

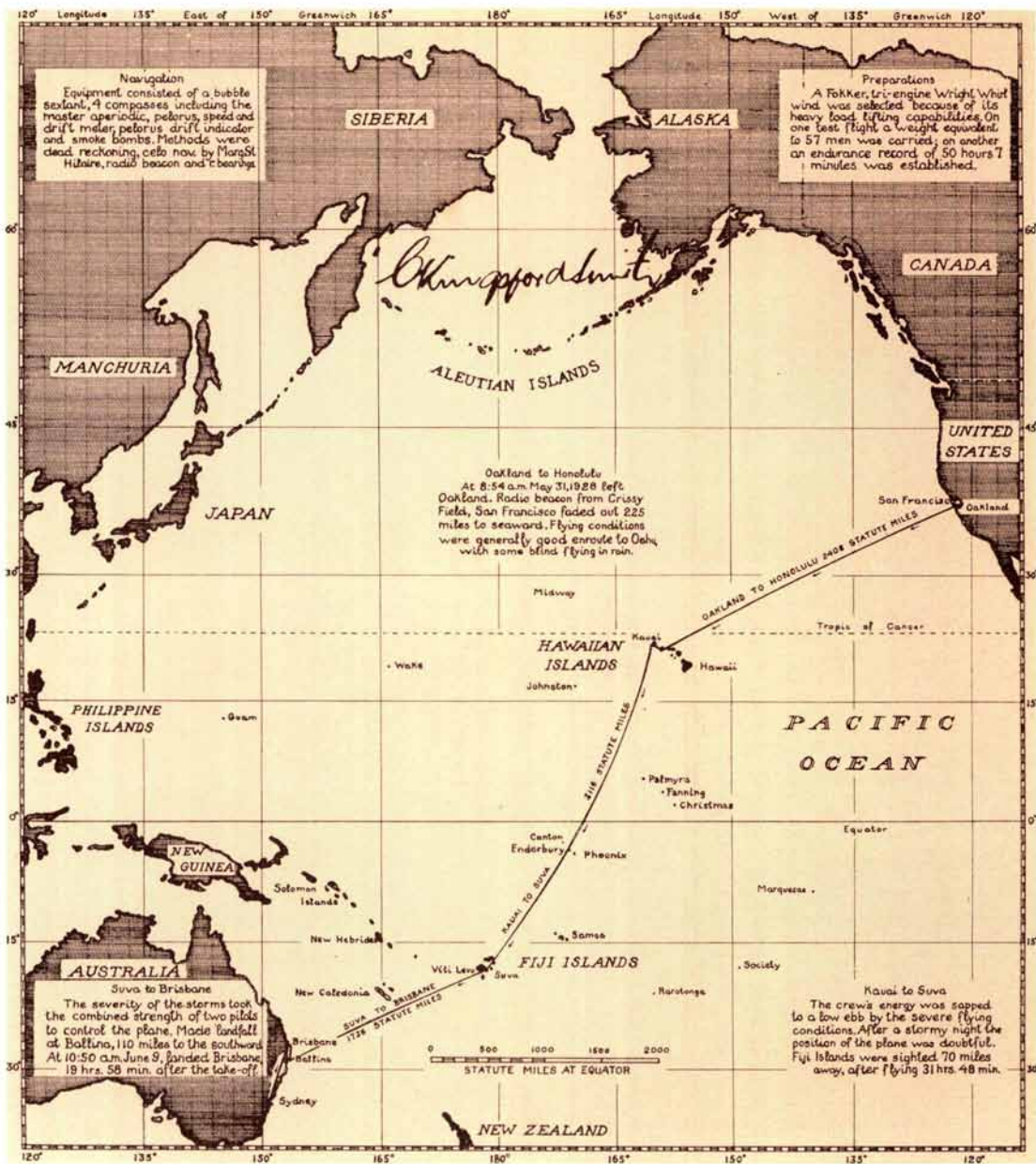
CROSSING THE PACIFIC

The flight of the Southern Cross 1928

Mementoes from the Crome Collection
and other aviation collections of the
National Library of Australia



