pushed the throttles to the contingency limit of 52in. The combination of high weight, virtually glassy water and three knots or so of wind from her stern dictated a slightly higher water speed before the combined efforts of

water pressure and wing lift could raise her up.

Blair eased the wheel back very slightly again and then forward and she rose sedately on to the "step"—at last we were planing, but we had used up half the straight run and the ASI read only 48kt. We thundered on, the engines pouring out a cacophonous tumult of noise. Noel, sitting behind the captain, flicked a finger towards Blair's ASI reading 50kt, concerned that the pilot



*A moment of triumph on the flight deck, on completion of 12,000 miles and 70hr flying time.*

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. On our present course we would have to abandon this take-off at the next instant, but we thundered on, accelerating slowly as we planed across the water and leaving a wedge of white foam behind us.

Blair had a contingency plan, and on reaching the elbow he very carefully applied some right rudder and we started to turn slowly starboard. Seventy knots—and now there was more water ahead of us. Blair continued this gentle "step turn", carefully keeping the wings level with aileron to keep the wing-tip floats clear of the water as we careened down the fjord in our slewing turn, a manoeuvre demanding caution in a heavy multi-engined flying-boat at high speed.

Eighty knots, and still we were slewing steadily to starboard, a little more usable water opening up ahead of us with each degree of turn. As the old flyingboat rose higher on the step the wings grasped at the air and began to take hold. At last the lumbering machine was beginning to feel like an aeroplane. As we reached 85kt Blair eased back the control wheel slightly, and out she came like a proud old lady gracefully taking her leave. We all relaxed and grinned at each other like a bunch of kids.

Several hours later, after a rest below, I climbed the short ladder to the flight deck, and as I slid into the co-pilot's seat Bryan 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 to keep the b.m.e.p. (brake mean effective pressure) down 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 a precaution we had been flying for the past four hours with reduced power on number three, compensated by a higher power than usual on the other three engines. The result was an overall higher fuel consumption than planned for. Our flight planned airborne time for this leg was 18hr 10min.

By now we were halfway, and Charles had taken a "celestial" on Sirius which put us 70 miles right of track, our correction for the expected east-north-easterly wind having proved too much. This brought our "dry tanks" position beyond Honolulu that much closer.

#### **To be concluded next month**

*Journey's end and the last splashdown at St. Croix. Above, left, a Grumman Goose of Antilles Air Boats, one of Southern Cross' future playmates, waddles on to the St. Croix slipway.*



