

# Antarctica Sun Times - *ONLINE*

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*On Oct. 31, 1956 the first aircraft landed at the South Pole. The following is an article written that day by a United Press reporter assigned to cover that historic event and is reprinted with his permission.*

## **First Plane Lands At South Pole**

*by Maurice Cutler, United Press Staff Correspondent*

One Thousand Feet Above the South Pole, Oct. 31 -- (UP) I have just witnessed the historic first landing of an aircraft at the South Pole and the first person setting foot there since Scott's ill-fated 1912 expedition.

A United States Navy R4D (Dakota DC-3) made a successful landing four miles from the presently known location of the South Pole at 2034 hours New Zealand time (0834 GMT Wednesday). With a long vapor trail stretching miles behind it, I saw the small ski-equipped Dakota, named Que Sera Sera, grind to a halt, throwing a wake of snow in its path.

Overhead, a United States Air Force C-124 Globemaster carrying this correspondent circled the area in brilliant sunshine, leaving crisscrossing vapor trails. It carried emergency supplies that would be airdropped should the small plane be unable to take off from the 10,000-foot Polar plateau.

Que Sera Sera--what will be, will be--landed safely in a temperature of around 60 below zero Fahrenheit. The honor of being the first person at the Pole in 44 years went to Operation Deep Freeze commander Rear Admiral George Dufek of Rockford, Ill.

In a message to our plane, Adm. Dufek said he raised the Stars and Stripes for the first time at the South Pole. After 50 minutes on the desolate polar plateau--a flat, white landmass stretching miles to the horizon--the Dakota commanded by Lieutenant-Commander Conrad (Gus) Shinn of Spray, N.C., took off at 2123 hours local time. It was headed for the support base near the Liv Glacier and the Duncan Mountains.

However, shortly after takeoff from the Pole, the Dakota reported engine trouble. Our Globemaster then reduced speed and accompanied it down the Beardmore Glacier to a safe landing at the Liv Glacier outpost. After topping off its fuel tanks, the aircraft then made its way back across the Ross Ice Shelf to McMurdo Sound.

Adm. Dufek's participation was appropriate given the fact that he has been a member of all U.S. Antarctic expeditions since he navigated Admiral Richard Byrd's flagship USS Bear in 1939-41.

"It was like going into another world," Dufek told correspondents after his return, referring to the severe temperatures. After three minutes, he noted that the face of Navy VX-6 Squadron commander, Capt. Douglas L. Cordiner of Washington, D.C., "was white with frostbite." Members of the small group on the Dakota kept looking at each other to detect frostbite.

The Pole landing party said they were heartened to hear the Globemaster commander Major C.J. Ellen of Raleigh, N.C., tell them, "if you can't get off, we'll crash-land beside you, so you'll have a house."

Dufek said that when he and Cordiner attempted to plant the flag, "we really had to dig with our pickaxes." During this activity one of Cordiner's hands became numb in a very few minutes. Dakota pilot Shinn said the flight was "operationally quite simple," but he was concerned when he started the take-off run at the Pole.

"I pushed the throttle fully forward and nothing happened. I then fired four jet-assist bottles and still nothing. I fired another four and got slight movement, then four more, followed by another three and we more or less staggered into the air," Shinn said.

During the takeoff, Shinn and his co-pilot could not see through their windshield and had to use instruments.

Crewman John P. Strider of Kearneysville, W Va., said his only difficulty was "my coffee wouldn't percolate at 12,000 feet."

Youngest expedition member Civil Air Patrol cadet Robert Barger of Peoria, Ill., was aboard the Globemaster, his third polar flight within six days.

"I made my first flight when I was 17, the other two when I was 18," Barger said. He explained that he celebrated his 18th birthday on Oct. 29, two days before the historic Polar landing.

The severe temperatures at the Pole prompted Adm. Dufek to postpone further landings and the air-drop of construction equipment for the proposed South Pole station.

