



Southern Cross and crew at Long Beach. L to R: Lyon, Ulm, Kingsford-Smith, Warner. Of interest—Taken concurrently with picture on pg. 59, Journal, Spring 1978. Generators are now installed, just above Ulm's head. (Miller)

# Harry Lyon and the Southern Cross

by Lloyd S. Gates

Harry Lyon at work. A very posed photo. It seems to be more a radio room than a navigator's compartment.



## FOREWORD

*It was the privilege and good fortune of the author to be able to examine the Lyon papers and photographs after the death of his widow, Thelma Lyon. The following account is largely extracted from this undated, handwritten autobiography that Harry Lyon had started but did not complete. All passages written in the first person are direct quotations from this manuscript. The events prior to the flight, which have been written in the third person, are facts as recorded by Lyon.*

*The author wishes to express his thanks to James Phillips of the Norway National Bank, administrator of the Estate of Thelma Lyon, for permission to use this material. Thanks are also due to Major Eugene J. Millikin of Pearl City, Hawaii, E.P. Wixted of the Queensland Museum, and Ken Williams of the Department of Transport, Melbourne, for supplying background information.*

—LSG

From the fact that I am the son of a United States Naval Officer, was born in Charlestown, Massachusetts, and was thrown into an atmosphere of ships, Navy yards, etc., it is only natural that from a very early age I became thoroughly imbued with thoughts of navigation and the seaman's life."

So starts an untitled, handwritten and incomplete manuscript found among papers from the estate of Thelma Lyon, widow of

Harry Lyon, navigator of the SOUTHERN CROSS, a Fokker F.VIIb-3m.<sup>1</sup> It flew from Oakland, California, to Brisbane, Australia, a distance of 7,332 statute miles, in a flying time of 83 hours and 15 minutes.<sup>2</sup>

As a 13-year-old country boy I remember Harry Lyon as our local hero who drove a yellow boattail Essex roadster. Harry was a personality in an era filled with personalities larger than life: Lindbergh, Babe Ruth, Byrd and Floyd Bennett, Rudy Vallee and Big Bill Tilden, and many, many more. We read about them, heard about them on our battery-powered radios, perhaps even heard them speak, but never did we ever expect to have one in our midst; that is, until Harry flew the Pacific. His homecoming reception in August of 1928 was an event to be remembered.

Although he was always known as Harry Lyon, he was born Henry Ware Lyon, Jr.<sup>3</sup> at Charlestown, Massachusetts, on April 22, 1885. His father, Rear Admiral Henry W. Lyon, was commissioned Ensign in 1862 at the United States Naval Academy, then located at Newport, Rhode Island. He had a long and distinguished naval career, and was cited for sailing the crippled NIPSIC from Apia, Samoa, to Honolulu after the disastrous hurricane of March 1889, which demolished the naval installation there. This was a distance of some 2200 nautical miles, no mean feat considering the technology of the time and the damaged condition of the vessel. The elder Lyon also served with distinction during the Spanish-American War, retiring to Paris Hill, Maine, in 1907.<sup>4</sup> His home there, "Lyonsden," continued to be the Lyon family residence until after the death of Harry Lyon on May 30, 1963.

In 1892 the elder Lyon was ordered to the Argentine to command the steam corvette YANTIC. Harry and his mother, whose people were in the Argentine, followed, and he recalls that his proud mother took him outdoors and pointed out the constellation "Southern Cross." Perhaps a portent to the child who was to become the navigator of a later SOUTHERN CROSS.

Harry's early schooling was obtained at various small schools in the United States and South America, depending upon his father's orders and duty. In 1901 he graduated from Nazareth Hall, a military school in eastern Pennsylvania. There was, apparently, considerable pressure from the elder Lyon to get Harry an appointment to the Naval Academy at Annapolis. Harry's first attempt, a competitive examination at Lewiston, Maine, "failed dismally." A second attempt was made upon the receipt of an appointment by Senator Henry Cabot Lodge (Sr.) of Massachusetts.

"By dint of hard [preparation] at Professor Wilmer's school at Annapolis, I managed to skin by the examining board at the Academy and entered the class of 1907 in June of 1903."

Harry's stay at the Academy was short-lived, however. His interest in athletics, he said, interfered with his studies and he was "bilged." Another appointment was sought from Congressman Killeher of Boston, Massachusetts. In this competitive examination he scored as first alternate. The principal appointee failed his (physical) examination at the Academy, and when Lyon took his examination, he also failed, his eyesight being temporarily impaired by three weeks of cramming for the competitive examination.

At that time his father was stationed at the Portsmouth, New Hampshire, Navy Yard, and it was decided that Harry should attend Dartmouth College in Hanover, New Hampshire. He entered in the fall of 1904 but could not reconcile himself to being "so far from the sea." After a year at Dartmouth he went

to Philadelphia and shipped before the mast as an ordinary seaman "in the full-rigged ship DIRIGO,"<sup>5</sup> Captain George Goodwin of Bath, Maine." There they loaded with coal and put to sea, around the Horn toward Honolulu. The cargo caught fire when they were 300 miles south of the Falkland Islands, so they put in to Montevideo, Uruguay. Two months were spent there, off-loading, cooling and reloading the cargo. During this time he again visited his mother's people in the Argentine. Finally the voyage was resumed, they rounded Cape Horn and "arrived in Honolulu the day of the San Francisco fire" (April 1906). His father had secured a position for him in Honolulu but Lyon had his heart set on the sea and he returned to Philadelphia on the DIRIGO.

