

# The Antarctic Sun

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## Pit stop



Maintenance crew chief with the 109th unit of the Air National Guard guides a Hercules LC-130 to a stop at the fuel pits on the ice runway (see *related story on page 2*). Unseasonably bad weather has forced the cancellation of more than 50 missions so far this season. Photo by Josh Landis.

## quote of the week

"It only goes to 20 below."

- shopper at Scott Base store pointing out limitation of a thermometer keychain on sale there.

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# Exploring the plateau

By Jeff Inglis  
*Sun staff*

The U.S. segment of the International Trans-Antarctic Scientific Expedition left Thursday for Byrd Surface Camp to begin this season's traverse of the West Antarctic ice sheet.

The project is a multi-national effort in which the U.S. component this year involves 10 research institutions and five areas of study: meteorology, surface glaciology, geo-

A crevasse detector is mounted on the front of a Tucker Sno-Cat. Photo courtesy of the ITASE project.



physics, remote sensing and ice coring. "It's five coordinated disciplines," said Paul Mayewski, coordinator of the U.S. traverse group.

Last year was the first of this four-year project that will end at the Pole in 2003. The

**see Plateau on page 4**

# Ice time Capsule

By Josh Landis  
*Sun staff*

There is a secret inside the two-mile thick ice cap of the South Pole. It has nothing to do with past climates or the future of global warming. It's a piece of history left by the first people ever to inhabit that frozen place: A time capsule.

On New Year's Day, 1957, the construction crew that built and occupied the first South Pole station held a ceremony that included the dedication of a time capsule.

Antarctic pioneer Paul Siple was there and he wrote about it in his book, *90° South*.

"After supper we added officially to the Station's status by burying a time capsule contributed by the citizens of Peoria, Illinois. Inside a cylinder of a D-8 tractor, built in their city, Peorians had inserted a newspaper and other material for us to bury, with the notation that the capsule was 'to be opened in the year 2000 AD.' Some of the men wanted to dig into the

snow and deposit the capsule, but I pointed out that if they did it would never be found again. Instead, I suggested that we put it in (Dick) Bowers' South Pole marker, the 4 x 4 x 8 plywood shack 1,200 feet away from my garage-top Pole. Bowers

**"There are conflicting reports on what happened and we're not sure where it is."**

- Jerry Marty,  
*South Pole construction  
project manager*

and (John) Tuck acted upon this and we held the ceremony."

Siple's concerns were well founded. Even though that first crew left the capsule in its place, 43 years later its where-

abouts are uncertain. Nobody knows for sure where the cylinder rests. They only believe it's down there somewhere.

There are a few likely scenarios.

The first is that it was never moved at all. Decades of snow drifting across the plateau would have buried it as much as 40 feet beneath the surface. Even if it can be assumed the cylinder was never moved, the exact location is still uncertain. In 1957 the capsule was placed inside a ring of fuel barrels marking the approximate location of the South Pole. But the polar plateau is in constant movement, and what was the Pole then is far different today. Tracking the drift and accounting for possible inaccuracies in past measurements would be difficult. Scanning for the artifact with snow-penetrating radar also presents a challenge. There were a lot of objects at Pole during that time, and many of them could look very similar on a radar search.

**see Pole on page 11**

## Cold crews keep Hercs humming



By Josh Landis  
*Sun staff*

**T**he U.S. Antarctic Program moves by air, and anything that keeps a plane from taking off could ultimately slow everyone down.

There's nothing anyone can do about bad weather, but there are a group of people who do what they can to keep their planes up and running.

The maintenance crews of the Air National Guard occupy two rows of buildings on the ice runway. They work around the clock to make sure the LC-130s are ready when it's time to take off, and brought up to spec when they come back.

**see Hercs on page 11**

Air National Guard Staff Sgt. Wes Middleton prepares to work on the hydraulic system of an LC-130's nose landing gear. A fluid and gas shock-absorbing system helps keep the plane steady while landing on rough snow and ice. Photo by Josh Landis.

**web sites of the week**

## Antarctic traverses in progress

- [www.yourexpedition.com/bae\\_site\\_pages/](http://www.yourexpedition.com/bae_site_pages/)  
*The Anne Bancroft-Liv Arnesen expedition to cross the continent from Patriot Hills to Ross Island.*
- [www.originxpedition.com/Water](http://www.originxpedition.com/Water)  
*The Dutch expedition from Patriot Hills to the South Pole and back.*
- [www.pole2pole2000.com](http://www.pole2pole2000.com)  
*An international team of young people attempt to traverse from North Pole to South Pole.*

# Obituary

## George W. Gibbs

First African-American in Antarctica, civil rights leader

ROCHESTER, Minn. – George W. Gibbs, Jr., the first African-American to set foot on Antarctica and a celebrated civil rights leader, died Nov. 7, on his 84th birthday.

Gibbs served on Adm. Richard Byrd's third expedition to the South Pole in 1939, becoming the first African American in Antarctica. He was one of 40 Navy men selected from 2,000 applicants to sail with Byrd on the *USS Bear*, a rickety, wooden ship that had been made into a museum before it was retrofitted for the South Pole voyage.