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On 31 May 1928 the Australian airmen, Charles Kingsford Smith and Charles Ulm, together with two Americans, the navigator Harry Lyon and the radio operator Jim Warner, left San Francisco on the first flight to Australia across the Pacific Ocean. Kingsford Smith was fully aware of the historic significance of the flight:

I have a vivid recollection of the morning of May 31, 1928, when, with a roar of the engines, we took off from Oakland airport. The morning was misty, but the weather forecast was good, and as we headed out over the Golden Gate I experienced a sensation of relaxation and relief from the worries and anxieties



Warner

Ulm

Kingsford Smith

Lyon

of the past nine months, and at the same time a tremendous elation at the prospect before me. To me personally all our troubles were over. What lay in front was a glorious adventure — and a glorious achievement. It is true that others had pioneered the path before us as far as Hawaii, but after that we were going into the unknown. Balbao [sic] had been the first white man to set eyes on the Pacific; Magellan had been the first to furrow its water with his keel; Bligh had navigated its unknown waters for 3000 miles in an open boat. I felt that we were following in the footsteps of these great predecessors, and that we could claim kinship with them. They had traversed virgin waters; we were about to traverse virgin air.

The two Australian aviators had both been born in 1897. Kingsford Smith had grown up in Brisbane, while Ulm, whose father migrated from France, spent his early years in Melbourne. They had both served at Gallipoli and France in World War I. They became close friends in the mid-1920s and in June 1927 they achieved their first great aviation success, when they flew around Australia in ten days. The previous record had been 22 days. Shortly afterwards they sailed for the United States with the firm intention of returning by air. The Australian explorer and aviator Hubert Wilkins sold them a three-engined Fokker plane, which they named *Southern Cross*, but many months elapsed before they obtained sufficient funds for repairs and new equipment. Eventually their debts were paid and, despite many warnings of disaster, they were ready to depart.

The flight from Oakland airport, San Francisco, to Eagle Farm aerodrome, Brisbane, lasted nine days. The first stage was relatively uneventful but shortly after the plane left Honolulu the weather deteriorated. The rain poured down, the drenched airmen had to fly 'blind' for long periods, and at one point the starboard engine coughed and spluttered, but then resumed its monotonous roar. The plane drifted off course, no landmarks were sighted, and for many hours Lyon was not able to make a sextant sight of any stars. Kingsford Smith wrote later that, 32 hours after they had set off from Honolulu, they realised that they were not at all certain where they were, they did not know how much further they had to fly before

they reached Fiji, and they began to worry about the petrol supply. Yet three hours later they landed safely at Suva. After resting for two days the four airmen took off on the last and shortest stage of the flight. Their confidence had increased but they soon had to face the worst weather of the flight. All through the night the plane pitched and forced its way through torrential rain and lightning, ascending to 9000 feet and descending to 500 feet in vain attempts to avoid the worst turbulence. The crew was drenched, their hands were numb, and in nine hours Ulm was able to make only one entry in his log. Eventually the storm eased. When the plane reached the Australian coast on the morning of 9 June 1928 it was 110 miles off course, but it was an easy matter to fly northwards to Brisbane, where the airmen were welcomed by enormous crowds.

A few weeks later Kingsford Smith and Ulm presented to the Commonwealth National Library the log which Ulm had kept throughout the flight. Written in pencil in an exercise book, it provides a unique record of the thoughts and fears, the occasional disagreements, and the pleasures and hardships experienced by the pioneer aviators [extracts].

- 31 May I believe there is more in side wing tanks than K.S. thinks.
- 31 May Sunset – the most beautiful I've seen for years.
- 3 June We are now 7 hours out from Kauai and Smithy has flown 4½ hours and self 2½ hours. Radio apparently still out of action for no word from Jim Warner yet.
- 3 June Hell this rain is rotten. Reminds us of 2500 miles of rain we flew thru on our 7500 mile flt. ard. Australia. The windshields are leaking & Smithy and I are getting damned wet too.
- 4 June Oh what a cheerless dawn – Rain, cold and blind flying at 8000 feet. Smithy sure knows his onions at this blind flying.
- 4 June Very doubtful whether we can make Suva or not. But we should reach land O.K.
- 8 June Since last entry have passed through worst 2½ hours of whole flight. Terrific rainstorm with very violent bumps

sometimes losing 400 ft. in one bump and incessant rain

At times when S. flying blind the bumps were so bad as to necessitate all the strength of both of us on the wheel.

