

Night Flight to Antarctica

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The successful completion in June of the first regularly scheduled winter flight to Antarctica marked a new milestone in the United States program of antarctic research and exploration. Rear Admiral J. L. Abbot, Jr., the commander of the U.S. Naval Support Force, Antarctica, who directed and participated in the flight to McMurdo, described it as a great step forward. He added that he could foresee the day when winter aircraft support would be a regular procedure of *Operation Deep Freeze*.

"With the winter flights," said Admiral Abbot, "the United States can apply the talents of scientists who normally would not be available because of teaching demands." Indeed, the primary objective of the June flight, named *Project Winfly*, was to add seven new members to the 200-man winter community of sailors and scientists at McMurdo Station. Aboard the flight were two parties of scientists, one headed by Dr. Jacques S. Zaneveld, director of the Institute of Oceanography, Old Dominion College, Norfolk, Virginia, and the other by Dr. C. C. Lee of the Institute of Marine Science, University of Miami. Both Dr. Zaneveld and Dr. Lee, whose projects required diving in ice-covered McMurdo Sound, had teaching commitments through early June and could not spend an entire winter season in Antarctica. Also on the historic flight was a photographer from the National Geographic Society.¹

While the support of research was the main reason for the winter fly-in, it was perhaps of secondary interest to many of the men at McMurdo Station and to the New Zealanders wintering at neighboring Scott Base. For these men, isolated since late February except for radio communications, the winter sortie meant mail, one of the most cherished items in Antarctica, and the flight brought more than 5,000 pounds of it.

Getting the men and the mail to McMurdo, uneventful as it proved to be, involved considerable planning and coordination—and more than a little luck with such imponderables as antarctic weather and communications. Planning started months before, when the necessity for getting the scientists to McMurdo during the winter was presented by the National Science Foundation's Office of Antarctic Programs to the U.S. Naval Support Force, Antarctica. In the 12 years of *Operation Deep Freeze*, Air Development Squadron Six (VX-6), the Navy's antarctic aviation unit, had acquired considerable experience in polar flying. While this was to be the first scheduled winter flight to Antarctica, VX-6 had successfully flown the LC-130F Hercules to the Continent during the winters of 1961, 1964, and 1966 to evacuate medical patients.²

The operational plan developed for *Project Winfly* called for Hercules 318, "City of Christchurch," to fly to McMurdo as soon as possible after June 16, when the moon would be in its three-quarter phase and approaching full. A second Hercules would stand by in New Zealand to provide search and rescue services, if necessary. One aircraft departed Quonset Point, Rhode Island, on June 12, embarked the scientists in Washington, and flew to Christchurch in three days, making stops in California, Hawaii, and American Samoa.

Admiral Abbot and several of his staff officers had set out from Washington aboard the other Hercules several days before the scientists departed for Antarctica. Upon the Admiral's arrival in Christchurch, *Deep Freeze Control*—a communications and flight—monitoring center—was activated in the Naval Support Force's advance headquarters at Harewood International Airport. Communications between Christchurch and McMurdo were excellent and remained so throughout the flight. Even Byrd Station and Amundsen-Scott South Pole Station could be heard "loud and clear" on the voice radio network.

A series of voice conferences began between meteorologists in Christchurch and McMurdo. Lt. Comdr. Ralph Sallee, assistant staff meteorologist with the U.S. Naval Support Force, Antarctica, had accompanied Admiral Abbot to Christchurch to establish a weather control center. His evaluations and forecasts, together with those of Lt. (jg.) Maurice Gibbs, USN, meteorologist at McMurdo, would be the basis of the decision to launch the flight. Early weather forecasts were very favorable. On Thursday, June 15, McMurdo reported clear skies and a temperature of -19°F ., while at Williams Field on the Ross Ice Shelf, about four miles from McMurdo, it was a brisk -50°F .³

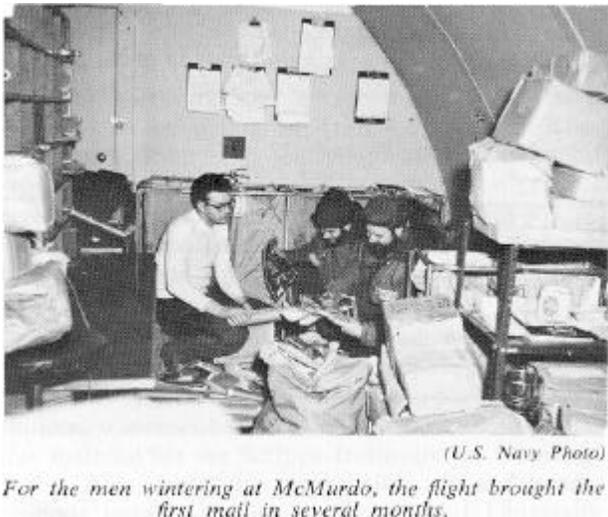
The loading and final preparation of the aircraft began early Friday morning. VX-6 crewmen installed internal fuel tanks in both planes. The fuselage tank was required by "City of Christchurch" because a low-altitude return flight from McMurdo was a possibility: one of the two Navy men to be evacuated, Chief Radioman Ronald Hilton, had suffered a collapsed lung, and, though his lung had fully expanded by June 16, it was not known whether he could withstand flying at 28,000 feet.⁴ Providing the reserve Hercules with an internal fuel tank was also precautionary; the aircraft commander, Lt. Comdr. F. A. Prehn, wanted a maximum load of fuel available in the event he had to conduct a search and rescue mission. Along with the fuel tank and mail, 500 pounds of nonperishable cargo were loaded on the McMurdo-bound airplane. The fresh provisions—almost a ton of fruits, vegetables, milk, and eggs to replenish McMurdo's long-depleted stocks—would be loaded just before takeoff.