After this sailing experience he went into steam and obtained License #7098 as Chief Mate, Steamers, Oceans, prior to June 22, 1911, when he received License #34873 Master, Steamers, Oceans. At this time he was 26 years of age.<sup>6</sup> He obtained a Masters and Pilots License May 22, 1916.

Lyon's whole life would provide a Conrad or a Forrester with enough material for an entire series of adventure yarns . . . mutinies, fights, storms at sea, leaky ships, faulty equipment, salving of wrecks . . . he experienced them all and tantalizingly refers to them in the manuscript. . . . Mutiny aboard the Pacific Mail Company AZTEC. . . . Fired from the employ of the San Francisco and Philippine Steamship Company . . . "for having a most undignified fight with a laundryman in front of several hundred passengers. During the scrap the laundryman had his face badly scratched, blood poisoning set in, and they nearly had to decapitate him to save his life. I spent two weeks in San Francisco, trying to dodge a warrant for my arrest for mayhem, or some sort of thing, and eventually shoved off to Honolulu and became an assistant inspector of construction at Pearl Harbor Navy Yard."

He lasted two months at this job and again went to sea in the employ of the Inter Island Steam Navigation Company. There, in 1913, he received his first command, the S.S. LIKILIKI, 350 tons. One of the duties of this command was the transportation of lepers or those suspected of having the disease.

"About every three months we had to make a tour of the islands and pick up what were called leper suspects. These poor unfortunates were taken to Honolulu and placed under close surveillance for a period of six months so that the health authorities were absolutely positive whether or not the suspects were afflicted. Then about every six months the LIKILIKI had to take the lepers to Kaulapapa on the island of Molokai. This to me was bad enough but the most harrowing part was to have to return to Honolulu with all the babies which had been born to lepers in the six months. One trip I had twenty-eight. These children are placed in a founding institution in Honolulu until they are seven years and are then open for adoption. Leprosy is not hereditary and I believe there has never been a child to stay in that home after he or she was 'eight' [years old].

It was probably during this period (1913-1917) that Lyon made his first airplane flight.

"My very first flight was made in Hilo, Hawaii, with a San Francisco-born Chinese named Tom Gunn. He had brought an old Curtiss machine to Hawaii and was giving exhibition flights over Hilo Bay. I was in command of a steamer plying from Honolulu to Hilo at the time. I remember going ashore to find out what all the excitement was about and hearing Tom's manager calling for a volunteer to accompany him aloft. He had



**The Southern Cross at South San Francisco. The original caption: "A picture of the Fokker which the group used to fly to Australia. Taken at South San Francisco. The men are not identified. Lyon did not**

**know who they were." Of interest: Center cow! removed and toolbox on ground. Wind-driven generators are not installed. Man at left seems to be the same individual as man at left in picture pg. 59, Journal Spring 1978. (Miller)**

experienced quite a bit of trouble in getting his bus off the water as his pontoons seemed to be of the wrong pattern. I volunteered to go up, so, accordingly, someone dropped an inner tube around my neck and shoulders. Someone else handed me a big slug of whiskey, this being, I suppose, so I wouldn't back down. Then I was rowed out to the bus and took my seat between the pilot's feet. It was a hectic time getting the old thing out of the water but finally she seemed to rise and as I looked ahead, I could see my own ship right in our path, apparently coming broadside towards us at a terrific speed. I was convinced that we would crack up on her smokestack so I closed my eyes and wondered what sort of a skipper my chief officer was going to make. When I opened them and looked down, there was the ship many feet below us and the chief officer on the bridge blowing the whistle by way of a salute! We circled over the land and it was very bumpy which to a person making his first flight is not comforting. Then the motor began missing, so we came down, without accident. Personally I was rather frightened but could not afford to show it as I was hailed as a hero when I got back to the wharf. I didn't fly again for three years.

"On March 21, 1917, the feeling that we would become involved in war was ripe in Honolulu, so one day I went to the Navy Yard at Pearl Harbor and interviewed Rear Admiral George R. Clark, U.S. Navy, relative to entering the Naval Reserve. I was given an examination, passed and was appointed Lieutenant, J.G. On the 26th of March, I was ordered [to] the U.S.S. ST. LOUIS, Lt. Cdr. Victor Houston, USN, commanding. The ST. LOUIS had been station ship at Honolulu with just a skeleton crew aboard. All preparations were made to get under way. We knew we were going to have war and that we would not be kept in the Pacific."

The ST. LOUIS was ordered to San Diego and then Philadelphia. En route Lyon was "unofficially" appointed Lieutenant.

"At Philadelphia preparations were made to get [the] ship ready for convoy work, and in June 1917 we were the first convoy of American troops to cross the Atlantic. We arrived at St. Nazaire, June 30, 1917."

Convoy work continued for a year.

"I was detached from the ST. LOUIS in June 1918, promoted to Lieutenant Commander, and given command of the U.S.S. WESTERNER, one of the U.S. Naval overseas transports. Luck followed me on this ship too. We were in a large convoy which had sailed from Cape Breton. One morning just after dawn there was a submarine attack. Every ship [there were 42] started going for herself. Fortunately we were on the starboard flank and fearing that someone would run me down, I called for more speed and changed my course 90 degrees. Just as I got on the new course, a torpedo paralleled me about 25 feet away. We had not seen any periscope or oil slick and the turning had been done simply to avoid collision. Incidentally, as part of my cargo, I had over *two thousand tons of TNT* aboard. More luck.