9 June Sorry so few entries in this Log but been forced to fly high and hands too numb to write now.

Kingsford Smith and Ulm made several other record-breaking flights but within seven years the two young men were both dead. Ulm disappeared in December 1934 on another flight from America to Australia. Kingsford Smith crashed in the Bay of Bengal in November 1935, while flying from England to Australia.

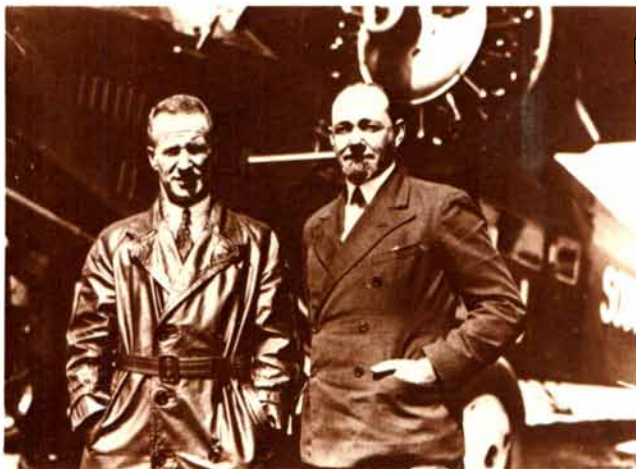
Other aviators followed the example of Kingsford Smith and Ulm by presenting to the National Library their logs, letters and other papers. They included the English airmen Alan Cobham and Francis Chichester, as well as the Australians Bert Hinkler, Arthur Affleck, Guy Menzies and Gordon Taylor. In more recent times the Library has acquired the splendid collections assembled by aviation collectors. Among the papers of Norman Ellison are many letters of Kingsford Smith, mainly dating from his early years as an airman, and hundreds of photographs of planes and their crews. Rex Allison brought together a most comprehensive collection of letters, cables, photographs, maps and logs relating to the MacRobertson International England-Australia Air Race of 1934. Above all, E.A. Crome has spent fifty years in collecting logs, letters, photographs, newspaper cuttings, books, flight covers and objects associated with historic flights. The Crome Collection, which is now in the National Library, includes the compass and other instruments used on the *Southern Cross*, radio messages, and handwritten messages which had to be passed between crew members owing to the noise of the engines.

In commemorating the fiftieth anniversary of the first trans-Pacific flight, the National Library pays tribute to the many Australian aviators and collectors who ensured that the written and pictorial records of early aviation have been preserved.

Below: Kingsford Smith's ambition to fly the Pacific had been frustrated by lack of money. In California in 1919-20 he had earned a living stunt flying.

Below right: Ulm, Smith and Keith Anderson planning their route. Anderson went with them to America in 1927, but returned to Australia before the flight began.

Right: Kingsford Smith with Sir Hubert Wilkins, Australian aviator and polar explorer, who sold the fliers their plane, a Fokker without engines or instruments. Three Wright Whirlwind J5C motors, each of 220 h.p., were installed. When a promised New South Wales government grant fell through, the expedition was saved by a gift from the Australian businessman Sidney Myer, and by the generosity of Captain G. Allan Hancock, who bought the plane and presented it to the fliers.





The *Southern Cross*, after taking off from Oakland, flies over the Golden Gate. This photograph is reproduced from the frontispiece of Smith and Ulm's own account, *The flight of the Southern Cross* (New York, 1929).

Below: The *Southern Cross* before takeoff at Oakland airport. Here 1200 gallons of fuel were loaded into the four tanks on board, with a week's emergency rations and a freshwater still. No parachutes or lifebelts were carried, however. The wingspan of the plane was 71 feet 8½ inches and the wing was entirely of wood, which would provide flotation in the event of the plane ditching. An amphibian aircraft had been considered, but was too

expensive and had less lifting capacity. At cruising speed the engines of the *Southern Cross* turned at 1650 r.p.m., giving an airspeed of 94 m.p.h. With an estimated fuel consumption of 32 gallons per hour, Kingsford Smith and Ulm calculated that they would have a still-air range of 3800 miles; their longest leg, from Hawaii to Fiji, was 3100 miles.