After three Antarctic expeditions, he was a World War II gunner in the South Pacific.

Following his naval career, Gibbs graduated from the University of Minnesota, and moved to Rochester in 1963 to work for IBM. After retiring, he managed his own employment agencies.

Gibbs helped organize the Rochester chapter of the NAACP 35 years ago and worked tirelessly for civil rights.

In 1974, Gibbs made national news when the Rochester Elks Club denied him membership. He was the first African-American to apply to the local club, and he helped break the color barrier at service clubs in Rochester.

- Associated Press and Rochester Post-Bulletin reports

## Correction

In last week's list of geographic feature names, the Sun incorrectly stated that Steve Kottmeier's work with the U.S. Antarctic Program began in 1988. He was a researcher on the Ice from 1981 to 1987.

[www.polar.org/antsun](http://www.polar.org/antsun)

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## the week in weather

### around Antarctica

<b>McMurdo Station</b> High: 37F/3C Low: 8F/13C Windchill: -36F/38C Wind: 49 mph/80 kph	<b>Palmer Station (Saturday)</b> High: 41F/5C Low: 27F/-3C Wind: 43 mph/69 kph	<b>South Pole Station</b> High: -31.3F/-24.3C Low: -41.8F/-41C Avg. temp: -33.2F/-36.2C Wind: 33 mph/53 kph
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### around the world

<b>Bogota, Colombia</b> High: 65F/18C Low: 47F/8C	<b>Duluth, Minn.</b> High: 25F/-4C Low: 15F/-9C
<b>Tokyo, Japan</b> High: 64F/18C Low: 46F/8C	<b>Orlando, Fla.</b> High: 75F/24C Low: 59F/15C
<b>Copenhagen, Denmark</b> High: 46F/8C Low: 39F/4C	<b>Prescott, Ariz.</b> High: 52F/-11C Low: 25F/-4C

Saturday's numbers

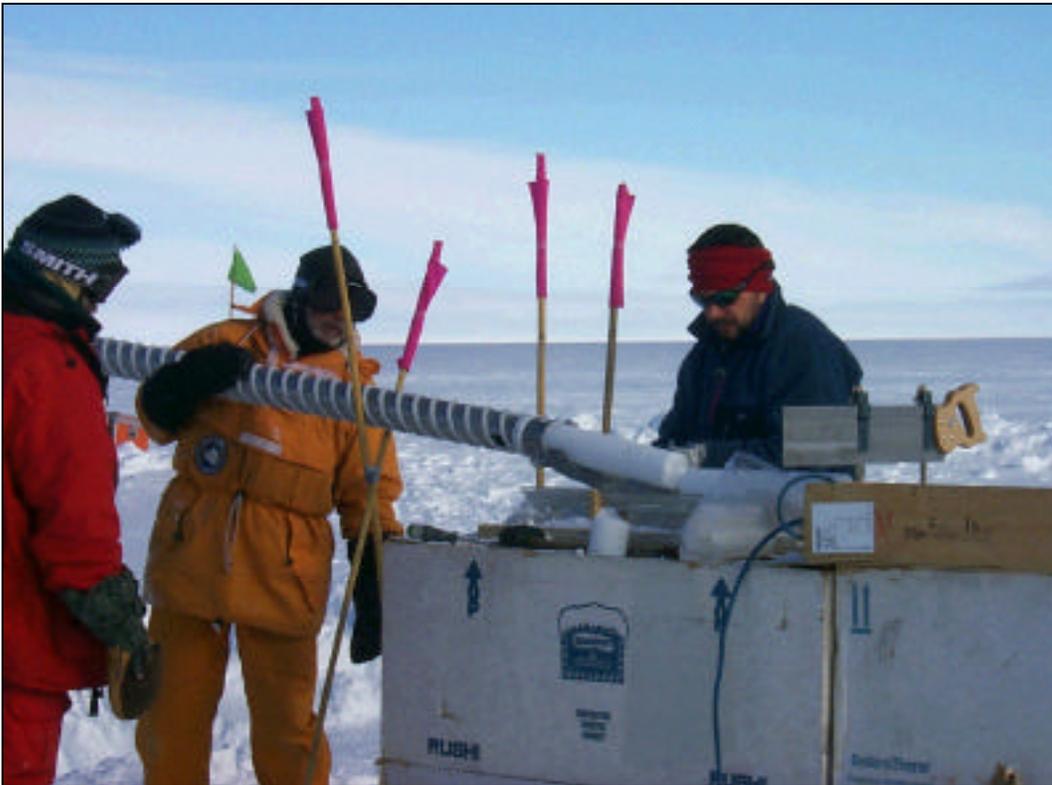
## Attention McMurdoites and Polies

**Send holiday mail north by:**  
First class/Letters: Dec. 1  
Priority mail: Dec. 1  
Space Available Mail (Parcel Post at home): Nov. 21

**Your friends and family should send holiday mail south by:**  
First class/Letters: Dec. 1  
Priority mail: Nov. 27  
Parcel Post: Nov. 20



# Plateau



Mark Twickler (right) and Paul Mayewski supervise the removal of the ice core from the drill last season. Photo courtesy of the ITASE project.

from page 1

information the team collected last year is already helping improve scientists' understanding of the world's climate.

