



*A History of  
Sea-Air Aviation  
Wings Over  
The  
Ocean  
part five*

By John M. Lindley

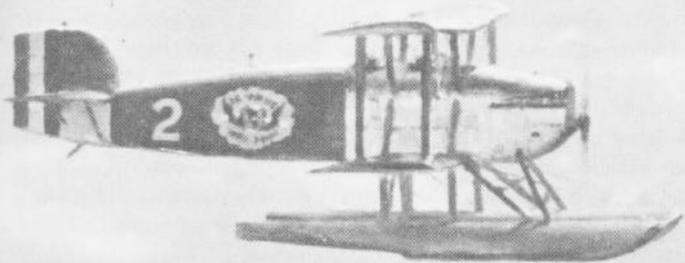
Unlike flights across the North Atlantic, attempts to cross the South Atlantic by air did not draw much public attention. There were no money prizes for South Atlantic firsts; no great cities, such as New York and Paris, which governments and civic leaders wished to see connected by air; and the South Atlantic was of no special economic value to the United States, Britain or France. Nevertheless, its conquest was not easy.

The first crossing had been made by the Portuguese team of Coutinho and Capt. Arturo de Cabral-Sacadura, but

their flight from Portugal to Brazil had been made over two months and in three different airplanes (March 30 to June 5, 1922). In January 1926, Cdr. Ramon Franco of Spain made a crossing by stages. The first "decisive" flight across the 1,500 miles from Europe to South America came in 1927. Italian Cdr. Francesco de Pinedo flew the flying boat *Santa Maria* from Sardinia to Brazil. Later that year, on October 14, Dieudonne Costes and Joseph Le Brix of France flew a sesquiplane (a biplane having one wing of less than half the area of the

other), named the *Nungesser-Coli* from Paris to St. Louis, Senegal (2,850 miles), and then to Natal, Brazil (over 2,000 miles). Then in 1933 another Frenchman, Jean Mermoz, pioneered commercial aviation flights across the South Atlantic. Mermoz left St. Louis, Senegal, on January 14 and flew to Natal in 14 hours and then returned to Senegal the following day. He made this round-trip flight with a four-man crew in a Couzinet trimotor named *Arc-en-Ciel* (*Rainbow*). The next year *Arc-en-Ciel* and its sister plane made 12 regular commercial crossings.

*Douglas World Cruisers, flown by U.S. Army Air Service crews, made historic Round the World flight in 1924. Douglas Aircraft's R.G. Smith did painting.*



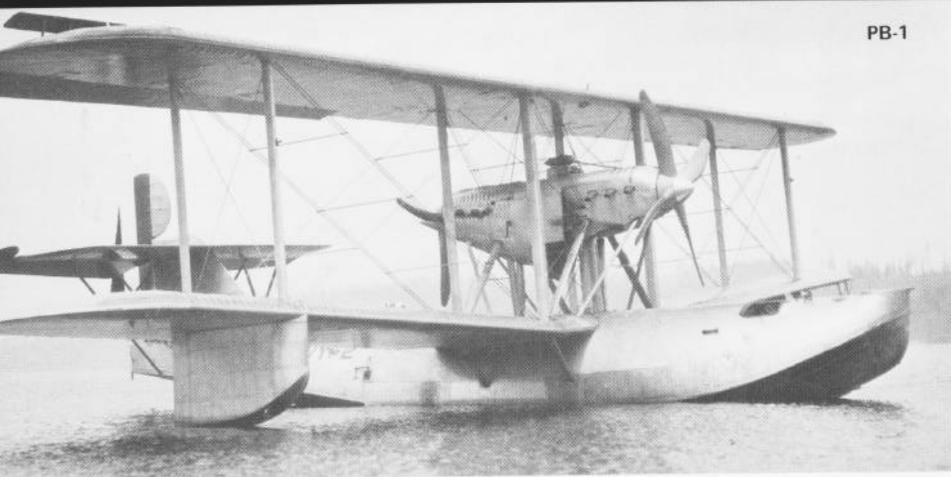
As was the case with the South Atlantic flights across the Pacific failed to capture public attention to the degree that the North Atlantic ones did. Because of the greater distances involved, aircraft with greater range were required. Thus Pacific flight came somewhat later than North Atlantic flight and, hence, was less newsworthy. Despite that, on at least one occasion prize money was used to promote flight from California to Hawaii.