"I had hoped conditions at the Pole would have been less harsh. Under the circumstances we experienced yesterday, we are going to have to wait. It is humanly impossible to do outside construction work under such conditions. I'm not going to put anyone in until temperatures improve."

## **First Pole Landing Remembered**

*by JOC(AW) Jacqueline Kiel*

It was October 31, 1956 at 8:43 p.m. when a DC-3 Dakota, aptly bearing the name Que Sera Sera touched down on the Polar Plateau.

Maurice Cutler, then an 18-year-old reporter for United Press (UP), witnessed the event from an Air Force C-124 Globemaster that was circling above the pole.

While circling, Cutler wrote an article for UP, using a small typewriter balanced in his lap.

Cutler remembers the Globemaster circling above the Pole at no more than 1,000 feet for several hours. It was not an easy flight. "Because the Globemaster was not pressurized, we had to take sniffs from an oxygen bottle while circling the Pole," Cutler said. The passengers were strapped to folding seats, making the flight even more uncomfortable.

Another of Cutler's assignments was to take pictures of the historic event. One of his pictures was used as the official U.S. Navy photo of the landing.

Cutler said other world-shaking events of the time overshadowed the mission. These events included the British-

French war with Egypt over the Suez Canal and the coincident uprising in Hungary which was crushed by the Russians. "It was pretty scary to know that we were so far from a civilization that seemed to be on the brink of World War III," Cutler said.

These other events kept everyone huddle around a short-wave radio to keep updated. "All in all, it was quite a week. There was a feeling that in the event of a nuclear war, we were about as safe as anywhere in the world," Cutler said.

In retrospect, Cutler said, "We were all pretty blase or perhaps naive about the dangers inherent in those early flights."

Cutler has fond memories of his experience. "Like most Antarctic veterans, I will always hold in mu mind's eye the view from Observation Hill across McMurdo Sound to Mount Discovery and the Royal Societies....," he said. "I still get goose bumps remembering the magnificence of it all."

## **AROUND USAP**

*by JOC(AW) Jacqueline Kiel*

**McMurdo Station** - Representatives from the Chilean Air Force and media arrived at McMurdo Station, after visiting the South Pole, on Saturday, Nov. 23. They remained at McMurdo over-night and departed early Sunday.

Bad weather shut down flight operations for a two-day period. However, as flight missions were ahead of schedule, the shut-down did not cause operations to go behind schedule.

A woman was medevaced from the South Pole to McMurdo Station on Friday, Nov. 22, due to severe pneumonia. An LC-130 was diverted from its mission to take her to Christchurch at 11:00 that evening. The woman was admitted to Christchurch Public Hospital where she spent a day in ICU. She is currently in good condition, but is expected to remain in the hospital for another week.

**South Pole** - An electrical feeder at the station, servicing Summer Camp, tripped last week. Planned upgrades to the power system should be completed within a week, which should alleviate any further problems. However, energy conservation is still being encouraged.

The station hosted its first distinguished visitors. Air National Guard personnel and Congressional staffers working on the House and Senate Department of Defense Appropriations Committees were given a tour of the facilities.

**R/V Nathaniel B. Palmer** - The ship completed its second week at sea in support of the U.S. Joint Global Ocean Flux Study. Four mooring stations, which hold equipment that collect samples and measure water flow velocity and direction, were deployed.

**R/V Polar Duke** - The ship continues to work in the western Weddell Sea in support of research on sea life affected by the seasonal migration of sea ice. Last week two under-ice dives revealed and documented some forms of life supported under the ice.

Trawling to gather specimens continues at a greater pace due to some bad samples received. Mechanical failures in the trawling net caused the failures.

**Christchurch** - Naval Antarctic Support Unit raised \$1,446 from an auction on Friday, Nov. 22. Profits will benefit Toys For Tots. Items sold included lawn-mowing services, home-cooked meals and rides on a Harley-Davidson.

A new New York Air National Guard LC-130 ski-equipped "Hercules" will be christened on Dec. 2. The aircraft will be named "City Of Christchurch."