The data is specific to the region of West Antarctica where the traverse will occur, but it shows effects of regional and even global weather and climate systems.

"What we're looking for isn't just an understanding of Antarctica," Mayewski said.

By looking at snow layers in Antarctica ice sheets revealing the last 200 to 500 years of the Earth's climatic history, ITASE groups across the continent have already learned about the relationship of certain Antarctic weather patterns to large-scale climate phenomena like El Niño.

"We already have seen some very interesting results," Mayewski said.

The team is also comparing the results from their work in the Antarctic to similar work in the North Atlantic, another powerful element in the engine of Earth's weather. While small changes are localized, Mayewski said, larger alterations are visible in ice cores from both ends of the globe.

This field season, the traverse team will cover 1,200 kilometers in a triangular path starting and ending at Byrd Surface Camp. During the drive, they

will use downward-looking radar to map the strata in the ice beneath the route. They will also have a shorter-range crevasse detector radar unit operating to keep the vehicles and researchers safe out on the plateau.

At roughly 100-kilometer intervals, they will stop for a few days to drill a 200-meter ice core. The core itself and the hole it leaves show the chemical and physical properties of the layers of snow.

They will identify specific layers in the cores that can be cross-referenced to the radar data, allowing them to follow snow layers for hundreds of miles.

"It's almost like a three-dimensional ice core," Mayewski said.

The data they get from the cores and from the radar shows indicators of the extent of the sea ice, activity of marine life and duration of polar stratospheric clouds in recent centuries, Mayewski said.

This year the team will be able to haul more equipment and better shelters, because they have a Challenger instead of one of the two Tucker Sno-Cats they used last year. The other Sno-Cat will continue the journey this season.

As the project progresses, Mayewski said, the setup and takedown

at either end of the traverse will become more streamlined, as vehicles and supplies are left to spend the winter on the plateau.

"We should be able to go in with a very small amount of C-130 support," Mayewski said. This is a big efficiency advantage, he said, as compared with individual field camps.

"There are 10 institutions that can potentially be served by two to three flights in and two to three flights out," Mayewski said, adding that fuel air-drops will also be part of the support of the field traverses. This year they expect to use seven flights in and four flights out.

To choose its exact route, the team uses satellite photos to avoid crevassed areas and other potentially problematic sites. But they also confirm satellite pictures by reporting on surface conditions and comparing that information to the pictures taken from space.

In addition to their own work and contributions to wider projects like the International Geosphere and Biosphere Project, one of this year's shallow cores is at a possible deep-core site like the one at Siple Dome.

"This is a return of the 1960s style of science in this region, with 21st century technology," Mayewski said. ■

# SOLAR FLARE SHUTS DOWN continental communications

By Jeff Inglis  
*Sun staff*

**M**acOps bills itself as the Voice of Antarctica. The radio operators there talk to people all over the continent and elsewhere around the world on high-frequency and very high-frequency radios.

Thursday, just before lunch, the continent got a sore throat. All the HF radios went quiet, broadcasting white noise instead of voices from all over.

"It was pretty eerie," said Paula Elliott of MacRelay, which also monitors all radio frequencies.

A solar flare had sent a mass of charged particles out from the sun into the Earth's atmosphere. Those charged particles had disrupted the ionosphere, the layer of Earth's atmosphere that reflects HF radio waves, preventing transmission of HF waves around the globe.

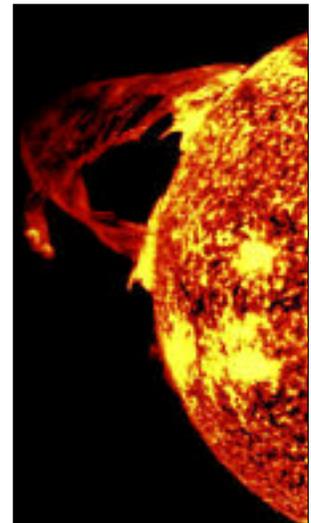
The radiation, the fourth-largest storm of its type since 1976, caused some rearrangement of communications and transport schedules on the continent.

"Camps were unable to check in," Elliott said. "People were technically overdue for their check-ins, though we knew why."

If camps miss their check-ins under normal circumstances, rescue missions are launched. This time, though, radio operators waited and worked around the situation.

They had lost contact with South Pole Station, Byrd Surface Camp, Siple Dome, Byrd Glacier, as well as the Olympus Range and Lake Vida, which are in VHF "dead spots" in the Dry Valleys.

Communications with the Pole were possible on the Internet during the Pole's satellite window. The people at Vida had to climb a hill to hit a



Left: Stephanie Brackin talks to deep-field workers at a camp on the high polar plateau via high frequency radio. Last week a solar flare interrupted HF transmissions on the continent. Photo by Josh Landis. Right: Asatellite image of a solar flare.

**"We didn't expect it to be  
as big as it was."**

- *MacOps coordinator Shelly DeNike  
on the impact of the solar flare*

VHF repeater.