"I left the WESTERNER January 1919, and went on the inactive list, taking command, on January 5, of one of the Shipping Board's lame ducks named the PASAGONLA [PASCAGOULA?] built in the town of that name in Mississippi."

After several commands under the United States Shipping Board, Lyon was "on the beach" in New Orleans in 1922 where "in order to eat I became the navigator of a taxicab."

Several commands and escapades followed:

Mahogany from Nicaragua to Astoria, New York; a year with the Standard Oil Company of California; a concessionaire on ships of the Mexican States Line Company; caught between the Rebels and Federal troops in Mexico; in a yacht brokerage business in San Francisco for a year.

On December 2, 1926, Lyon became Chief Officer on the ISNOMIA (commonly referred to as *Insomnia*). This assignment became a long and involved cruise in a leaky ship, with a polyglot crew and several captains until Lyon was named to command and complete the trip. They went from San Francisco to Vancouver to load wheat, thence to Seattle for repairs, through the Canal, more repairs there, repairs at Kingston, Jamaica, refuel at Horta, Azores, finally making Ipswich, England, after at least seven months at sea. Needless to say, the wheat was not in very good condition.

"In the fall [of 1927] I drifted back to Maine, the first time I had been home in ten years. As a matter of fact, I spent thirteen days at home in twenty-two years! In the winter I had to go to



Crew in Australia. Original caption, "Another photo of the flyers, taken at Sidney, in the same order as a similar picture." Left to right: Warner, Ulm, Kingsford-Smith and Lyon. Of interest—Warner is carrying a straw hat, all the others have flying helmets. Also note that the pilots are wearing heavy flying gear, contrasted to the garb of Warner and Lyon who worked in a relatively protected area. They are standing in the bed of a light truck which is included in "the similar picture." Note bentwood chair. (Broughton, Ward and Chaseling)

California, having been subpoenaed as a witness in a rum-running case of several years standing. It was as I was about to return to the state of Maine that I came across the 'Great Adventure'. My business finished in California, I had gone into the Merchants Exchange one day to bid farewell to my friends of the Marine Department and also the chaps at the hydrographic office. As I was about to say goodbye to Captain J.C. MacMillan, the assistant hydrographer whom I had known for years and who probably knows every skipper that ever sails in or out of the Golden State, he shook me somewhat by asking me if I wanted to take a job as navigator of an aeroplane. I thought he was crazy, especially when he told me that the plane was to make a flight from Oakland to Australia. As a matter of fact, I asked him to try one of my brand of cigarettes instead of his own. Only after he assured me that he was really in earnest did I begin to consider the proposition.

"That particular day I was lunching with some friends, so MacMillan told me to have my lunch, think matters over, then come back and tell him how I felt about the proposition. During the luncheon I must have seemed very distraught to my friends, as the proposed flight took all my thought, and naturally I could not help thinking of all the poor chaps who had lost their lives in overseas hops.

"That afternoon I returned to the hydrographic office and told MacMillan that I should like to go. He, accordingly, gave me the address of Kingsford-Smith and Ulm and by way of introduction called them on the phone. They were living at the Bellevue Hotel and so I called upon them.

"My first impression of these two chaps was of their extreme earnestness and confidence, not only in the feasibility but of the absolute success of the flight. Then, too, the uncanny thoroughness with which they had been preparing for the flight. We talked for several hours. I had many questions to ask and naturally they wanted to know what sort of a navigator I was; also, what sort of flying experience I had had. As a matter of fact, I

had never done any long-distance flying, especially over water, and my flying had consisted of flights with army officers in Virginia during the war and with commercial aviators in California after the war. My very first flight was made in Hilo, Hawaii, with a San Francisco-born Chinese named Tom Gunn.

"After I had talked with Smithy and Charles, I begged off to think it over for a night. Needless to say, I slept very little that night and by daylight had absolutely made up my mind that I would take the job.

"The following day I entered the service of Kingsford-Smith and Ulm, and was taken out to Mills Field to see the SOUTHERN CROSS. The time of the proposed takeoff was drawing near and there were many things to do for my own department. For instance, I had never even seen a bubble sextant, let alone use one. The sextant as applied to marine navigation is an 'instalment for measuring the angular distances of celestial objects by reflection to the horizon.' This, of course, is that observed on natural horizons. Some sort of an artificial horizon had to be thought up so the bubble sextant was evolved, whereby a spirit level effect is placed on the top of the telescope, then it has a stationary line which apparently bisects the bubble in the level when the sextant is level. This line then is your false horizon and the reflection of your celestial body brought tangent to this line gives you an observed altitude. The corrections to be applied are slight. By means of this instrument one may be flying hundreds of feet above cloud banks with nothing in sight and can still obtain observations.

"I began to practice taking sights with this instrument and, when possible, had a man along with a sextant, and at the same time I took altitudes with the artificial horizon or bubble, he took altitudes with the natural horizon for a matter of comparison. We spent one night on top of Mount Tamalpais across the bay from San Francisco, just experimenting. Along the beach outside of San Francisco is a long stretch of road following the water. We used to go out there and he would station himself a mile or two away from me and choose a star which he would keep on the horizon as best he could. I would be in a high-powered open car with someone driving and we would go on tearing down the road. I would stand up and observe the same star as I passed my helper. Then we would compare. The effect of the fast-moving car, the bumps, etc., had the same effect as taking an observation from a plane. We got in quite a bit of practice at this but after the third arrest, it became too expensive.