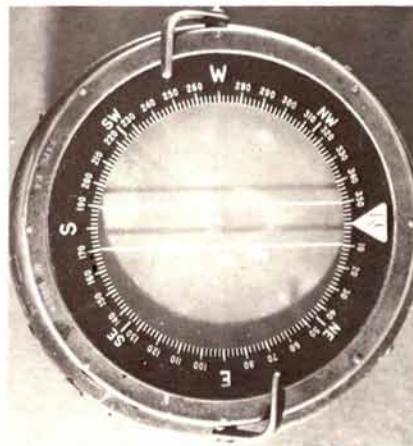
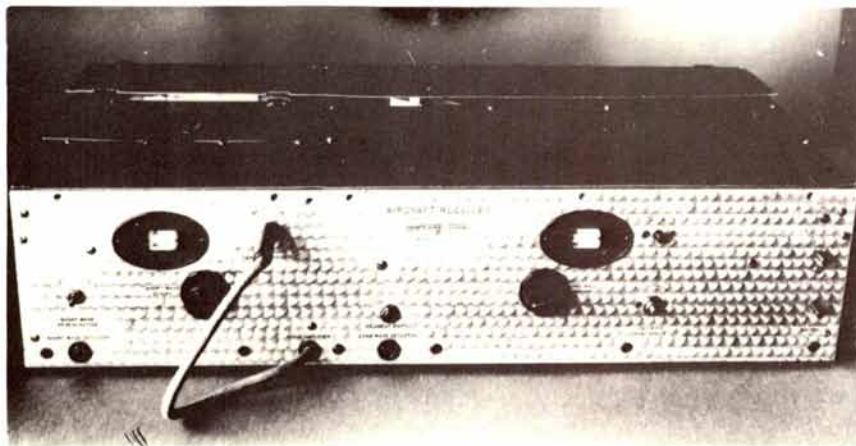
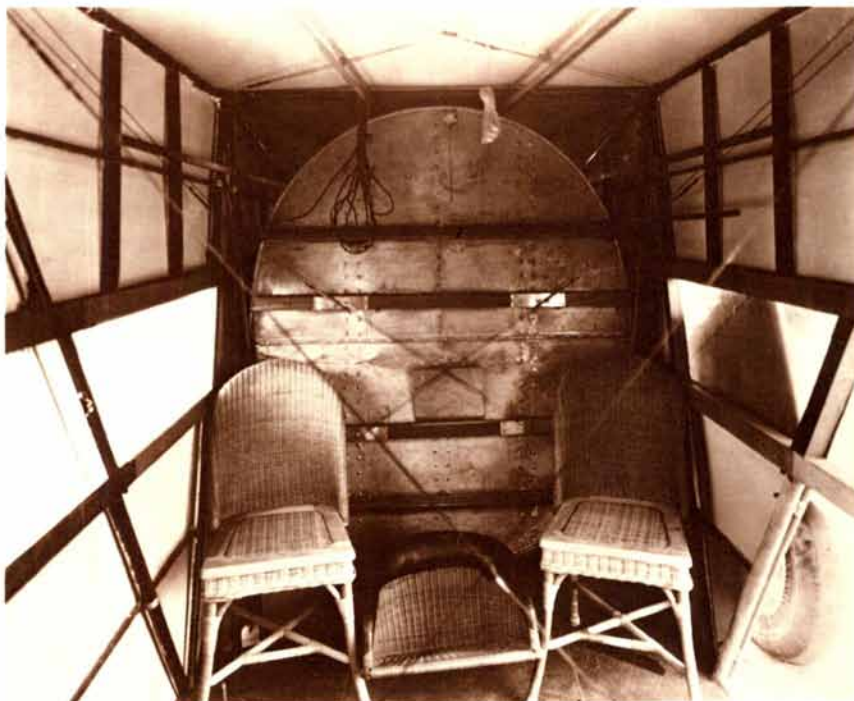
Right: The navigating cabin, measuring 6 feet high by 5 feet 6 inches wide and 8 feet 3 inches long, where the Americans Lyon and Warner worked during the flight, at a chart table and radio set not shown here. Looking forward, the immense petrol tank separating the cabin from the cockpit



can be seen. The pilots too sat on wicker chairs. Communication between the crew was intended to be by telephone, but engine noise was so deafening that conversation was impossible. They resorted to a system of notes passed over the tank with what Lyon called 'Ulm's patent annunciator', a stick.