"We didn't expect it to be as big as it was," said MacOps coordinator Shelly DeNike.

The camp at Icestream C was put in during the communications blackout. Normally, an airplane can't leave a camp put-in until the camp radios MacOps on HF. This time, though, the camp was only able to talk to the plane on the ground. The solar flare's energy prevented them from talking farther away.

Other than that small glitch, everything was fine.

"We've been pretty much prepared for this to happen," DeNike said.

The larger field camps have emergency beacons they can set off if all else fails, just like if an aircraft crashes or a boat is in distress at sea. Had anything truly disastrous happened, they could

have activated the beacon.

After two days without contact from Byrd Surface Camp, an airplane went out of its way to fly over it to make contact. Pilots helped by contacting camps along their flight routes.

"When they would fly in the vicinity of field camps they would call them," DeNike said.

Camp managers knew this might be a problem. Before going into the field, they had been briefed that HF problems might occur in this year of high solar activity.

In terms of air traffic control, everything also went smoothly with what air traffic manager Dusty Barrett called "a little bit of creative scheduling."

Before planes left McMurdo, controllers gave pilots instructions for flying both to and

**see Flare on page 10**

# Diving for Science

By Jeff Inglis  
*Sun staff*

Most scientists in the U.S. Antarctic Program study things on or above the ground. Some even explore the sky or faraway galaxies. But a select few regularly descend into Antarctic waters to collect material and information for their research.

On average, 20 divers make 600 dives a year in McMurdo Sound, the Dry Valleys, near Palmer Station and based from the program's two research vessels, said scientific diving coordinator Rob Robbins.

The highest number of dives recorded in any one year was 908 in 1984, Robbins said. The average dive lasts 40 minutes, though some have gone longer than 90 minutes. The water in McMurdo Sound is 28.5 F (-2C),

**"I've potentially got  
the best job  
in the program."**

*- Rob Robbins, diver*

and near Palmer it's only slightly warmer, at 30 F (-1C).

This summer season, six research groups, five based at McMurdo and one at Palmer, will include 16 divers. The GLOBEC survey of the Southern Ocean ecosystem, based on the *Laurence M. Gould* and *Nathaniel B. Palmer* research vessels, will have two groups diving in March.

Less commonly, Robbins will dive to support specific projects that don't have their own divers.

"Most groups bring down whatever dive labor they require," Robbins said.

Scientists dive for many reasons, including photographing marine life, collecting specimens for lab work and maintaining underwater equipment.

"The facilities here are fabulous for diving," said John Heine, the U.S. Antarctic Program's advisor for research diving. "The diving conditions are really great. The support from Rob is really what makes it happen."

One reason to dive in McMurdo Sound is that the low water temperature attracts deep-sea wildlife to shallow water with little light filtering through the sea ice.

"The sound is fairly interesting," Robbins said. "You see animals in the sound you would normally see in deep water, but at diveable depths."

The depth at which wildlife are observable



Diver Rob Robbins lowers a rope down a dive hole. The rope has flags and strobes on it to help divers find the hole when they are ready to leave the water. Photo by Jeff Inglis.

is important, because diving deeper than 130 feet and for extended periods is not allowed for scientific research. Deep diving is more complex and dangerous, even in warmer waters. In Antarctica, the margin of error is slimmer, so divers take more precautions.

"We don't allow decompression diving," Robbins said.

That's when a diver needs to pause on the way back up to the surface to adjust to the difference in pressure.

McMurdo Station has a recompression chamber, originally installed in 1984 to comply with federal safety regulations for construction diving. After the construction finished, Robbins said, station management decided to keep the chamber in case of dive accidents.

Since then, nine people have needed treatment. Four were aviators who had decompression problems after accidents in which their airplanes depressurized at altitude. The

other five patients were divers. "Every one was a complete resolution," Robbins said.

Robbins runs the recompression chamber with a volunteer crew of six, as well as a doctor and a medical technician from the medical department on station.

Palmer Station has no chamber, though there is one at the nearby British base, Rothera, as well as in Punta Arenas, Chile.

Robbins works hard, though, to avoid accidents, and gives each dive group a first-aid kit and an oxygen kit.

"We provide a lot of safety equipment," he said.

He also ensures that science divers know how to move around underwater while wearing a dry suit, which keeps them warmer than a wetsuit would.

"It's really the dry suit that's different from most diving," Robbins said.

A dry suit traps a lot more air than a standard buoyancy control device. Therefore, as the divers change depth, their buoyancy changes rapidly.

Each season, each diver has to do a as a refresher or orientation dive to qualify for Antarctic diving, because some of the things are different here. For example, most under-ice diving courses teach divers to use tethers. But here, the water is so clear, Robbins said, that they don't need tethers if they appropriately mark the holes.

"Here the visibility's good. When visibility drops we use the tethers," Robbins said.

There are two ways to breathe under water.

If divers use scuba tanks, at least two divers must be in the water, to help each other in the event of an accident.