"After taking the sights, I used to lean over, using the dash-light to see by, and try and see how fast I could work them, the car still bumping about. In fact, I made myself as uncomfortable as possible, and it was good practice for when we started on the trip. I found that working in the fuselage of the SOUTHERN CROSS was far easier than the front seat of a Cadillac.

"At Mills Field, Colonel Harry Abbott had two planes. Kingsford-Smith would borrow one and we would go up together while I practiced taking sights. This too was inconvenient as the plane was a Swallow biplane. The controls were in the after seat and so when I took a sight, Smithy had to put the bus in some awful banks so I would get the object clear of the top wing. We had a lot of practice at this. There was the preparation of my gear and data for the trip, compasses to be bought, installed and compensated, installation of a speed and drift indicator, practice in its use, etc.



**Southern Cross at Long Beach.** Original caption: "A photo of the plane at Long Beach, Calif. Lyon did not remember the name of the field, but oil derricks can be seen in the background." Of interest—A/C in same position on field as in picture No. 2. Perhaps of

local interest: legends on hangars in background, left to right: O'Donnell School of Aviation; Continental Air Mapping Co.; W. O'Kane; (one or two hangars concealed by a/c); Al Ebrite; Earl S. Daugherty; —es Tool Co. Facing, at end of field. (Miller)

'The three compasses carried were ordinary aviation magnetic compasses in the pilot's cockpit, an aperiodic in the navigator's room and an earth inductor on top of the fuselage, with a setting device in the navigator's room and an indication needle on both the navigator's and the pilot's instrument boards.

"Prior to the flight we went to a great lot of trouble to swing the plane for compass adjustment. One Sunday at Mills Field in San Francisco, we swung her point by point, first having picked out some land ranges. This was done by Captain MacMillan and myself to get the aperiodic compass in adjustment. We had a gang of men to lift her tail around and an old wooden horse to put it on, so that the plane was practically in flying trim as we corrected for each point of the compass. Again later at the Oakland Airport we did the same for the earth inductor compass regardless of the headings of the other two compasses. The curve of deviation on the earth inductor compass was very slight; in fact, the greatest amount of deviation for that latitude [Oakland] was found to be 1°10'E on southerly courses. On the aperiodic it was 3°E on southerly and the magnetic was as high as 7°W, all deviations being on SE, S and SW courses.

"There was a matter of installing a pelorus or bearing indicator on top of the fuselage so that it was convenient to the observation hatch. This was fitted with a shadow needle and marked off in points and half points, with holes for placing the needle into. One convenience that I omitted to prepare, and which other chaps have used, was to have points marked off on the plane's tail for taking stern bearings on lights or objects to determine drift as an auxiliary to the drift and speed indicator.

"I found that with the ship flying at 3000 feet, our usual cruising height, one lost a lot of time waiting for the smoke or light bomb to reach the water after having been thrown overboard.

"Another serious mistake we made was the way in which we installed our speed and drift indicator. We should have had a glass hatch in the bottom of the fuselage, a sliding one, so that it could be opened not only for cleaning but to drop the bomb and then have the indicator placed on the forward side of it. As it

was, we had a bracket rigged out from the entrance door, making it necessary to open the door to an angle of 45 degrees and prop it so while I lay down on the floor, stuck my head out and manipulated the instrument. Once in a while the prop would slip and the door would give me a most resounding thwack on the back of the head. This used to make me very often estimate our drift as I had done years before in sailing ships, simply by looking over the side and watching an object drifting astern of the ship.

"A week before our departure from Oakland, we flew from San Francisco to Long Beach, California, having on board Capt. George A. Hancock<sup>7</sup> and Mr. Chaffee of the California Bank of Los Angeles, in addition to the regular crew of four. After taking the air, I set a course by E.I. [sic] compass for Point Sur Lighthouse approximately 100 miles 162 degrees true of San Francisco. The wind was directly on our tail. To my surprise, we made the course exactly; in fact, we flew directly over the lighthouse. There was then a slight change of course to the eastward as I set a course for Point Sal, another 100 miles to the south. We repeated and flew directly over. From there we worked inland over Capt. Hancock's ranch at Santa Maria and, after flying around the ranch, I set a course well to the eastward for Los Angeles. This brought us around so that we had a stiff breeze on our port beam. The amount of drift was allowed for and again the ship made a perfect course to Los Angeles. The fact that we made all these courses so perfectly gave me the greatest confidence in the compasses and my future ability to use them. During the trip down, I took several sights, all of which worked out fairly accurately. When I say 'fairly', I mean that it might not have been accurate enough to take a large steamer through a narrow entrance in a reef but practical enough for aerial navigation where one's ordinary visibility is a good many miles.

"After a few days in Los Angeles and Long Beach we made the return trip to San Francisco. The compasses again put up a good show.

"There were still many minor details which had to be attended to so that the last few days in San Francisco and Oakland prior to the takeoff were very busy ones. I kept in constant touch with



**Bird of Paradise and Southern Cross at Wheeler Field. No caption, but from the sequence in Lyon's album this seems to be the logical site for the picture. Millikin agrees. (Lloyd S. Gates)**

the U.S. Weather Bureau for weather reports. At the offices of the Twelfth Naval District we were awarded every courtesy. Admiral Washington threw the resources of the department over to us. Two of my classmates, Commanders Cross and Bernard, did everything they could to help us out. Commander Davis, in charge of communications, helped us greatly. I remember 'Jumbo' Bernard saying, 'Harry, when we were midshipmen 25 years ago, I used to think you were crazy. Now I know it.' This was when I told him I was going to navigate a plane to Australia. I spent a day going around to the various steamship companies' offices finding out what the positions of their steamers were, their courses, speeds, etc.; that is, those bound to or from Honolulu and the Golden Gate. I arranged a small chart and had pins with tags representing the different ships and placed them in the various positions that they should be encountered at noon the day of takeoff. Then the idea was to move them every four hours so that I could see where I should meet them provided we were on the great circle course to Honolulu.