In 1925 the U.S. Navy tried to use the method of the NC flight of 1919

to fly from San Francisco to Hawaii. Again three aircraft, all flying boats, were scheduled to make the flight and again naval vessels were stationed along the proposed route to aid the aircraft. For this attempt Commander John Rodgers, Naval Aviator #2, who had learned to fly from the Wright Brothers, served as flight unit commander. Rodgers was an expert navigator and had previously commanded the naval air station at Pearl Harbor. Thus he was very familiar with Hawaiian waters.

Two of the aircraft for the flight

were PN-9 flying boats which the Navy had just built. The other was a PB-1, built by Boeing. All three were biplanes flown by a five-man crew, but the PN-9s weighed 10 tons while the PB-1 weighed 14 tons. After training and preparation, the three aircrews gathered with their planes at San Pablo Bay in San Francisco Bay. Here they would have a long, sheltered and unobstructed stretch of water for the take-off. Originally the flight was scheduled for August 28, 1925, but when the Boeing flying boat developed engine problems, the departure date was slip-



ped to August 31. Despite repair efforts, it was not ready when the takeoff date arrived. The Secretary of the Navy subsequently cancelled its participation in the flight.

The two PN-9s were, however, ready on the planned date. Early in the afternoon both aircraft started their takeoff maneuvers, but they were too heavily loaded to get off the water. By taking off unnecessary weight and by shifting weight aft to raise the noses, the planes were finally able to take off. Lt. A.P. Snody and his crew in PN-9 No. 3 took off first; then Rodgers in PN-9 No. 1.

Snody's flying boat passed the first two of the eleven destroyers, stationed at 200 mile intervals, but a broken oil line forced the plane to ditch at 7:30 p.m. Shortly after 2 a.m. a destroyer located the downed aircraft and took the crew safely on board.

Rodgers and No. 1 were going strong. They averaged 77 knots for the first 1,200 miles at which point they saw the smoke and searchlight of the sixth destroyer. At 1:27 p.m. on September 1, USS *Aroostook* (CM-3) made radio, but not visual, contact with the plane at the 1,800-mile mark. Suddenly No. 1 radioed the ship that they were running low on fuel. The ship radioed back that they held the aircraft south of their position. Rodgers' figures put his plane north of the station vessel. Uncertain, Rodgers chose to follow the ship's radio bearing and he turned No. 1 north. Unfortunately *Aroostook* was in error; she lay to the south of Rodgers. Thus the flying boat headed away from help. Rain and squalls complicated matters, reducing visibility and churning up 10 foot waves. At 1:34 p.m.,

No. 1 ran out of gas and glided down for an easy landing, some 220 miles from its destination of Kahului, Maui. Rescue, they thought, should come shortly because of their contact with *Aroostook*.

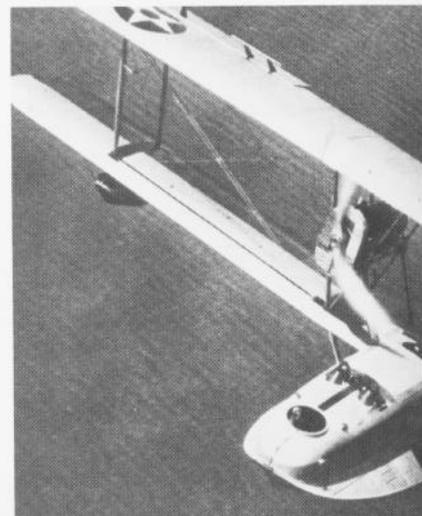
No rescuers came. In fact, Rodgers and his crew were destined to spend nine days on the ocean while they listened to their radio which told them of the fruitless efforts of the naval vessels to locate the flying boat. The radio on No. 1 could receive, but it lacked power to transmit the aircraft's position. Consequently Rodgers established his position accurately and then had the crew cut the fabric off the lower wings and use it to rig sails. This operation also reduced wave damage to the aircraft. Although they spotted a merchant ship to no avail on September 3, the plane slowly made for Hawaii using ocean currents and its sails. Late in the afternoon on September 10, a Navy submarine finally spotted the flying boat and took it in tow to Nawiliwili Harbor on the island of Kauai. Before reaching help, Rodgers and his crew had flown 1,841 miles in 25 hours and 23 minutes, and then they had navigated 450 miles across the ocean in nine days.