When a diver is breathing from a surface supply of air, the system not only permits two-way communication between the diver and someone on the surface, but a rescuer can follow the air hose from the surface to a diver in distress. So a standby diver is still present, suited up and ready to swim, but is on the surface.

With only one diver using air at a time, they can take turns diving and being the standby diver for each other, accomplishing more in one outing.

"You can do a lot more work," Robbins said.

Also with surface supply, a diver is more comfortable in the water, Robbins said.

"It's quite a bit warmer," he said. "Your face is covered."

Robbins said he would like to be doing more commercial construction diving, but he's pretty happy with the science support end of things as well.

"This is a lot more scenic," he said. "I've potentially got the best job in the program." ■

# Taking THE heat

By Beth Minneci  
*Sun staff*



During the mass casualty drill, a mock disaster staged Thursday, Lee Bruchez and Shane Ellison assist a person pretending to be hurt. Photo by Beth Minneci.

**T**wenty-three-year-old Heather Bowles could probably be working as an engineer in a plush office somewhere, but instead she's hauling a fire hose across rock and ice in sub-zero temperatures.

After earning a bachelor's degree while volunteering for a Boulder fire department, she chose her career.

"I love it," Bowles said, pushing her hair over one shoulder. "I got the big (college) degree and decided I liked firefighting better."

A large contingent of McMurdo's firefighting force is twenty-somethings from western states who are earning salaries as firefighters for the first time.

They're here for personal adventure and to gain experience that will set them apart from other firefighters when they go home.

But that doesn't mean they're all inexperienced. Most of them attended an academy and worked extensively as volunteers in their home states.

"It's typical," McMurdo Station fire chief Dave Turley said. "They get out of the fire academy, get some volunteer experience and come down here to get another experience."

And at McMurdo, they're getting a range of training that would be unheard of for a rookie in the states.

With 25 years at the Seattle Fire Department, McMurdo freshman Lt. Dan Wade is part of the smaller, seasoned segment of the staff.

In Seattle, new firefighters are apprentices for the first six months, where they master small tasks for a specific position before hitting the streets.

McMurdo is a different story. Right away every member is thrown into the fire.

"There's a ton of stuff that you're trying to digest," Wade said.

In a big city, a man who has been on the force 10 years can have had the same duties his whole career.

Not here, said Bowles.

"One day I'm driving, the next I'm in charge, the next I'm in the back seat," she said.

Some aspects of the job are vastly dif-

ferent from home, but Turley tries to mirror his department to those in the states. The chief is from Lakewood, outside Denver.

Among the 43-person crew covering the McMurdo and airfield stations are the chief, four dispatchers, two captains, eight lieutenants and 28 firefighters.

Like at many departments in the states, McMurdo's firefighters work alternate days

ing in town is checked out once a month.

The afternoon consists of four hours of training, from driving engines to running pumps and brushing up on emergency medical procedures.

After dinner is free time, during which they can watch television or use a computer or any other activity in the firehouse.

A shift at the department's airfield station can turn into an all-nighter, depending on air traffic. On the other hand, days when flights are canceled are dull.

Another public misconception is that the buff men and women wearing radios and dark blue McMurdo Station T-shirts are showcasing themselves during dining hours. They eat together because they have to, said Josh Card, 25.

"We're just very identifiable because we're all wearing the same clothes," Card said. "But it's a response issue and an accountability issue because if we get a call, we all have to respond at the same time."

Spending so much time together is part of the experience.

"We live together, eat together, sleep together, we're like a family," said Lt. Justin Henkel, 24. And working and living so closely creates unlikely bonds.

"You may not even like the person behind you, but you'd give your life for him, and the other way around," Henkel said. "We have to work together as a team and get along."

Some people learn here that they don't want to pursue a firefighting career when they go home. But most take away a stronger passion for the profession, and an experience that gets them noticed, Turley said.

That's important. Full-time, salaried firefighting jobs in the states are competitively sought.

"In Denver, they'll get 5,000 applications from strong, intelligent kids," Turley said. "So you went to the bottom of the world to get fire experience? It puts you in another category. It sets you apart." ■

## Learn firsthand what McMurdo Station's firefighters do at an open house this afternoon

**What:** Fire Expo 2000

**When:** noon to 5 p.m.

**Where:** the firehouse

### If you go, you can...

- shoot water from a fire hose
- extinguish a pan fire
- crawl through a smoke-filled room while wearing firefighter gear, looking for victims
- tour the firehouse
- take home a door prize
- eat free chili

with three days off every two weeks.

That's a nice stretch, but during their shifts they are responsible for emergency calls around the clock.

Like firefighters at U.S. departments, McMurdo Station's deal with a public perception that they don't work.

"There's a fallacy that firefighters sleep and play checkers and that's all they do," Turley said.