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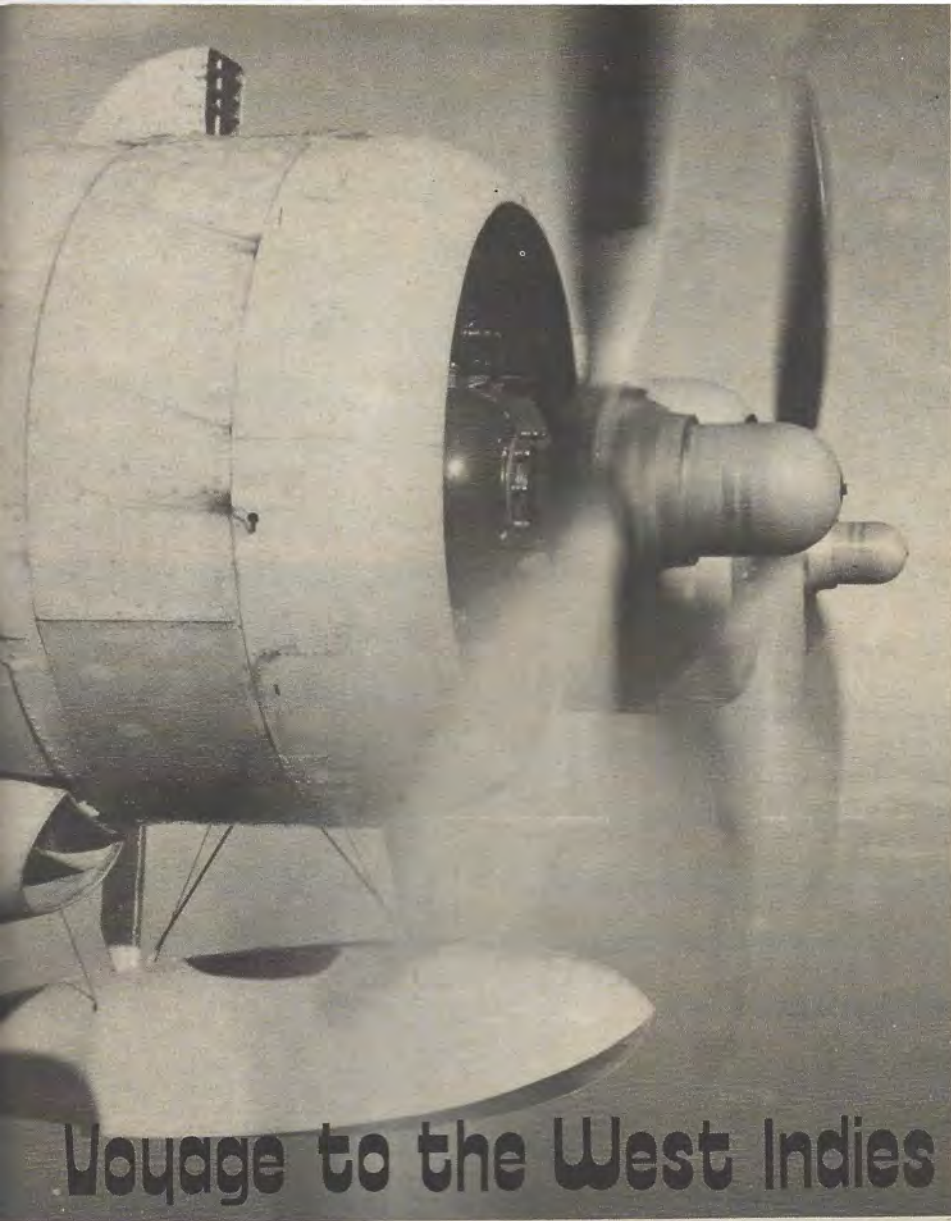
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**\$25,000 Stearman**

Casualties of war  
More Spitfire floatplanes  
De Havilland's camera-shy Dolphin  
XB-70 Valkyrie, bomber with the mostest





KEITH SISSONS concludes the account of his flight from Sydney to St. Croix in a Short Sandringham last December.

At 1935 GMT the engineer announced that we had another 4hr 22min remaining, and with Bryan and I constantly scanning the gentle white caps for any sign of the wind changing in our favour we reckoned we still had 3hr 25min to go. However, the beacon at Maui gave us a good bearing and with the Wheeler NDB at Honolulu providing a track check our ETA should not have been far out. Jim offered the comforting advice that if we did get "a bit thin" on fuel there were 40gal unusable, much of which could be coaxed out of the tanks if we got the nose well up!

At 2030 we pulled the revs back to 1,750 and rumbled on, almost able to see the propeller blades as they churned slowly through the air. At last the outline of Pearl Harbor appeared, and on requesting an initial descent from 5,000-ft the controller directed us to turn starboard for a radar identification, on

to a heading which hardly took us any nearer our destination. Eventually we were turned again towards the island and cleared to descend. Charles disconnected the auto-pilot and we made a weaving descent to 1,500ft before sweeping in over the coast and the fine anchorage of Pearl Harbor, almost adjacent to the international airport.

Bryan carried out the approach and finals checks as we turned in past the old US Navy seaplane base with its fine slipways and straightened out. Then the murmur of ripples on the keel told us that we had arrived. The time 2255 GMT, 17hr 40min since we roared through Pago Pago harbour. Paul appeared in the bow hatch and streamed the drogues, a boathook at the ready, and past our port wing tip a large launch overtook us, a large board on its stern ordering us to FOLLOW ME, an unexpected spill-over of modern air-

port practice making an intrusion into our voyage of a bygone age.

Refuelling occupied Capt Blair and the engineers for some time the day after our arrival. The flying-boat was taxied to a marine jetty and moored stern on, a motorboat keeping the bow aligned, but the operation was a tedious business. The engineers had discovered that the number three engine "illuminations" were simply due to a plug lead becoming loose at the plug end.