## **Power Turned Off To Conserve Energy**

*by JOC(AW) Jacqueline Kiel*

McMurdo Station is experiencing an ongoing problem in the Power Plant due to engine malfunctions, according to Bill Haals, ASA Operations manager.

There was another power outage on Tuesday due to a fire in one of the engines. Though the fire was immediately extinguished, the engine still had to be shut down, and another engine brought on line, Haals said. Since this procedure takes time, only two engines were carrying the full load of the station, and they were starting to overheat.

To conserve energy and take the load off the two remaining engines, a power feeder affecting several buildings, including dorms, Bldg. 175 and the Vehicle Maintenance Facility (VMF), was manually switched off. The feeder remained off from 11:48 a.m. to 12:28 p.m.

This incident follows an outage that occurred on Oct. 31 where power was lost station-wide.

During normal operations, three engines are used to run the generators, which keeps power flowing. When one goes down, another is started. During severe weather, a fourth engine is started and kept on standby for emergencies, according to Haals. Right now, only four engines are serviceable. The other two are down.

Residents are asked to be energy conscious. Even though breakers for vehicles were shut off, vehicles only play a part of conservation. Lights, appliances and anything else not needed on a daily constant basis needs to be shut off.

There is no time table for completion of the work, Haals said. One engine needs valves replaced and the other needs a complete rebuild.

## **SCIENCE PROJECT UPDATE**

*by JOC(AW) Jacqueline Kiel*

### **Ground-Based Infrared Measurements in Antarctica (S- 148)**

This project uses an infrared interferometer which will monitor selected traced constituents in the atmosphere above the South Pole and McMurdo Stations.

Two modes will be used to take measurements. The absorption mode uses the sun as a source of infrared radiation, allowing measurements during the spring, when the ozone hole is forming. The emission mode is less sensitive but allows for measurements during the polar night. This mode measures radiation emitted by specific gases.

The instruments will measure the amount of each of several gases which are known to play a role in the formation of the ozone hole. Several of these gases are also important greenhouse gases.

This season, field-team member will service instruments at the South Pole and will install a new solar interferometer at Arrival Heights for McMurdo Station measurements. Contract personnel will monitor and maintain the equipment during the winter.

### **Measurements and Model Development of Antarctic Snow Accumulation and Transport Dynamics (S-190)**

This research continues to quantify year-round snow accumulation and the transport of wind-blown snow. The research assists with the interpretation paleoclimatic ice core records and assessing the role of wind in snow transportation.

An instrument that disperses colored glass microspheres at fixed times throughout the year is used. The

microspheres act both as time markers and tracers for wind transported snow.

Principal Investigator Dr. David Braaten and his field team will visit various sites around the continent, including McMurdo Skiway and the Ferrell Automatic Weather Station site located on the Ross Ice Shelf. The team will conduct snow-core and snow-pit sampling of the annual snow accumulation. Snow cores will be obtained along a line in the direction of prevailing winds and identify microspheres transported by the wind.

## Scientists Wonder Why Fish Don't Freeze

*by Samantha Tisdal*

Several times a week, the "fish-squeezers" of S-005 get to hang a sign on their door that says "Gone Fishin'." Then they climb aboard snowmobiles or sprites, head off onto the frozen surface of McMurdo Sound, and dangle hooks through holes in the sea ice.

A good day may land a bucket-full of diminutive *Trematomus borshgrevinki* and *bernacchii*, which are caught with "kiddy" fishing poles using bits of brightly-colored rubber for bait.

More impressive are the Antarctic cod, or *Dissostichus mawsoni*, snagged on three-inch hooks attached to a weighty 500-meter steel cable "down-line." These deep-swimming giants can weigh up to 200 pounds, and must be hauled out of the water with a gas-powered winch.

Bottom-dwellers -- eel pouts and jelly-encased snail fish -- are brought up in large wire cages bated with bags of smelly herring innards.

This may not sound much like sport-fishing, but it is serious science. The fish-squeezers are trying to solve one of the greatest mysteries of Antarctic seas, which average 28.8 degrees F. Simply put, fish which inhabit such frigid waters should freeze.... And yet they don't.