"We were at the Oakland Airport for three days prior to the takeoff. One affair that was rather distressing was our all being robbed in the hotel two nights before leaving. It was a case of 'hocking' watches, etc., just before we left. The reason for the picking of Oakland Airport was that we could get a much longer run on the takeoff as we knew the ship was going to be very heavy.

"The big day arrived. At eight o'clock that morning we were at the airport ready for the big adventure. Our departure was scheduled for nine o'clock in the morning and the crowds were gathering when we arrived. The motors had already been warmed so all we had to do was get aboard. The people of Oakland had been very good to us. On the field Major Irwin had stationed men along our line of takeoff. The first run was made at 8:50 when suddenly the midship motor cut out. We felt that it was really a good omen on account of the old saying, 'A poor start is a good ending.' So we started over again and left the ground at 8:53 A.M. Pacific Coast time. As we circled for altitude and then shot over the cities of Oakland and San Francisco, I set a course of 242° on the earth inductor compass. This took us out over the Farrallone Islands and there being a light northwest wind, I had to allow three degrees for southerly drift.

"On the way out over the Golden Gate several planes accompanied us with photographers aboard. I remember Warner saying something to the effect that if we did go down, the pictures of our departure would make nice mementoes for our friends!

"When the SOUTHERN CROSS swung clear of the Farrallone Islands, 23 miles off the Golden Gate of California, and the ac-

companying planes turned back, the feeling to we four men<sup>8</sup> was one of utter loneliness. We felt, there at an altitude of 3000 feet and over 2000 miles of open water ahead of us, like a pretty small speck in the universe.

"The weather being fine and clear with a gentle northwest wind was very much in our favor. I tried getting observations every hour and after working out the sights would turn the position over to Warner so that he could send it out by radio, thus letting people know just about where we were at all times, so that in the event of our being forced down, someone would know about where we were. Leaving San Francisco the radio beacon was functioning beautifully but we lost it about 300 miles out. We were right on the 'T'<sup>9</sup>, or center line, at the time which was over the great circle steamer route from San Francisco to Honolulu.

"About 800 miles from Honolulu we got on radio communication with the Matson steamer MALIKO, Captain Hansen. The ship being equipped with a radio compass, he gave us some very good bearings at intervals of 20 minutes, showing me that I was a few miles north of my course. This was remedied by altering the course and flying directly over the MALIKO and one hour later over the MAUVA of the same company. This, in view of the fact that it was only 800 miles from Honolulu, was a splendid check on our journey. We had already made better than 1600 miles. I accordingly set a new course and we continued.

"Shortly after daybreak a most peculiar thing happened. We were, by my reckonings, due to see the land of the Hawaiian Islands. Presently the pilots sent a note aft saying that land was in sight on the port bow. I looked at this supposed land and could not recognize it. I say 'recognize' because in over four years of interisland trading I felt I knew the Islands very well. This appeared to be a few perpendicular rocks sticking up about 40 or 50 feet and no other land in sight. This worried me as I knew of no rocks such as these and I began to wonder if I had passed the island of Karrai and was off a little island called Kaula, to the north and west of Niihau. The sensation of having missed my landfall [Molokai channel] was sickening. A check back on my 'reconning' and last sights showed me to be on my course but I knew there were no rocks in that vicinity, so we changed the course and headed for the rocks. As we neared



**Pilot's instruments. Instrumentation for earth inductor compass consists of dial to be set for proper course at lower right and "On Course" indicator at center.**

them, they suddenly came up out of the water and drifted away—clouds. The reaction on the crew was peculiar: the other three took it as a great disappointment; I was elated. So we changed back to the original course.

"Warner had been having trouble with his receiving apparatus. We had not heard the beacon at all but he made an effort to get a radio bearing. About then a bearing came through—Hilo 2°, meaning that we were bearing north 2° east from the town of Hilo on the island of Hawaii. Marking this line of bearing off on the chart, I found it to be only a few miles from where I thought I really was. It was my intention to get another bearing a few minutes later but, unfortunately, the batteries went dead and we heard nothing more. However, I got a shot at the sun just then and the result was in keeping with the radio bearing. I wondered why I could not see the land as we should have been close enough but there were clouds over the islands. I kept looking when suddenly I noticed a long, thin black line over some clouds on the port bow. As I watched, it resolved itself into something permanent and not drifting, as the clouds were. I took a quick map bearing of it and laid it off on the chart. It was Mauna Kea, 14,000 feet high, on the island of Hawaii. It was very gratifying to find out that I was right on my course. Ordinarily at this time of year we should encounter stiff northeast trade winds around the islands but we encountered practically no wind.

"Shortly after sighting the island of Hawaii, the clouds fell away and the various islands unfolded themselves. We were heading directly for Makapuu Point Lighthouse. As we neared the island, Kingsford-Smith altered the course to fly over the Pali.<sup>10</sup> The Pali is sort of an opening in the hills up in back of Honolulu. At this opening the land drops vertically several hundred feet, the result being that when the prevailing tradewinds strike this cliff, a terrific rush of air goes through this opening. Persons cannot walk without assistance and many cases of people having been blown off a horse's back have been recorded. Even though there was very little wind at the time, I was afraid that in going directly over the Pali, we might encounter very bad bumps. Accordingly I sent Smithy word to stick to the coast and go over Honolulu by the 'front door'.