#### Off for Long Beach

All aboard again, and with a minimum of formality and fuss we slipped our mooring, the engines were started and we turned about to taxi to the end of the lagoon. The vital ritual of engine and propeller checks was done and we turned sharply into wind, the throttles were opened to the normal limit of 48-in, and we were thundering through the water in a cloud of spray. No problem getting "on the step", and as she accelerated the flying-boat rose until she reached her flying speed of 82kt or so and left the water. Almost immediately we started a gentle turn to starboard as directed by Control, reduced power and raised the flaps as Honolulu slid past beneath our wings.

The weather forecast Bryan had obtained today was more optimistic than yesterday's, and although there was still bad weather in the east of our route, the winds generally would assist us. We anticipated doing these 2,277 n.m. in less than the 18hr expected.

Fifteen hours later the clinging clouds began to break as we commenced a slow descent, the Ventura Vortac giving us our continuous position. Ten minutes more and we were breaking through the overcast with the coast of America off to port. Blair eased *Southern Cross* gently down to skim the small wavelets and then the patter of water against the hull announced our arrival in the United States, 15<sup>3</sup>/<sub>4</sub>hr after slipping our mooring in Honolulu.

Captain Blair was planning on a two day "layover" in Long Beach, but the engineers' plans to do a 60hr check the next day were thwarted by the weather. In 24hr it cleared, and the engineers set to work. The three sectors we had flown had taken 50 flying hours and the transcontinental sectors to Miami would be another 16, so our planned refuelling stop at Eagle Mountain Lake, Fort Worth, was unsuitable.

The following day, December 6, was set aside for refuelling. The only suitable jetty was deep in dockland, about six or seven miles away, so the engines were fired up and, led by small motorboat, the old Sandringham got under way. The specially requested long fuel hose was dragged down the bank and hoisted out on to the flying-boat by light line and the long job of transferring 2,160 Imp gal of avgas was started.

*Southern Cross* was in good company for, behind the jetty, a tall, boxlike and windowless metal building loomed. The clue was the slipway immediately in front of the building, with a huge vertical shutter-like door at its face. Be-



Right, on finals and coming in over the old Queen Mary at Long Beach. Below right, edging up to the Long Beach mooring buoy to hook on.

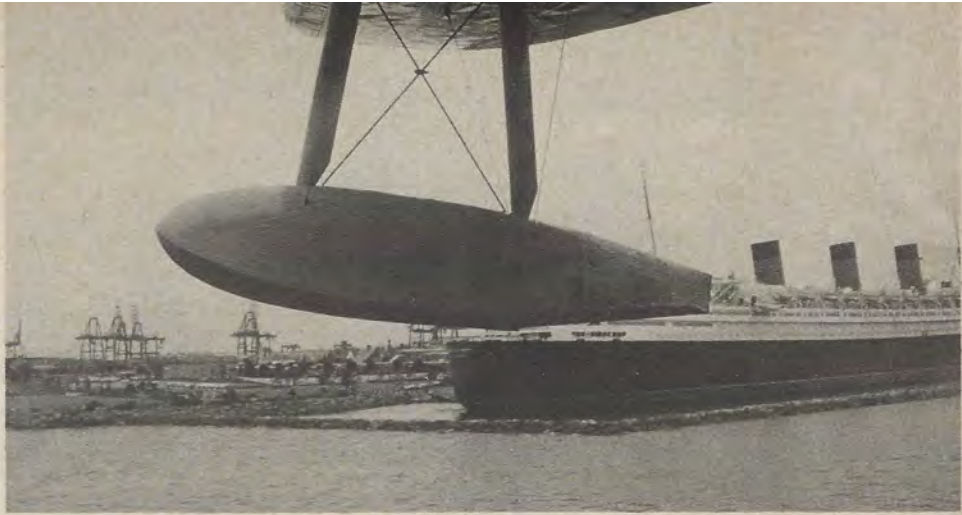
hind these doors, in great secrecy, was stored that mysterious and incredible eight-engined wooden flying-boat, the Hughes Hercules.