Below: The radio carried on the *Southern Cross* was the most modern available, and could send and receive on long and short wavelengths. There was also an emergency transmitter, the aerial of which could be carried aloft by a balloon.

Below right: The *Southern Cross* carried four compasses: a master (aperiodic) compass mounted on a non-magnetic tripod, an earth inductor compass and two magnetic compasses for steering. Both the radio and compass shown here, together with other instruments, form part of the Crome Collection in the National Library of Australia.



3-10 P.C.T. Clearing up ahead. Sun out above perfectly calm water below no draft apparent to the eye.

3-15 Clear horizon - height 1200 -
Revs. 1650 - Speed 77 knots -
alt press. - 61-59-64.
Temp - 45-47 - out.

4-35. Revs. - 1620 - 1650 - 1635
alt. 1000 -
Speed 74 knots
Visibility good -

Smithy and I ~~are~~ worried re gas consumption - if our estimates of what is left in ship tanks is correct we can't make Honolulu -

Smithy estimates we have used over 400 gallons in 6 1/2 hrs - I estimate we have used about 290 galls - I believe there is more in ship tanks than K-S tanks.

Have not sighted vessel since leaving S.F.

Two pages are reproduced here from the 37-page log kept during the flight by Ulm, scrawling hastily with a pencil in an exercise book. At times his hands were too cold to continue, and the pilots' legs and feet were soaked by rain in the part-open cockpit. The extracts give a vivid picture of the crew in their wicker chairs, living on water and sandwiches, unable to sleep when off duty for the roar of the engines.

The page at left is from the first leg of the journey, Oakland to Honolulu, 2400 statute miles, flown in just under 27½ hours. This flight had already been made by four other crews: Maitland and Hegenberger on 28-9 June 1927, Smith and Bronte on 14-15 July 1927, Goebel and Davis, and Jensen and Schuller in the Dole Air Race of 16-17 August 1927. The second leg, however, from Honolulu to Suva, had not been attempted before. The page at right is from Ulm's account of the last leg of the flight, from Naselai Beach, Suva, to Eagle Farm, on 8 June 1928.

Position lat 15° 15' S long 178° 30' W
20 minutes
Avg 89 kts

Sunset - last phase sunset
again OK. The last bit of
flight ahead - one compass set
out of order - speed gauge
at 3850 hrs 1650 yellow
colder

Again the 2 hour flight
Spoken for - Markon
both now read
for time on scale. The
at 1650 hrs 1650
speed gauge showing
No engine start.
at 1650 hrs 1650
arriving good time
we will at the end of
passing New Caledonia

Since last entry have passed
Uranga 10:30 12:15 hours on whole
left. Jerry's Ram down under
very violent bumps. Some
long 400 ft - one 500 ft

It will be delight
to see that first
22 hours in the ^{Peak}
air Hawaiian Hege

Receiving Beacon OK ^{6:11 AM}
Getting distinct "A"
indicating we are little west
of ~~Radio~~ Radio Beam
JW
Hotter Today