S-005 Principle Investigator Art DeVries of the University of Illinois has been working to unravel this mystery since the early 1960's, making him one of the oldest-timers on the Ice. His research has gone a long way toward revealing the "anti-freeze" properties of fish blood.

The blood has been found to produce proteins -- more specifically anti-freeze glycopeptides and peptides -- which stick to ice crystals as they form, and prevent them from growing larger. "It's something like the way that an antibody attaches itself to a toxin," explained DeVries's colleague Craig Marshal, who recently arrived in McMurdo from the University of Otago in Dunedin, New Zealand.

"The anti-freeze proteins recognize the ice crystals as being invaders to the system, and react by inhibiting their growth cycle and thus neutralizing their lethal effect."

What still perplexes the scientists is how the fish rid their systems of the miniature ice crystals which form in spite of the anti-freeze presence.

"The waters these fish inhabit never become warm enough for the ice to melt," Marshal said. "So, what happens to the ice? If the fish didn't somehow get rid of it, the crystals would eventually build up in their system in levels high enough to freeze them."

The leading theory as to how the fish manage this problem is that they raise salt levels inside compartments within the cells. Then, in a process called phagocytosis, the cells may "swallow" the ice, just as they would a virus or bacteria. Within the cells, the ice crystals would melt in response to the high salinity.

"It's the same idea as pouring salt on an icy road," Marshal explained.

For now, this is just a working theory, but one which the S-005 team members are actively pursuing during this season's research. "In our lab, using samples from specimens we've caught in the field, we're trying to tease out

the parts of the path which may reveal how phagocytosis works," Marshal said.

Research is also being conducted to learn more about the fishes' enzymes, and to identify and sequence genes that code for antifreeze glycopeptides.

McMurdo-ites who are interested in the fish-squeezers' work can visit the old aquarium, which houses many live specimens from McMurdo Sound. There are also often openings for "fish-tenders" to go out on the ice and assist with the fishing process. (Call Juan Laden at 4114 to make arrangements.)

Those who are more gastronomically motivated will appreciate the fresh Antarctic Cod -- compliments of the fish-squeezers -- being prepared for Saturday's Thanksgiving feast.

## **Morale Process Action Team Wants Your Input**

The Morale Process Action Team, representing Total Quality Management (TQM) for McMurdo will be conducting a survey this Thanksgiving weekend. The survey will be available November 30 through December 7. There will be collection boxes located in both sides of the Galley, Mail Room, and Computer Room.

The goal of this survey is to enhance morale boosting activities here in McMurdo. The members of the Morale Positive Action Team are sincerely interested in the voice and participation of the community. We encourage your ideas, creativity, honesty and positive solutions to help us achieve our goal.

Our key element to success is the participation of the community and finding out what kinds of activities are meaningful and beneficial to station employee morale.

We will return the results of this survey to the community no later than the Christmas Dinner.

Sincerely,

*The Morale Positive Action Team*

## **LT Saves Navy \$258,000, Earns Himself \$1,800**

*by JO2 David H. Lippman, U.S. Naval Antarctic Support Unit*

**CHRISTCHURCH, New Zealand** -- A U.S. Navy lieutenant's alertness and thinking saved the Navy nearly \$260,000 this year, netting him \$1,800 from the Military Cash Awards Program.

LT Charles Callanan, Communications Officer at U.S. Naval Antarctic Support Unit (NASU), was tasked with closing down the unit's transmitter at Weedons, outside Christchurch. Under a Memorandum of Understanding between the United States and New Zealand, the abandoned site had to be returned to its original state -- namely an undeveloped field.

However, when Callanan had to demolish the site in 1995, it consisted of several antennas, with various communications equipment and associated systems. Demolition contractors determined that it would cost the Navy \$250,000 to raze the site. And more than 90 percent of the equipment was no longer used in Navy inventories, so it would not have been cost-effective to move the gear to any other facility.