A typical workday starts before breakfast with housework at the station. After morning meetings they inspect fire extinguishers, sprinklers, lights and exits so that every build-

# our Antarctic week

**19**  
*Fire Expo 2000, noon to 5 p.m., firehouse*

*Science lecture: "Big balloons and other cosmic things," by Stephen Meyer, Greg Guzik and Steven Peterzen, 8:15 p.m., galley*



**20**  
*Movie, title to be announced, 8 p.m., galley*

**21**  
*Karaoke night, 8 p.m., Gallagher's*

**22**  
*November Birthday Bingo, 8 p.m., Gallagher's. Guest caller: Lana from Scott Base*

**23**  
*Acoustic night, 8 p.m., Coffee House*

**24**  
*"Thanksgivin'Flava," with DJ Alexis, 9 p.m., Gallagher's*

**25**  
*Thanksgiving dinner, 3:30, 4:30 and 6 p.m.*

**cold hard facts**

- Amount of oxygen on an LC-130 aircraft: 25 liters (in liquid form)
- Number of days that oxygen supply typically lasts before it warms and is vented from the plane: 4-5 days
- Percent oxygen in air in divers' tanks: 20 (78 percent nitrogen; 2 percent carbon dioxide and trace gases)

**Oxygen**

## Ross Island Chronicles

By Chico

It sure is boring around here.



Well, why don't you join the French Foreign Legion? They don't ask questions, take anyone, and you get to see the world. Plus you can meet lots of girls.



I'm off to join the French Foreign Legion to help poor defenseless countries fight against oppression and overwhelming odds.



That's very noble of you, considering joining them means low pay, long days, hard work and the possibility of getting shot. But at least you'll come out honorable and brave and make us proud.

Hey - where are you going? Did you forget something?

Yeah. My senses. All of a sudden it doesn't seem so bad being a penguin.



# Will you marry us?

— depends on who you ask

By Beth Minneci  
Sun staff

Two months before Miriam Sloan and her boyfriend Todd Zender were scheduled to leave Washington for Antarctica, Todd's dad became seriously ill.

Instead of leaving, Miriam offered to stay with Todd until his father's condition changed.

"He said, 'You'd miss Antarctica for me?'" Miriam recalled.

"Yes," she said.

"Will you marry me?" he asked.

She said yes.

Todd's dad recovered, but the couple's plans hit a snag at McMurdo Station. A Catholic priest here researched the legal implications of a wedding in Antarctica, and found that because no government has jurisdiction in Antarctica, the wedding was off.

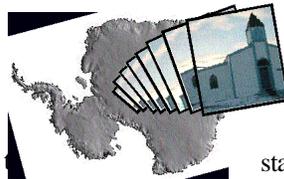
"Unfortunately, there is no way a marriage can be legally celebrated on the Ice," the Rev. Brendan Ward said. But that depends on where you're from.

In Ward's home country of New Zealand, conducting a marriage without legal authority is grounds for a hefty penalty: three months in jail and \$19,000 (NZ), the equivalent of \$7,600 (US).

"I'm not up for that," Ward said.

But David Stillie, a pastor who worked at McMurdo Station in the late 1990s, said he married five couples during three seasons on the Ice.

Stillie's marriages were merely reli-



gious blessings of vows between two people, and not state-sanctioned.

"I simply tell the couples that I am happy to provide a religious ceremony for them but that the legality of their marriage should be verified in their own home state," Stillie said.

Stillie said that for couples who live in states that permit common-law marriages, like his home-state of Colorado, marriages on the Ice are legal.

Fifteen states and Washington, D.C., permit common-law marriages, which generally require that a couple claim they are married and live together for a "reasonable" period of time. No license. No ceremony.

"Therefore, since no government licensing or permission is now required in (those) states, it is legal for people to get married in Antarctica," Stillie said.

Not everyone, including the current station chaplains, agrees.

A couple can marry in Antarctica, Protestant Rev. Art Moore said, only if they already hold a marriage license from the state in which they are residents.

But having a license

doesn't guarantee an Antarctic wedding. First, Moore requires three counseling sessions with the couple over several weeks. Then, maybe.

"If two people come to me and say they want to get married, I say, 'Let's talk,'" he said.

Because a multiple-session counseling requirement is standard practice and chaplains generally serve in Antarctica for only a month each season, most chaplains won't conduct a ceremony here, license or not.

"For most couples we won't be around long enough," Moore said. "It ain't gonna happen."

The Antarctic wedding ceremonies that he knows of involved couples who were already married in the states but had their vows renewed here, in front of their friends on the Ice, said the Rev. John Coleman, another Catholic chaplain from New Zealand.

"It might mean they want to be married before God and have their union blessed," Coleman said. "That's the best we can do." ■

A legal marriage in Antarctica



Dining room attendant Paul Zahradka "marries" ketchup bottles in the galley after lunch. Photo by Jeff Inglis.

## Highway 1 ORP

What would you put in an Antarctic time capsule?



"A toilet sponge."  
Scott Maddeaux  
housing



"Pez."  
Liz Connell  
Chalet



"Asteak."  
Ben Rillo  
cook

# Flare from page 5

from the Pole; normally they clear flights for only one direction at a time. MacCenter, the hub of air traffic control at McMurdo was only able to talk to the planes while they were within line-of-sight.

In a contingency set up last year, they had two controllers in Christchurch, New Zealand. The controllers in McMurdo talked over the phone to Christchurch, which relayed messages over a satellite communication link to the planes.