Sunday December 8 dawned windy but bright. The bad weather of the previous day had gone and so the flight was on. While the engines warmed up they propelled us through the water at a good pace of about 15kt and we moved up and down the wide harbour in a series of wide sweeping turns. The pre-take-off checks were swiftly completed as we turned into wind close by the old Queen Mary. Charles eased the throttles forward and called for full power, over-riding on the outers as necessary to keep the lumbering seaplane going straight.

Slowly she rose higher, and at 80kt she lifted out, water streaming from her hull. It was 1326 local time as Blair called for the flaps to be raised and we settled into a slow climb. We banked to port, turning our backs 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 schedule, and the intention was to get right through to the Virgin Islands without a "layover", which meant that to arrive before darkness we would have to reach Miami at daybreak and refuel in about two hours.

I rested for only a couple of hours before climbing back up to the warmer flight deck. A layer of stratocumulus beneath us concealed the waters of the Gulf of Mexico, so that we were suspended between the stars and a Christmas snowscape of cloud. For an hour or more we droned on before the cloud began to break and the lights of Florida beckoned us to the coast. Just over 13hr out and we were talking to Miami Center as light grew in the eastern sky.

We started our final descent and rumbled in over the tall white buildings of Miami as the city awakened to begin another day. Many lights were still on and the Sun was still below the horizon as we swept in over the swampy coast,



well ahead of our original ETA. Picking out Chalk International Aviation's seaplane base, Charles brought the Sandringham round in a wide curve, and let her down on the lightly rippled surface. He closed the throttles and she subsided in the usual flurry of foam, her navigation lights still on, 2,069 miles and 14 $\frac{1}{2}$ hr from Long Beach.

During refuelling there was time for the ladies to re-stock the galley and for George to get the APU going to pump out the bilges. Refuelling took longer than the allotted two hours, even though we took on only a little over 1,400 Imp gal, not requiring full tanks for the six hour flight to St Croix. However, Charles decided to leave, and when we were all aboard the hatches were smartly closed and Paul cast off. Charles let the current take the flying-boat into mid-stream and waited to see how she headed in the very slight breeze. Her bow pointed down channel so he quickly started numbers one and four. The inboards quickly followed and we proceeded downwind. There seemed to be something ridiculous about checking the magnetos in a shipping channel while being overtaken by an orange bus just off the port wing tip.

A burst of power turned us about and Charles opened the throttles, handed them over to Bryan, and we pounded down the watery runway. We lifted gracefully from the water in about 40sec—the shortest take-off yet. Power was reduced, and we banked to port over the flashy buildings of Miami

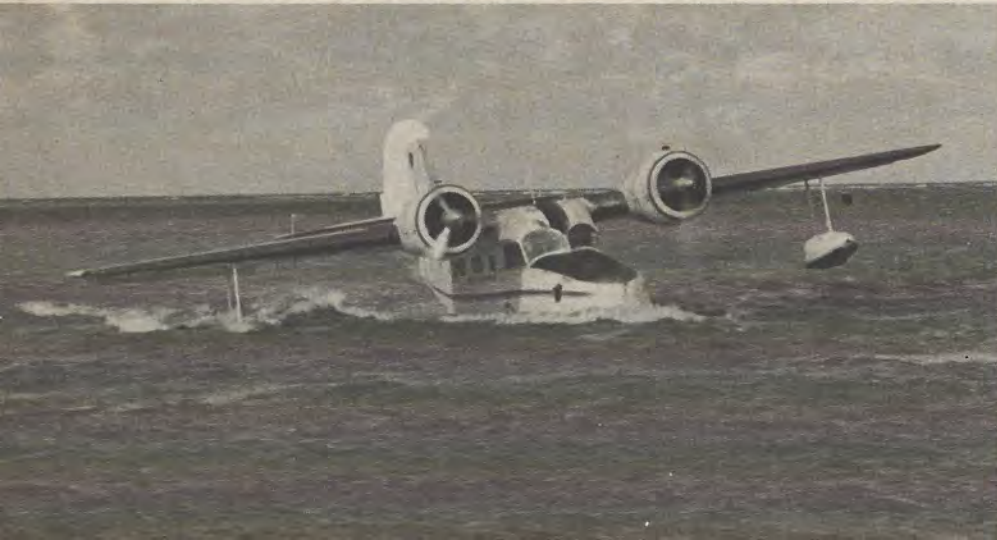


as the flaps were brought in, settling into our climb and leaving the pleasant Florida coastline to pass from view astern. It was 1020 local time. With a six-hour flight and an easterly change of longitude we were going to be pushed to make St Croix before dark. I settled down for a sleep, it being my turn "off watch" as the faithful old flying-boat droned on toward a sea of islands. When I came to we were running through the southern-most Bahama Islands.