Although Cdr. Rodgers and his crew failed in their attempt to fly to Hawaii, their flight had shown that the islands would soon be within airplane travel of the continental United States. Air conquest of the 2,400 miles from California to Hawaii came two years later in June 1927. Two Army Aviators, Lester Maitland and Albert Heggenberger, made the flight in an Army Fokker trimotor similar to Byrd's *America*. Although their flight would be some 1,200 miles shorter than

Lindbergh's, they knew that their over-water distance was about 600 miles further than the *Lone Eagle's*.

Maitland and Heggenberger were not the only pilots who tried to make the California-to-Hawaii flight on the heels of Lindbergh's conquest of the Atlantic. Ernest Smith, an air mail pilot, and Capt. Charles Carter planned to make the flight in a single-engine Travel Air monoplane. Richard Grace, a movie stunt pilot, announced that he would fly a Ryan monoplane similar to Lindbergh's from Hawaii to San Francisco. Thus there were three rival groups poised for a "first" in the Pacific.

Maitland and Heggenberger were the first ones off on June 28. They had expected to navigate by means of radio direction bearings but their receiver broke down en route, forcing them to rely upon dead reckoning. Nevertheless, they successfully flew their *Bird of Paradise* from Oakland, Calif., to Hawaii in 25 hours and 50 minutes. Stunt pilot Grace tried next, on July 4, 1927. Shortly after leaving Kauai Island he encountered heavy rain which caused the tail surfaces of his plane to malfunction. Realizing that he could not make the mainland with this mechanical problem, he turned back. Ten days later, Smith and a new navigator, Emory Bronte, tried the flight in their *City of Oakland*. They, too, were depending upon radio direction bearings for locating Hawaii, and their receiver, like that of the two Army Aviators, broke down. Uncertain about their position, Smith and Bronte thought they would have to ditch in the sea due to lack of fuel; so they sent out an SOS. They soon discovered, however, that their fuel



gauge was defective and that they had more fuel than they had first thought. Consequently they flew on, eventually landing in a clump of trees on Mokolai Island. Although the plane was damaged in landing, Smith and Bronte were unhurt.

Despite the successes of Maitland and Heggenberger, and Smith and Bronte, James D. Dole decided there should be an air race from California to Hawaii. He put up a prize of \$25,000 for the winner of his Pineapple Derby, as the race was called, and set the date of August 12 for takeoff. He chose this date so that Lindbergh would have plenty of time to enter; however, Lindbergh declined.

Dole's generous prize attracted plenty of other competitors. As part of the preparation for the race, the aeronautical branch of the Department of Commerce tested all planes entered for airworthiness and all pilots for their ability to fly. Entrants who passed these tests received a provisional license. Initially there were 15 entrants. Some dropped out; others failed the qualifying tests. When race day arrived, the field contained eight planes (fifteen men and one woman). Three of the planes failed to get airborne. Another plane got off but had to land soon after due to mechanical problems. That left four; of these, only two made it safely to Hawaii.

The first entry to reach the islands was a Breese monoplane named *Woolaroc* piloted by Art Goebel with Lt. Bill Davis as navigator. They made the trip from Oakland to Hawaii in 26 hours and 17 minutes. Two hours later, Martin Jensen and Paul Schluter, navigator, landed in Hawaii. The other two airplanes never arrived. Navy ships

and several aircraft undertook a vast search for them but no trace of either plane was found, and another plane with pilot and navigator was lost at sea during the search efforts. Dole's Pineapple Derby had brought publicity to Hawaii, but not in the way he expected. Instead of public acclaim for those who had successfully made the flight, there arose a great public outcry over the foolishness of races such as Dole's. When the search for the missing aircraft was finally abandoned, the death toll was staggering. Nine men and one woman had been killed in pre-race crashes, en route to Hawaii and in the fruitless search.