HAGEOL
SAFETY COACHES
COMPOUND TRUCKS

up side of our ship
of course it may have to
adjust itself in flight

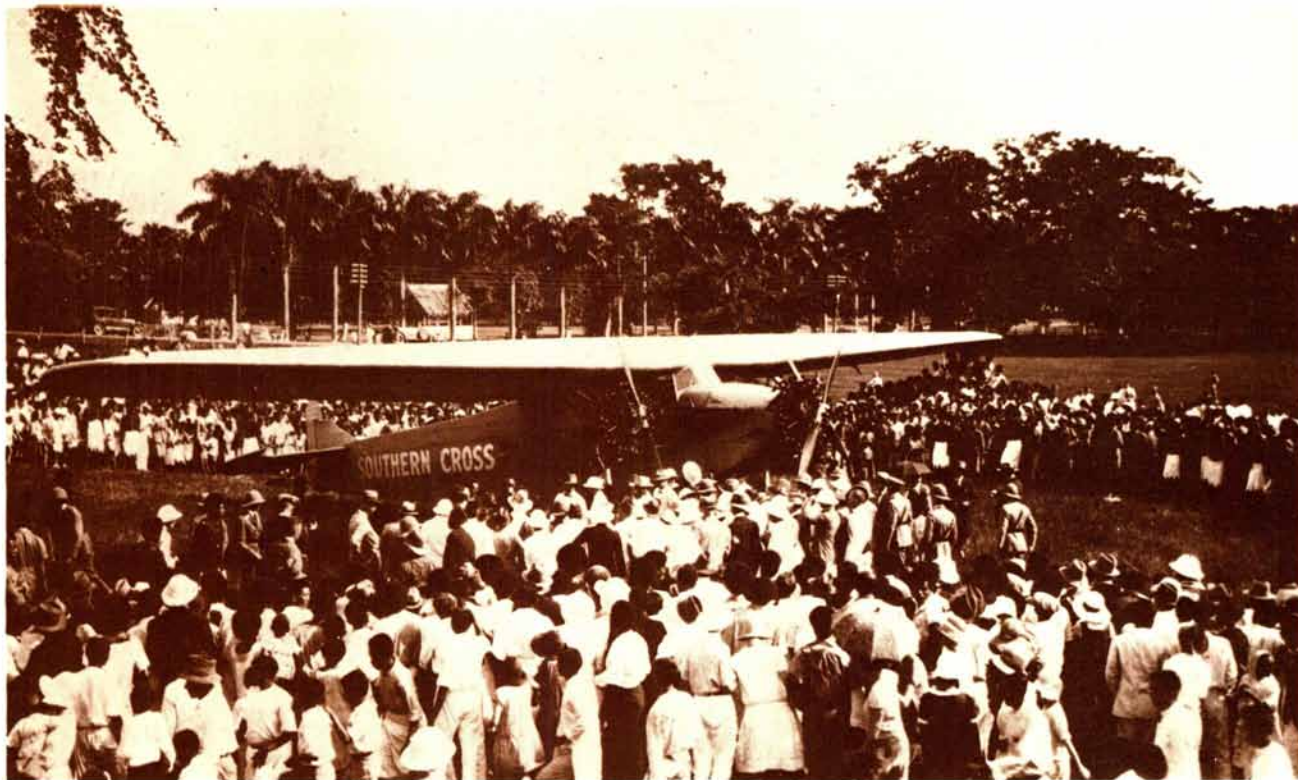
These messages are a selection from hundreds scribbled and passed between the cockpit and the navigating cabin during the three flight stages. Afterwards, Kingsford Smith recommended, 'Our advice to airmen who may fly oceans in the future is to design their machine in such a way that the crew will be able to walk between the pilot's cockpit and the navigating compartment It would have been very convenient when we wanted to exchange messages, and the same passageway could be used by members of the crew off duty to snatch a little real sleep.' Many of the notes were discarded by the fliers as too ribald for posterity.

They're getting that transmitter
if way around the globe
wouldn't be surprised if
they're getting everything I
say right in Australia now

I've got a feeling we're
going to make it with
flying across

The *Southern Cross* surrounded by crowds at Fiji after the second leg of the journey, 3100 miles flown in nearly 33 hours. From the roar of the engines, the crew was totally deaf for some time afterwards, and could not hear the congratulations showered upon them. Smith landed the plane on a small sports ground in Suva; telegraph poles at one end had to be removed to make room. Takeoff from there with a heavy fuel load was obviously impossible, and after an anxious and time-consuming search for a suitable runway