We were near Georgetown on Great Exuma, and Bryan was concerned about our ground speed. The winds forecast, although not favourable, were light, but he suspected they were stronger. By the time we reached the Caicos Islands we were extremely doubtful about getting to St Croix. Charles reckoned that if we did not pick up any time we would have to go into St Thomas, which was 40 miles nearer. At 2130 GMT we started our descent from 5,800ft, having advised the San Juan controller of our intention. The beautiful island came into view as the Sun began to set behind us.

Charles called for the descent and finals checks as we came steadily lower. We could see St Croix, and could have just made it, but he had now settled for St Thomas. Skimming the water, we entered an inlet with green sloping hills on either side. The water was like

*An Antilles Air Boats Goose taxiing into St Croix in a stiff crosswind, with its starboard float almost awash.*

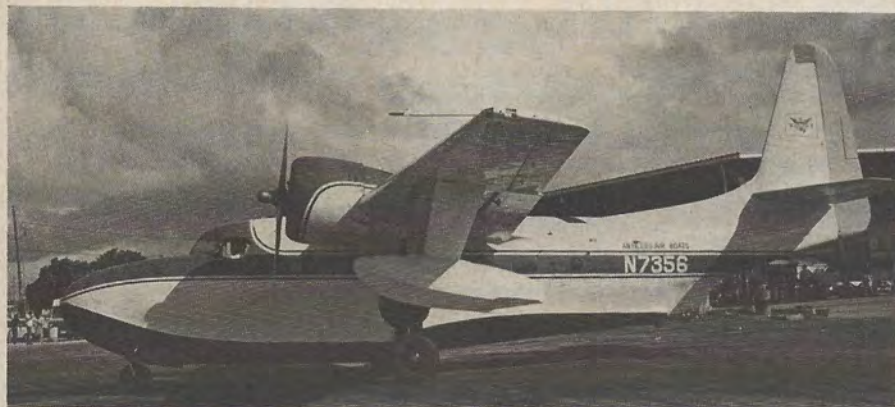




a millpond. Keeping a fair amount of power on Charles let her down as lightly as a whisper, holding enough power for us to run on the step and turn into another narrower inlet which then opened up into a wide harbour—Charlotte Amalie. We had arrived in the Virgin Islands, but we were still not quite home.

Next morning we congregated at the seaplane base for the final leg home. As we clambered into the little boat

Right, Jacques Cousteau's PBY-6A Calypso parked at Long Beach in December 1974. Below, Antilles Air Boats' Sikorsky VS-44A, sole survivor of three built, languishing at St Thomas awaiting restoration.



Grumman Mallards and Goose 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 highly patronised high frequency links between the various local islands.

For the last time the checks were done and hatches secured. The ritual of engine testing was completed and then, with a great surge of power, we raced across the harbour, with the stern disappearing between two fountains of curving water. Being light, we were on the step almost immediately, and then we were curving to the right to follow the shape of the harbour. Charles stopped the turn to run briefly straight and we lifted off and out over the open sea.

Twenty-five minutes later St Croix lay below us, and as we banked over the seaplane base a very familiar shape was silhouetted on the blue water—our sister ship, *Excalibur VIII*. We lined up towards the alighting area behind the reef. Closer came the brilliant blue water, and then we made contact. The throttles were closed and in a brilliant white tumult of foam we arrived at our destination. Our long flying-boat voyage had ended. Will history record it as the last such voyage?

Left, Antilles Air Boats Grumman Mallard N7356 taxis out of St Croix on December 12 last year. Below, apron scene at St Croix, with Mallard and Goose nearest, Sandringham behind.