"The island of Oahu from the air is a most beautiful sight. The sugar plantations appear as huge lawns. Everywhere everything seems so green and fresh. As we were flying over Diamond Head, we were met by the U.S. Army planes who escorted us to Wheeler Field. These planes were led by Captain Lowell Smith flying the Fokker that took Maitland and Hegenberger to Honolulu.<sup>11</sup> Lowell Smith is one of the Army's round-the-world fliers who has remained in the service. It was through his untiring efforts that the SOUTHERN CROSS received the dispatch which she did while in Hawaii. At Wheeler Field we were received by Governor Farrington of Hawaii and many officers of both the Army and Navy with a civilian turnout of about 15,000 people.

"Strange to say that after a 26-hour flight,<sup>12</sup> I do not think that any of us felt really tired or sleepy. The thing we craved most was a cigarette, as we carried none on the flight and were really afraid to smoke in the air. We were all more or less deaf and people were wondering why we were yelling at each other while apparently holding an ordinary conversation!

"A trip by auto to the Royal Hawaiian Hotel followed where we breakfasted and then went to bed for several hours. Later in the afternoon I had a chance to drive around Honolulu and renew some old acquaintances dating back ten years.



**Southern Cross today. Now preserved at Brisbane Airport, Queensland, in a special memorial building as a tribute to pioneer aviators. Note depiction of the constellation Southern Cross on side of fuselage. 1928 photo shows only five pointed stars. Also compare the shape of the nacelle fairing to shape in photo No. 2. (Comm. of Australia, Dept. of Civil Aviation)**

"We had planned to fly to the island of Kauai the following day and to take off for the long hop of 3100 miles to Suva from that island. There is a place known as the Barking Sands<sup>13</sup> and is a long level plain of hard sand, a bit over a mile in length. During the flight from California to Hawaii, I had not been altogether too pleased at the way my bubble sextant was working so I determined to take it down to the Pearl Harbor Naval Station and have someone look it over. In the morning, after we arrived, Martin Jensen, winner of second place in the Dole race,<sup>14</sup> and Mrs. Jensen very kindly flew me down to Wheeler Field in the ALOHA.<sup>15</sup> I got my sextant and was flown in a Navy plane to Pearl Harbor where I was met by an old classmate, Commander Herbst. He helped me with my sextant, took me to his quarters for tea, and ended up by insisting that I take a rubber lifeboat similar to Byrd's. We packed this on a Navy plane with oars and inflating bottles and flew back to Wheeler Field. When Kingsford-Smith saw all that gear he wouldn't take it, too much weight. I think he even begrudged the weight of my sextant.

"At four that afternoon, in company with Lowell Smith and several Army mechanics in the Army Fokker<sup>16</sup> and Martin Jensen in his ALOHA, we took off from Wheeler Field, Oahu, for the Barking Sands of Kauai, arriving there about an hour and a half later. The SOUTHERN CROSS was turned over to the Army men who took absolute charge of her. The gasoline and oil had already been sent to Kauai and were at the Sands when we arrived. We were taken to someone's<sup>17</sup> house in Kekaha and they looked out for us during the night.

"At five o'clock the morning of June third the SOUTHERN CROSS, being fueled, oiled, provisioned and warmed up, was ready to hop the 3000 and more miles to the Fijis. There was on board 1287 gallons of gasoline. The total weight was 15,800 pounds, nearly eight tons. The provisions consisted of 48 sandwiches, four quarts of coffee and four quarts of water. A few minutes after five we started down the field full out. She ran 3000 feet before leaving the ground and quickly settled back again, running along to almost 6000 feet before leaving again. This was almost the end of the field so we had to keep going. It was about a 35-foot drop to the water. We nosed her down 25 of that and flew only about 10 feet over the water for about 25 miles and then began to climb very slowly. It was nearly four hours before we attained an altitude of 3000 feet, our usual cruising height.



"Southern Cross" at Albert Park, Suva.

"The radio beacon at Honolulu had been turned around to face Fiji so I set a course to come in on this beacon about 100 miles from Honolulu. We picked it up very clearly and distinctly but lost it completely. We never heard anything else nor received any bearings after losing the beacon. Leaving Hawaii we encountered fairly strong tradewinds. Being on our tail, they were very helpful and, in fact, assured us of reaching Suva.

"Our plan was to fly until abreast of the Phoenix group of islands which were only 200 miles off the course, then check the fuel and see if we could make it. If we were sure we could not do so, we had planned to make a forced landing on Enderbury Island at daylight but to send out an SOS just before doing so. We also had balloons for sending up a light aerial in the event of our coming down and had an emergency radio set in one of the wings. We had emergency rations and a water still.<sup>18</sup>

"The first thousand miles towards Suva were done in eight hours and 50 minutes, being a very fine average for the SOUTHERN CROSS, especially as she was so heavy and loggy on her first few hundred miles. I found that my sextant was working much better since the Navy had put it in better adjustment.

"At about 1 A.M. on the morning of June fourth we were abreast of the Phoenix group and took a very careful check of the gas. We estimated that we had used about 500 gallons of gas and had nearly 800 gallons left. With any sort of a break we felt that we could make our objective, so, accordingly, we kept on.

"In about latitude seven north we dropped the northeast trades and began running through the doldrums, or over that stretch of water lying between the NE and SE trades. We encountered some very nasty squalls and did a bit of blind flying."