When two Australians, Squadron Leader Charles Kingsford-Smith and Flight Lieutenant Charles T. P. Ulm, announced they would complete the aerial conquest of the Pacific by flying from California to Australia, some Australian authorities tried to dissuade them from making the flight on account of the loss of lives in the Pineapple Derby. Undeterred by these arguments and by financial uncertainties, the two Australians came to the United States and bought a used Fokker trimotor monoplane which they named *Southern Cross*. They fitted the aircraft with three new Wright Whirlwind J-5 engines, added two Americans (LCdr. Harry W. Lyon, USN, and James W. Warner) to their flight crew as navigator and radio operator, respectively, and made several preliminary flight trials.

When everything was ready, this Australian and American crew took off from Oakland, Calif., on May 31, 1928, and headed for Honolulu, which they reached 27 hours and 25 minutes later. En route they encountered rain and headwinds which slowed their crossing. The day after their arrival, the *Southern Cross* flew on for Suva, Fiji Islands. Winds and heavy rain forced the flyers up to 8,000 feet so that they could avoid the storm. More wind and rain subsequently drove them back down, toward the ocean. They found they had to fly at only 400 feet. Despite this stormy weather, the crew of the *Southern Cross* located the Fiji Islands with the aid of their radio and landed there on the afternoon of June 5. They had flown 3,144

miles in 34½ hours.

The final leg of their transPacific crossing was from Suva to Brisbane, Australia (1,762 miles). Again they encountered stormy weather. In addition the crew members had forgotten to oil their earth-inductor compass, and it ceased to function. Thus they had to fly by magnetic compass, a less accurate system. Nevertheless the *Southern Cross* made the flight to Brisbane arriving there about 10 a.m. on June 9, having made the journey from the United States in a total flying time of 85 hours and 15 minutes.

Air conquest of the polar regions of the earth proved to be just as costly in human lives as the Dole Pineapple Race. Although Commander Robert E. Peary, USN, had reached the North Pole on foot in April 1909, there was no successful aerial conquest of the Poles until the 1920s. In 1890 the French worked up a plan to reach the North Pole by a giant balloon capable of carrying sled dogs, sleds and humans. Their expectation was that they could pass over the frozen pack ice of the Polar Sea until they reached the vicinity of the Pole where they would land and explore by dog sled. The French never tried out their scheme, but a Swedish engineer and scientist named Salomon August Andree decided he would try to reach the Pole by balloon.

Andree bought a balloon in 1893 in which he made nine ascents, learning how to handle his craft. Next he built a balloon with a larger capacity (more than 6,000 cubic yards) and persuaded two scientists, Nils Ekholm and Nils Strindberg, to join him on the polar trip.

When all was ready, they took off from Spitsbergen, a group of Norwegian islands east of Greenland, on July 11, 1897. By this time, Ekholm had dropped out and had been replaced by Knut Frankel, an engineer.

The intense cold soon made it very hard for the polar aeronauts to maintain sufficient lift in their balloon. Ice formed on the envelope as they crossed the Polar Sea, weighing down the craft and forcing them to jettison ballast. They landed for the night on July 12, then continued on the next day. On the 14th, they were unable to

PN-9



get the balloon off the ice. There they camped until July 22nd, when they began walking across the pack ice toward White Island in the Polar Sea. Nothing was seen or heard from these three brave men for 33 years.

By accident, a Norwegian sailing vessel put into White Island in August 1930 and one of its sailors found Andree's camp and the men's bodies. Still intact was Strindberg's diary which told of their hardships and from which scientists inferred that the men probably died from trichinosis contracted from insufficiently cooked polar bear meat they had eaten, rather than from the cold. The last diary entry on October 17, 1897, was brief and incomprehensible. Even more extraordinary than the revelations of Strindberg's diary was the discovery of one of the cameras taken on the expedition. The photographic plates in the camera were intact and when developed, they served as mute witnesses to the hopeless trip the men had made across the ice pack.