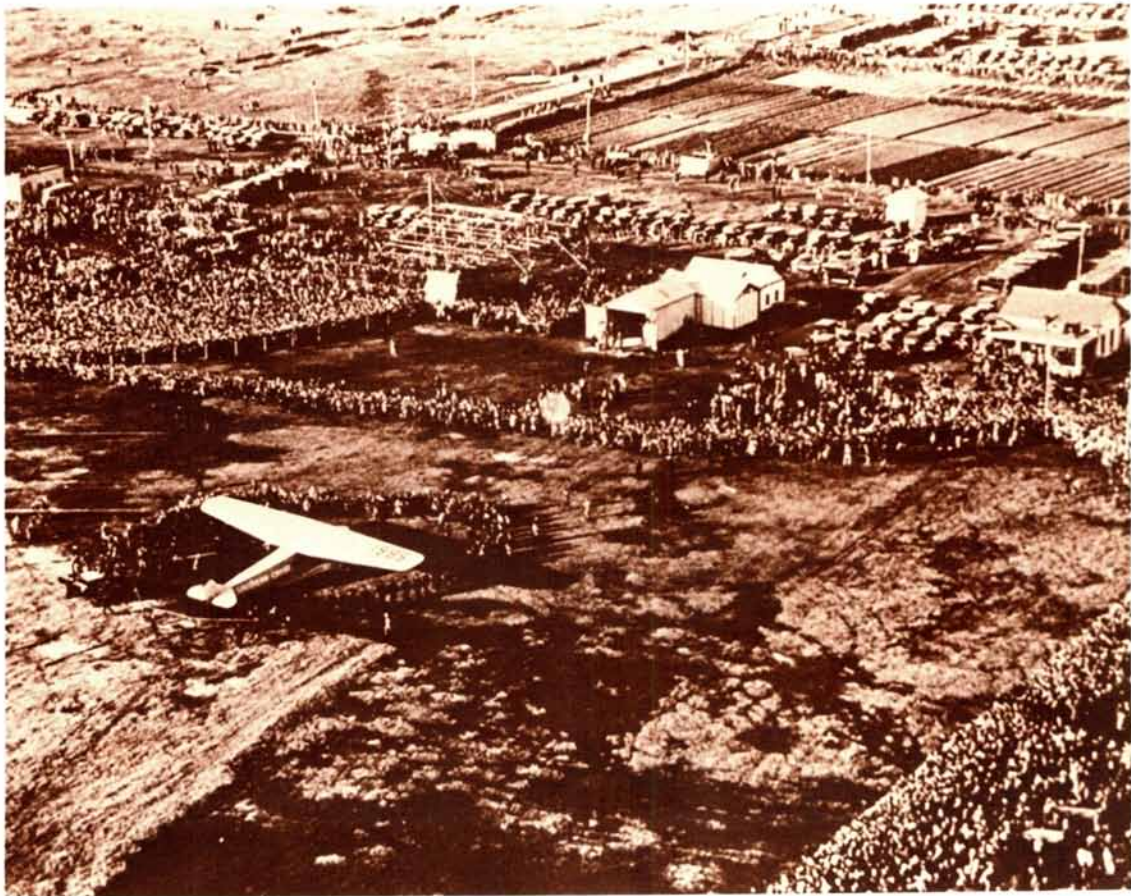
the plane was loaded at Naselai Beach, twenty miles east of Suva, for the final leg to Australia. The airmen were feted at many parties; Lyon and Warner were smartly dressed, but Smith and Ulm had neglected to take a change of clothes and appeared throughout in flying suits. Meanwhile policemen and members of the Defence Force guarded the plane from curious Fijians, many of whom had never seen one before, and invented some striking myths about 'Wanga Vuka', the bird ship.



Kingsford Smith's parents awaiting his second Australian landing, at Sydney's Mascot Airport, on 10 June 1928. The first landing had been at Eagle Farm, Brisbane, on the morning of 9 June. Ulm wrote in his log at 9.55: 'Aussie Coast clearly defined. Loud cheers. Our goal is in sight. In an hour or so we will have satisfied our ambition to be the first ones to cross the Pacific by air.' The log ends with the laconic entry: '10.50a.m. ARRIVED BRISBANE.'