"Once the HF went down we had to be a little bit creative," Barrett said.

They also used Iridium satellite phones, Barrett said.

Pilots continued to use HF, sending their position reports "in the blind," without knowing if they were received, in the hope that MacCenter could hear them.

"Sometimes you can receive but you can't transmit," Barrett said.

This is the second full blackout since Winfly, but there have been partial blackouts where only lower frequencies were cut off.

This type of event has happened in the past, but only for 24 to 48 hours, Elliott said. This time it was Saturday evening before things came back, a shutdown of nearly 60 hours.

"We've seen a lot more activity than we had last year," Elliott said.

It may have to do with a peak in the 11-year cycle of solar activity. Sometimes these effects from flares are predictable, and this time there was some warning. But the loss of HF communications was rapid.

"It happened right away," DeNike said.

Things are back to normal now, Elliott said, but it could happen again anytime, and without a lot of warning.

"They hit without much notice," she said. ■

**"We've seen a lot more (solar flare) activity than we had last year."**

*- Paula Elliott,  
MacRelay*



**Candi-striping**

Candi Perales paints black-and-white stripes on the floor of Building 159 as part of a project to make the airfield ground equipment workspace safer. The white stripes indicate a safe walking area. Photo by Jeff Inglis.

Are you ready to write?

## The Sun's Annual creative writing festival

Poetry (Maximum length 30 lines.)  
 Fiction (Maximum length 500 words.)  
 Finish this story... (Maximum length 500 words.)  
 Scenario will be available on Wednesday at the Sun office.)

Entry deadline: 6 p.m. Dec. 17  
 Enter via e-mail to [AntSun@polar.org](mailto:AntSun@polar.org), or at the Sun office in McMurdo's Building 155.

DON'T FORGET

## Seuss-a-palooza

7 p.m. Dec. 3 at the Coffee House

Readings, recitations, songs and skits of or inspired by the writings of Dr. Seuss.

Hurry and sign up by calling Recreation, ext. 2443, or The Antarctic Sun, ext. 2407.

## Hercs from page 2

Behind tinted windows in a two-story control tower, Senior Master Sgt. Ford Chambers watches the air traffic on the apron of the ice runway. He's a point person for Guard planes coming back from missions on the Ice. The phone rings off the hook in his office, and the crew of one skier reports a problem with its bearing-heading-distance indicator.

Chambers says that call will go to avionics.

"We do all we can do here without sending the planes to Christchurch," he said. There aren't many jobs that can't be done right on the ice runway.

"Electronics, hydraulics, engines... we've got the specialists to take care of it all," Chambers said.

Each maintenance shift involves more than 20 people working in seven shops.

In the propulsion shop a series of well-worn diagrams hangs on the wall, detailing every gear, seal, pin and shaft in the engines. The unit keeps a complete supply

of parts on hand, including an entire spare turbo engine.

Tech. Sgt. Ed Pasquarella has been returning to the Ice for 10 years. He says it's because of the variety and challenge.

"It's different here," he said. "You never know what you're going to run into. The hardest thing for us is doing work in the field."

While the majority of the work takes place right at the runway, major overhauls must sometimes take place far away. In 1998, for example, Skier 95 got stuck in a crevasse near Upstream D, hundreds of miles from McMurdo. Maintenance crews had to fly there and replace two engines. It would have been an enormous task even under the best of conditions. Working in the field, surrounded by hidden crevasses, made it a job to remember.

Most of the work is less eventful, but no less important. Keeping up with small problems prevents larger ones from developing.

There are thousands of intricate, precise parts that all have to work perfectly for an

LC-130 to perform to its potential.

"Overall the engines are very reliable. It's mostly just the little things that have to be fixed," Pasquarella said. "Leaks are a problem down here. When things get cold they shrink, and seals don't work as well."

A recent, small oil leak on one of the engines translates into a big seal replacement, which will send the plane back to Christchurch.

Vibrations and wear-and-tear also take their toll, but the cold temperature doesn't impact performance very much. That has more of a potential effect on people, unless they bundle up.

"You don't really get cold out there," said Senior Airman James Keller. "You're wearing so much cold weather gear that you end up sweating."

In the end it's the lure of Antarctica that makes the job special for people like Keller.

"I love it here," he said. "It's amazing that you can do so much in a frozen place. And the scenery is breathtaking." ■

## Pole from page 2

Bill Spindler, a former winter station manager at Pole, says there are reports that the box (pictured here) was still in place in the 1960s, slowly being consumed by the snow.

Another possibility is that someone, years later, pulled the time capsule out of that location and brought it inside the old South Pole Station. They might have done this in an attempt to keep the artifact from getting lost. But once there, it could have been moved again and again. The old station now rests under dozens of feet of hard-packed snow, half-crushed by the encroaching ice cap, and is only entered for very brief trips and essential reasons.

At least one person who was there in 1959 says there was no hut or wooden structure at the center of the circle of barrels, pictured here.

Still, there is hope the capsule can be found. South Pole construction manager Jerry Marty says the National Science Foundation is open to the idea of excavating the relic.