The disappearance of Andree and his comrades did not deter others from trying to reach the North Pole by air. In 1907 and again in 1909, an American named Walter Wellman tried to fly over the Pole in a dirigible. Both attempts failed. In 1925 the famed Arctic explorer, Roald Amundsen, wanted to try a flight to the Pole, but he lacked the money to finance the flight. Amundsen got the help he needed when the American aviator and explorer, Lincoln Ellsworth, convinced his millionaire father to put up the money for buying two Dornier Wal duralumin flying boats that were specially fitted for taking off or landing on water or ice.

Amundsen and Ellsworth knew that the range of these aircraft was probably insufficient to cover the round-trip distance from their base to the Pole; thus they calculated that they would have to abandon one plane en route and all return in the other. This plan might have succeeded but, upon taking off, Ellsworth's plane sheared some rivets on the ice. When Amundsen subsequently decided to land some 150 miles from the Pole because he was unsure of his longitude and had used up half the fuel in his plane,

Ellsworth's plane became unusable when it took on water after landing.

Amundsen's plane had landed without damage and was quickly hauled up onto the ice. For the next 26 days the six men who comprised the two crews built a runway on the ice and transferred all the remaining gas in Ellsworth's plane to Amundsen's. When all the gas had been transferred and the runway was ready, Amundsen's pilot managed to get the heavily loaded flying boat into the air from its ice runway for the flight back to Spitsbergen.

Defeated, Amundsen decided to try again the next year. While the Norwegian explorer was preparing at Spitsbergen for a second attempt in a dirigible, Cdr. Byrd and Floyd Bennett, his pilot, arrived in Spitsbergen to attempt a round-trip flight over the Pole with a Fokker F. VII, a trimotor monoplane powered by Wright Whirlwind J-4B air-cooled radial engines.

After flight trials in early May and an unsuccessful attempt to take off on May 8, Bennett was able to get a somewhat lighter aircraft off the ice just after midnight on May 9, 1926. With Byrd navigating, Bennett flew the *Josephine Ford*, as the plane was called, to the Pole and back, a distance of 1,535 statute miles, in 15½ hours. Although today there are those who question whether Byrd and Bennett actually flew over the Pole, neither the National Geographic Society, the U.S. Navy, nor Amundsen, who was there when the *Josephine Ford* took off and returned, ever challenged Byrd's claim to have been the first to fly over the Pole. Whatever the arguments by the critics of the Byrd flight, one interesting aspect of the flight is that the *Josephine Ford* would have had to have a tail wind both ways to have made the flight in the published time.

Undeterred by Byrd's flight, the Amundsen and Ellsworth party took off from Spitsbergen on May 11 in a semirigid dirigible designed, built and piloted by Col. Umberto Nobile of Italy. This airship, the *Norge*, was headed for Nome, Alaska, via the North Pole. They had a relatively uneventful trip north to the Pole, which they reached at 1:25 a.m. on May 12. While the airship hovered over

the north geographic pole, the explorers dropped small Norwegian, Italian and American flags to signify their arrival. The next leg, from the Pole to Nome, was not easily accomplished. Ice formed on the airship cover and the propellers and carried away their radio aerials. Their sun compass with which they navigated became covered with ice and was, for a long time, unusable. They ran into fog. Somehow Nobile managed to keep going toward Alaska. Eventually they recognized the coastline below and piloted the airship by dead reckoning toward Nome. When they came upon a small settlement, they decided to land — at Teller, Alaska, some 60 miles northwest of Nome. Their flight had taken about 72 hours and had covered 3,290 miles.

Following a falling out with Amundsen, Nobile tried to go it alone to the Pole in 1928. His new airship, *Italia*, reached the North Pole on May 24, 1928, but on the return leg to Spitsbergen, ice and fog again proved to be deadly foes. Lost in fog and weighted down by ice, the airship crashed about 8 a.m. on May 25. When *Italia* hit the ice, the gondola broke free of the gas envelope. Six crewmen were trapped in the lightened airship envelope which drifted off and was never seen again. Nine men, including the injured Nobile, survived the crash because they were in the gondola; nevertheless, they were now adrift on an ice floe. Fortunately much of the emergency equipment in the airship, including their radio, had spilled out of the gondola during the crash and was undamaged. Thus they immediately sent out an SOS. Although an international team of would-be rescuers began an extensive search for them, it did not find their camp until late in June. Not until nearly mid-July, however, were all the survivors finally rescued by a Russian icebreaker. By that time one of Nobile's party had perished trying to walk for help and Nobile's former collaborator, Amundsen, and a crew of rescuers had vanished in a search plane north of the Arctic Circle. The *Italia* disaster cost the lives of twelve crew members and would-be rescuers and was a primary reason for the subsequent demise of

airship development in Italy.