This is where Harry Lyon stopped writing: in mid-flight, abeam of the Phoenix group, seven degrees north of the Equator, at the top of page 98 of the penciled account. Did he lose interest, run out of time, or decide that his story would be of no interest to anyone? The reason will never be known as anyone who could tell us is gone. It is unlikely that he ever completed this written account, but enough is told to give us a flavor of the times and a picture of the man.

Picking up the story of the flight from this point, Kingsford-Smith<sup>19</sup> tells of their battle with the storm merely mentioned by Lyon, "... nasty squalls and a bit of blind flying." The landing at Suva was at Albert Park after a flight of 3144 statute miles in

34 hours 30 minutes from Barking Sands. Albert Park had a clear space of barely 400 yards, the approach was over a road which was raised 10 or 12 feet and the other end had a sharp rise covered with trees. A timely and intentional ground-loop prevented a crash.

The SOUTHERN CROSS was subsequently flown a short distance to Naselai Beach on the same island. The tanks were topped out and they took off on the last leg of the trip. This flight, of 1780 miles, was accomplished in just under 20 hours, landing at Eagle Farm Airdrome, six miles from Brisbane after a landfall 110 miles to the south, at Ballina. It would be interesting to hear Lyon's explanation of this error after his concern about the Hawaiian landfall. Kingsford-Smith says that the earth inductor compass did not function on this last leg as they had neglected to oil it before they left Suva. Or . . . it is possible that it may have been the old trick of a deliberate offset of the course to the left, at the end of a long flight, to insure the destination truly lies to the right.

Lyon returned to Maine and a hero's welcome in August 1928, after receptions in Australia and California. For him, life was never to be the same again. A monster parade<sup>20</sup> was planned for the 18th. He was to be flown into town by Harry Jones of Old Orchard, in his Stinson Detrioter, and land "near the residence of George Twitchell on High Street." The weather did not co-operate, and instead the party arrived by car and the parade was held as scheduled. Speeches by local and state dignitaries were delivered from the steps of the Baptist church,<sup>21</sup> on the Common, across the street from "Lyonsden." Accompanying Lyon at this celebration were Captain Lancaster,<sup>22</sup> RAF, and Mrs. Keith Miller. A reception followed at the Country Club.

For the next several years newspapers carried stories of Lyon's plans for flights to various places. The local newspaper<sup>23</sup> carried an account on October 30, 1928, that a plane, piloted by Captain H.B. Lancaster, was forced down the previous Sunday by "water in the gas" at Atlantic City, New Jersey. Lyon was the navigator and George Palmer Putnam a passenger. They were attempting a non-stop flight from Port Washington, New York, to Bermuda.

In March of 1930 he was proposing a westward Atlantic hop<sup>24</sup> from Paris, France, to Paris, Maine. By May he had expanded the plan to a round-trip, non-stop flight, to start and finish in Maine.<sup>25</sup> He said that a plane for this venture was now being constructed for him in California.

This project became more ambitious as time went on, as he was later proposing a non-stop, round-the-world flight with aerial refueling along the way, "if financial backing could be obtained." At this time the proposed flight was to be undertaken in a Bellanca.

In the spring of 1934 he was in California making preparations to compete in the MacRobertson International Air Race, London to Melbourne. He was to be accompanied by Robert W. Lape, as pilot in a Lockheed monoplane.<sup>26</sup> Among his papers are photos of two Lockheeds: Orion NC 12223 and Altair c/n 213 NR-14209 J-BAUC, the latter dated 1934. Were these being considered?

While in California that spring he was in an auto accident which resulted in a broken neck.<sup>27</sup> This did not deter him, however, and he is quoted "that nothing in the cockeyed world is going to stop me from competing in the race." Something did, however, as he apparently entered but did not compete.<sup>28</sup>

The advent of World War II saw Lyon in action again. By 1941 he would have been 56 years of age and by some standards too old for active service. After a stint at working for the New England Shipbuilding Corporation at South Portland, Maine, he was given the command of one of their products, the War Shipping Administration cargo vessel USS JAMES C. BLAINE. He was, at last, at sea again and seeing action. The *Portland Press-Herald* of February 9, 1944, reports that the BLAINE was under attack by Ju88s for nearly one hour while in convoy off Oran, Algiers. The score for the BLAINE'S gunners in the action: two planes downed and a probable.

We do not have much more information on Lyon's activities in the Second War. He returned to Paris Hill and a comparatively quiet life until 1958, the 30th anniversary of the flight of the SOUTHERN CROSS. That year he was sought out by Qantas and the Australian government. He and Warner, together with their wives, were flown to Australia for ceremonies commemorating the 1928 flight. They also took part in the enshrinement of the SOUTHERN CROSS in the Memorial Hangar at Eagle Farm Airport, now Brisbane Airport, Queensland. They were wined and dined there and in Melbourne, and eventually Lyon returned to Maine in September.

Lyon is quoted in an interview by a local reporter, after his return from Australia, as being a shipmate with Warner in the WESTERNER, but this fact is not mentioned in the penciled account from which these first person quotations are extracted. It is doubtful if he remained in contact with any of the crew of the SOUTHERN CROSS. Nothing in his papers would indicate it, only a short and somewhat terse telegram from "Smithy." This was sent while he was on the last leg of the round-the-world flight of the SOUTHERN CROSS. The message expressed Kingsford-Smith's regrets that they could not get together and hoped that they might at some future time.