But Callanan noted that in December 1995, the New Zealand military had just installed a new HF Dual Tower Rotatable log periodic antenna, known as an RLPA, on a site next to Weedons. Callanan made a few calls, and found out the Royal New Zealand Air Force planned to purchase and erect another antenna of the same make and model of the one Callanan had to demolish.

The RNZAF was looking at paying \$45,000 for their dish, but Callanan's RLPA had a value of only \$15,000.

So Callanan suggested a swap: the RNZAF take over the American antenna in return for absorbing the Weedons site, thus saving the Navy from having to spend money on demolition and cleanup.

After jumping through a number of administrative hurdles and paperwork, the deed was done. The RNZAF got their antenna, cleaned up the site, and the site was demolished five years ahead of schedule, resulting in a savings of \$258,000 for the Navy, and the reward for Callanan.

NASU, the only U.S. military unit in New Zealand supports the U.S. Antarctic Program, which is operated by the National Science Foundation's Office of Polar Programs. NASU is preparing to disestablish in March 1998, as the Navy ends 41 years of supporting the U.S. Antarctic Program.

## **USAP PERSON OF THE WEEK**

*by JO3 Roland Ortiz*

Physical Therapy Technician HM2(FMF) Charles Rael uses his knowledge and experience in physical therapy to care for McMurdo residents.

Rael is one of twelve augments who are temporarily assigned to Naval Support Force, Antarctica Medical Department. They will return to their permanent duty stations after the summer season. Rael will go back to Naval Medical Center, San Diego, Calif.

"The twelve augments for medical each have different specialties," Rael said. "My specialty is physical therapy."

Rael's main duty is to rehabilitate patients with musculoskeletal problems. Another of his duties is to give lectures on rehabilitation to the medical staff.

"Since, I've been here, there has been a lot of ankle, elbow and back injuries - many injuries resulting from slipping on ice," he said.

Rael usually rehabilitates patients for the first five days after they come in. "It really depends on the severity of the problem but daily treatment is usual," Rael said.

Rael, a native of Pueblo, Colorado, extended his Navy career by reenlisting this past week. He looks forward to transferring to Branch Medical Clinic in Sigonella, Italy in mid-July.

## **NAVY NEWS**

### **Tuition Aid Available For Spouses Overseas**

*by Michael McLellan, BUPERS*

**WASHINGTON (NWSA)** -- Educational assistance is available for qualified spouses residing overseas through the Navy-Marine Corps Relief Society's (NMCRS) Spouse Tuition Aid Program (STAP) and the VADM E. P. Travers Scholarship and Loan Program. The programs provide spouses of active duty Sailors and Marines serving in most overseas sites an opportunity to pursue an advanced or occupational educational goal.

STAP grants are provided for up to 50 percent of tuition costs, not to exceed \$300 per term for undergraduates and \$350 per term for graduates, up to a maximum of \$1,500 for undergraduate students and \$1,750 for graduate students each year. Spouses may take academic credit or high school equivalency training through on-base educational programs provided the programs relate to an individual's occupational goal. Since the program's inception in 1991, NMCRS has made approximately 6,276 STAP grants totaling \$1.2 million.

STAP is a need-based program, and requires individuals to demonstrate financial need by outlining a budget to a

trained NMCRS interviewer. The budget serves a two-fold purpose. It is the basis by which aid is granted, and also serves as the conduit through which sound budgetary advice can be provided, where needed.

The VADM E.P. Travers Scholarship and Loan Program provides a qualified spouse a scholarship of up to \$2,000 and a loan of up to \$3,000 per academic year. Applicants must be full-time undergraduate students. Re-application, by March 1 for scholarship and loan and Oct. 15 for loan only, is required each year. Qualified applicants are ranked according to financial need, and the Society is limited to 1,000 scholarships.

Current NMCRS policy does not regard Alaska and Hawaii as overseas assignments. That policy is presently under review.

Additional information for these programs and other education programs can be obtained by calling NMCRS at (703) 696-4960, or by visiting you local NMCRS office.

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