The *Norge* had made the first east-west flight over the North Pole, but in 1928 George Hubert Wilkins, an Australian, and Carl Ben Eielson, an American of Norwegian descent, made the first west-to-east flight over the polar region. Using a Lockheed *Vega*, Wilkins and Eielson took off from Point Barrow, Alaska, on April 15, 1928. One purpose of the flight was to determine if there was land in a large area previously unexplored. After 18 hours in the air, they ran into a violent storm. They landed to wait it out. For four days and five nights they waited in the plane's cabin at a place inauspiciously known as Dead Man's Island. Once the storm abated, they dug the plane out of the snow and tried to get it airborne. While Eielson piloted the plane, Wilkins pushed to get it started forward on the ice. Twice Eielson got the plane airborne but without Wilkins. Thus he had to return for his companion. On the final try, Wilkins kept one foot in the cockpit and pushed with the other foot on some driftwood. This time the plane took off with Wilkins aboard. When they eventually reached Spitsbergen, they were able to report that they had discovered no new land in their 2,200-mile flight.

In 1937 and 1938 the Soviet Union began to publicize its ongoing study of the problems of polar flight operations. Beginning on May 21, 1937, the Soviets airlifted four scientists and their supplies and equipment from an advanced base on Rudolf Island to a spot 12 miles from the North Pole. Since there is no land at the Pole, this scientific camp was set up on a drifting ice floe. For nearly nine months these Russian scientists studied weather conditions and the properties of the Arctic Ocean in the region of the Pole. During this time they drifted 2,500 miles away from the Pole. When the ice floe began to break up and Soviet aircraft were unable to rescue all the members of the expedition, two Russian icebreakers succeeded in reaching the scientists on February 18, 1938.

One valuable contribution of this scientific station at the Pole was the reporting of weather conditions at very high latitudes which was extreme-



Josephine Ford

ly valuable in the planning of three Soviet transpolar flights in 1937. On June 20, Valery P. Chkalou, Georgi F. Baidukou and Alexandr V. Belyakov made the first nonstop airplane flight from Europe to North America over the Arctic Ocean and the North Pole in a single-engine ANT-25 monoplane. This flight took 63 hours and 16 minutes, covering 5,288 miles from Moscow to Vancouver, Wash.

Three more Russians, Mikhail Gromov, Andrei Yumacheff and Sergei Danilin, then made a second nonstop polar flight in an ANT-25 — from Moscow to San Jacinto, Calif., about 25 miles east of Los Angeles. Pilot Gromov and his crew had actually flown as far as San Diego, but they had been unable to land there due to fog. Thus they had sought out a landing field in San Jacinto. This flight wiped out the nonstop distance record of Maurice Rossi and Paul Codos of France who had flown 5,657 miles from New York to Syria in 1933. The Soviet flyers covered 6,256.6 miles in 62 hours and 17 minutes.

Having secured the nonstop distance record, the Soviets then began to study the possibilities for freight and passenger service with the United States. Thus the Soviet Lindbergh, Sigismund Levanevsky, and a crew of five left Moscow in mid-August 1937 to fly to an unannounced destination in the United States, possibly Oakland, Calif., or Chicago, Ill. Levanevsky and his four-engine ANT-4 airplane were never seen again. While passing over the North Pole, he reported he was fighting 60-mph headwinds and had lost one engine. Under ordinary circumstances the other three engines should have been sufficient to have carried the flyer to safety. Radio monitors subsequently picked up a faint message which stated: "No bearings . . . having trouble with . . . wave band . . ." The plane apparently went down somewhere between the Pole and Alaska. Although an extensive search by an international rescue team combed the area in which the plane was thought to have disappeared, all efforts proved futile. *To be continued*