By Friday, the opening of Williams Field and the preparation of the skiway for the incoming Hercules had been completed. The winter-over contingent of Antarctic Support Activities at McMurdo had worked in temperatures ranging from -40° to -60°F . to open buildings that had been nearly

covered over by blowing snow during the preceding four months. Generators, heaters, snow movers, communications equipment, air navigational aids, and the GCA (ground-controlled approach) radar had been reactivated.

On the 8,000-foot skiway, which is 300 feet wide, a large snowplow first cut, then graded the surface, and two 35-ton low-ground-pressure D-8 tractors with 150 feet of anchor chain between them dragged the strip twice to ensure smoothness. Through the first 1,000 feet, the skiway was equipped with electric lights, while the remaining length was marked with Coleman double-mantle gasoline lanterns placed every 500 feet.⁵

On Saturday evening, June 17; a tentative decision to launch the flight was made. Comdr. Fred Schneider, the commanding officer of VX-6 and aircraft commander of "City of Christchurch," planned to take off in the early morning so as to reach McMurdo Station in the early afternoon. Although the aircraft would arrive in the darkness just three days prior to Midwinter Day—the time when the least sunlight falls on the Southern Hemisphere—the early afternoon would be the time of nautical twilight, when the sun is at its highest point on the meridian of McMurdo. It was felt that twilight combined with moonlight would provide the best visibility at that time of year .



Final preparations began at 0200 on Sunday, June 18, with the meteorologists evaluating the weather expected at McMurdo and along the flight track. By 0400, the flight crew had been briefed, and an hour later, crew and passengers gathered at the VX-6 hangar. With Dr. Zaneveld were his two divers and students from Old Dominion College, Leonard Nero and David Bresnahan. Also present were Dr. Lee and his student assistant, William J. Boggs, Jr., and Kenneth Line, a mechanical engineer from the airspeed permitted, he activated eight JATO bottles attached to the sides of the aircraft and, at 0621, nosed the big plane gently skyward. So heavily laden was the aircraft that the passengers

reported that they hardly felt the thrust of the JATO rockets.

Weather along the 2,400-mile flight track to McMurdo was so good that the "City of Christchurch" enjoyed a clear sky all the way. The first sight of Antarctica was spectacular, with the jagged features of the Continent clearly outlined in the blue-white moonlight.



Both the mission and search planes were fitted with 3,500 gallon internal fuel tanks.

The plane's Teflon-coated skis touched Williams Field at 1421 in a relatively mild temperature of $-39^{\circ}F$. Unloading operations began as soon as the four turboprop engines were shut down. The scientists and Admiral Abbot were transported by helicopter to "the Hill," as McMurdo Station is called at Williams Field. Admiral Abbot spent nearly six hours at the station, conferring with the various unit officers-in-charge, inspecting the winter construction and maintenance projects, and speaking to the members of the winter-over party— assembled in the general mess hall—about the significance of winter flights. He also discussed with the Navy men their prospects for duty assignments upon relief at the beginning of the summer support season.



Hercules 318, "City of Christchurch," which also made the second (September) winter flight.

Following this visit, those persons scheduled to make the return flight to New Zealand were taken to Williams Field, and at 20 18 the Hercules rose from the skiway. By midnight, activity had increased again in *Deep Freeze Control* at Christchurch. The in-bound plane with the two medical evacuees was about three hours from touchdown when fog descended on the Canterbury area of Christchurch, closing the airport. Alternate airports—which the aircraft had ample fuel to reach—were advised of the

situation. All of the major alternates (Dunedin on New Zealand's South Island and Wellington and Auckland on North Island) reported fog and rain. Fortunately, the fog lifted from Harewood Airport, greatly improving visibility, and the "City of Christchurch" landed at 0337 on Monday morning, less than 24 hours after it had begun its mission.

Such a flight would have been inconceivable when *Operation Deep Freeze* began in 1955, but the improvements made in equipment and the experience accumulated during 12 years of sustained antarctic operations made this historic flight almost as routine as the many other supply runs that are made in support of U.S. research in the Antarctic.

Footnotes:

¹See *National Geographic*, November 1967 p. 732–738.

²*Antarctic Journal*, Vol 1, no 6, p. 274.

³Dates and times that follow are in Christchurch time.

⁴The second evacuee, Hospital Corpsman First Class Lloyd G. Goodrich, had developed a gall bladder condition in May and was being relieved of duty in Antarctica as a precautionary measure. Both men arrived in Christchurch in satisfactory condition, and Hilton experienced no adverse effects from the normal-altitude flight.

⁵For the previous winter flights, which were conducted on an emergency basis, drums of burning fuel oil were used as runway lights.