The SOUTHERN CROSS still lives, preserved by a grateful people, in its Memorial Hangar at Brisbane, only yards from the spot where it first touched down after completion of Lyon's "Great Adventure." But Harry Lyon and his "Gallant Band of Brothers" are all dead. They were, for a brief moment in time, each with his own special ability, molded together in an event which was a benchmark in aviation history.

Henry Ware Lyon died on May 30, 1963, at the Veterans Hospital at Togus, Maine. His memory lives as one of the pioneers.

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- Kingsford-Smith and Ulm. *Our Conquest of the Pacific*. National Geographic Magazine. Vol. LIV, No. 4, Oct. 1928, pp. 373-402.
- Passport. Issued Boston, Mass. Dated 1942.
- Army and Navy Register, Nov. 30, 1929.
- Rowe, William Hutchinson. *The Maritime History of Maine*. W.W. Norton Co., N.Y. 1948 p. 164. Actually a four-masted bark. Bath-built by Sewell, 1894. First U.S.-built steel ship. "Dirigo" is the motto of the state of Maine, meaning, "I lead."
- Letter. R.Adm. Richard M. Ross, Commander, Third Coast Guard District. 23 October 1962, to H.W.L.
- Wixstead, E.P. Queensland Museum. *50th Anniversary Brochure*. Capt. Hancock, also identified as G. Allen Hancock, "came to their financial aid. He was very much alive to the importance and significance of the flight and believed implicitly in 'Smith' and Ulm's capacity to carry it out."
- Op. cit. Note 2 p. 371. The four men were: Squadron Leader Charles E. Kingsford-Smith; Flight Lieutenant Charles T.P. Ulm; James W. Warner, Radio Operator; (Capt.) Henry W. Lyon, Navigator.
- Forden, Lesley N. *The Dole Race, Part 1*. Journal, Vol. 20, No. 3, p. 159. "For those contestants with the foresight, and the money, to have acquired radios, the San Francisco Maui beam, or 'groove' as it was called, would be a valuable aid. The radio stations had been installed by the Army for the Maitland, Hegenberger flight and broadcasted a low-frequency wave which the pilot followed by listening for three signals in Morse code: an 'A' on one side of the course, an 'N' on the other side, and a steady hum, or 'T,' if he was on course." The author assumes that this is the "T" to which H.W.L. refers, and that these or similar stations were in operation in 1928.
- National Geographic Society. *Hawaii Atlas Plate 15* and Milliken, Eugene J. Correspondence with the author. Probably Nuuanu Pali, six miles NE of Honolulu Harbor. "When the tradewinds are strong, there is a very strong wind down Nuuanu Valley towards Honolulu. Almost any day, the winds at the top of the notch in the Pali (cliffs) are strong enough that you have to lean into them to get up to the point where you can look down over the windward side of the island. On strong days it can be exhausting."
- Goldberg, Alfred, Editor. *A History of the United States Air Force 1907-1957*. D. Van Nostrand, Inc., N.Y. 1957, p. 37. Lts. Lester J. Maitland and Albert F. Hegenberger flew the "Bird of Paradise" 2418 miles, Oakland to Hawaii, in 25 hrs. 50 min. June 28, 1927.
- Op. cit. Note 2, p. 383. K-S says 27 hrs. 25 min. 2408 statute miles.
- Millikin, Eugene J. Correspondence with the author. "The origin is the name of the squeaky bark the sand makes when you walk through it." The Barking Sands area had also been used by Dick Grace in his 1927 attempt to fly to the mainland. See Journal, Vol. 23 No. 1. It is a sandy plain, with sparse grass and scrub kiawe trees, between a reef and a 1000-foot cliff a mile or so inland and of considerable length. Millikin states that it is the most level area he has seen in his flights around the island.
- Op. cit. Note 9, p. 154.
- Ibid, a Breese monoplane.
- Bowers, Peter, *The American Fokkers*. Part 3. Journal, Vol. 12 No. 3, p. 176.
- Op. cit. Note 2, pg. 385, and Millikin, Eugene J. Correspondence with author. They stayed with Lindsay A. Faye who supervised the preparation of the Barking Sands airfield for Grace in 1927 and for the "Southern Cross" in 1928. He was still living as of late 1977. The Sands had been used for an airfield before 1927. Faye lived in the "manor house," the only large building in the area, so it was natural for them to stay there.
- Ibid, p. 375. In case of a forced landing at sea they carried (hack) saws to cut off the outboard motors [sic] and to separate the wing from the steel fuselage. The wing would then become a raft, in which were stored emergency rations, a still, a watertight radio transmitter and four gas balloons to lift the aerial for this transmitter.
- Ibid., p. 388.
- Oxford County Democrat. Aug. 15, 1928.
- Norway Advertiser. Aug. 24, 1928.
- Lancaster. Various identified in contemporary accounts as Capt. Lancaster, William Lancaster, W.N. Lancaster and Capt. Newton Lancaster. Mrs. Keith Miller is identified as having "flown from England to Australia." For details of this and subsequent events in their lives see Journal, Vol. 20 No. 2. *Chubbie and Bill*, a Love Story by Ralph Barker.
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- Op. cit. Item 25.
- Op. cit. Item 26.

## ABOUT THE AUTHOR

Lloyd S. Gates' lifelong interest in aviation stems from a gift subscription to *Aero Digest* and a flight with the Gates Flying Circus (no kin) in a Standard in 1928. He obtained a Private Pilot's License in 1948, but it is no longer current. His present direct contact with flying is crewing for a friend who flies a Schleicher ASW-15 sailplane in competition. He is also a member of the EAA and the NARPV.