"The NSF is interested in doing that, if we can determine where the capsule is," said Marty. To that end, Marty said he's talked to some of the people who worked and lived at the South Pole during that era.

"The hardest thing has been contacting the old veterans," Marty said. They are the ones with the memories that could help solve the problem, but decades have passed, and some of them have died.

Whether or not the original one is ever



In 1957 the original South Pole time capsule may have been placed inside a ring of barrels a short distance from the station. If unmoved since then, it would be under more than 40 feet of packed snow. Photo by Cliff Dickey.

recovered, the NSF would like to place a new time capsule inside one of the columns of the new station. It could happen later this season, according to Marty. Tentative plans include filling a box with pictures, news clippings, building plans and perhaps recorded messages from some of the top people at the foundation.

As far as the old capsule is concerned, the verdict may never be reached.

"There are conflicting reports on what

happened and we're not sure where it is," Marty said. "I am still researching to find its location."

The final possibility of the artifact's fate is in some ways worse than the thought of it being lost in the icy grip of the polar plateau forever. It may have been, opened, emptied or even taken by a person who didn't realize its significance.

"Maybe someone wasn't respectful and pilfered it," said Marty. ■

# Profile



Ted Dettmar

Left: Dettmar as an apprentice teamster in 1995, driving Mayday and Bonnie, near Bluehill, Maine. Photo courtesy of Ted Dettmar.

## Mind is in Maine

By Jeff Inglis  
Sun staff

On the windowsill above Ted Dettmar's desk sits a picture of him taken five years ago. He looks every bit an old-time Down-East farmer of Maine. His ballcap is pulled down over unruly hair, his long red beard hanging over a canvas jacket. His feet are sunk deep into a pair of rubber Wellington gumboots, and he sits atop a piece of farm machinery that has seen better days.

In the picture, Dettmar has one horse reined in very tightly and the other let all the way loose. That's how he handles his world, letting things go along their own way and then taking charge at specific moments that make all the difference.

Dettmar, 36, grew up in suburban Arlington, Virginia, the youngest of six children in a military family. His family lived all over the world while they were growing up and have all settled near the home their parents retired to, the one in which Dettmar grew up.

It's Ted who is now wandering the globe, with this picture and a very specific goal.

"I want to live as close to the land as possible," Dettmar said, "to get to know every tree, every bush, the soil types, the rock types."

Here in Antarctica, that may seem a very easy dream: No trees, no bushes, no soil. And there's not all that much rock, either. But he's talking about New England, and a vividly simple life on a farm.

Dettmar knows it's a long way from the Ice, where everything is imported by cargo plane or container ship from the rest of the world, where the landscape can and will kill.

"The irony is not lost on me," he said.

Now known as one of McMurdo's eminent historians of the Heroic Age of Antarctic exploration, Dettmar didn't know much about Antarctica until just a few years ago.

The first thing he read about the Ice was Apsley Cherry-Garrard's book, *The Worst Journey in the World*.

"That's the typical first book," Dettmar said. Just as he finished that, he came across another book.

"Somebody handed me a copy of *Endurance* and it had the crew list," he said. One of the names on that list was Thomas Crean, a name he recognized as having been part of Scott's Terra Nova expedition from 1910 to 1913.

"I found out there were these guys who were just indestructible, just made of stone," Dettmar said. They just kept coming back to Antarctica on expeditions.

When he got to McMurdo as a GA in 1994, he took a tour of the Discovery hut, given by someone who didn't know what he was talking about.

"The tour guide was abysmal. The guy knew nothing," Dettmar said. A history major in college, Dettmar bristled.

"People deserve to know more. These are interesting stories," Dettmar said. "I thought, 'We need people who can bring these places alive.' I said, 'That's going to be me.'"

After working in waste management and now for the Field Safety Training Program, Dettmar now shares with people not only the history but also the practical lessons learned by polar explorers.

Even so, he doesn't claim to be following in the footsteps of early explorers like Scott and Amundsen.

"There's no comparison," Dettmar said. "Amundsen's story is the story of what people can accomplish," he said, likening it to the construction of the George Washington Bridge over the Hudson River.

"Scott's and Shackleton's stories are the story of what humans can endure," he said. "Everything they did was a close call."

That's not how Dettmar likes to do things, though some might disagree.

"I do not consider myself to be adventurous in the least," he said.

He has been doing search-and-rescue since his junior year in college, recovering light aircraft crashed in the Shenandoah Mountains of Virginia, and lived for five winters in the Harvard Cabin in Huntington Ravine on New Hampshire's Mount Washington.

With that experience, Dettmar got out into the deep field quite a bit as a GA, and was a rare first-year selection for the secondary SAR team. He's been on the primary SAR team since his second year.

Now he's the lead field safety instructor, in training his coworkers to do their jobs as best they can. He still takes the lead in sea ice training, which is his specialty, and keeps watch while the rest of the instructors teach and learn and do.

"I think I can do it as long as I've got people underneath me who are more qualified than I am," Dettmar said.

As much as the job, he really likes being here and being part of history. When he leaves for the last time, he said, he expects he'll be bawling.

"I'm always ready to come back down here." ■