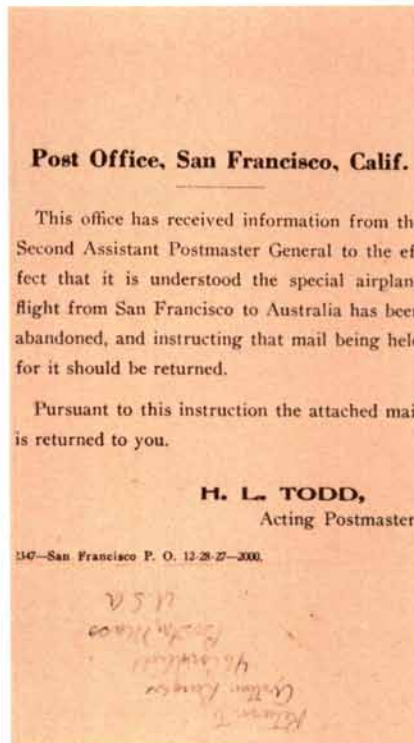
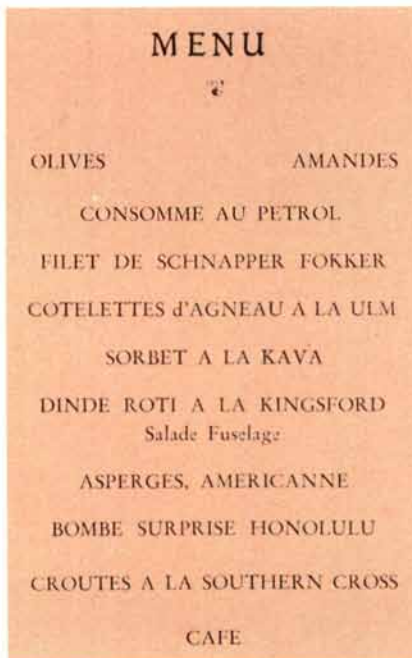


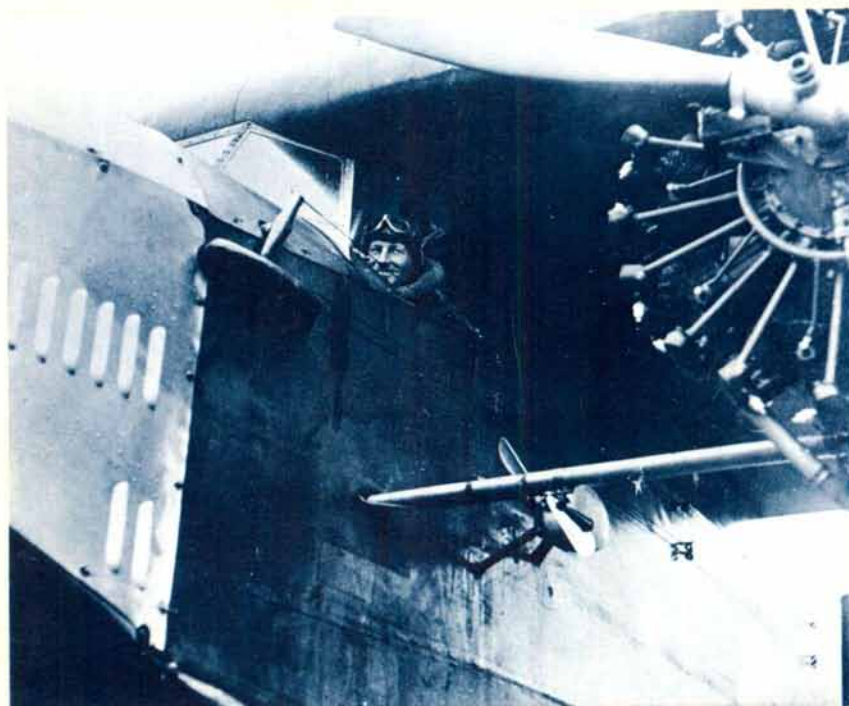
This leg of 1700 miles, flown in just under 20 hours, had seen the worst weather of the entire flight, and the Brisbane welcome was a well-earned reward. There were thousands at the airport: 'Brisbane rose much earlier than usual this morning, and a huge fleet of private cars and taxi-cabs rushed the crowd to Eagle Farm. Many fashionable parties went on to the aerodrome after late dances' (from the Special Representative of the Sydney Sun).



Right: Two sides of a prematurely issued flight cover, never used. Mail was often carried on pioneering flights as a philatelic novelty, acquiring rarity value. The Crome Collection in the National Library of Australia is particularly rich in philatelic treasures associated with aviation history.

Below: The cover and contents of a menu for a dinner in honour of the fliers, held in Sydney soon after their arrival, one of many such dinners and receptions at which they were feted.





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