



## Roll out the barrels



Fuelie Dave Tuepker checks new fuel drums for water condensation. Droplets formed inside some of them during transport to Antarctica, making them unsuitable for airplane and vehicle use. The ones that pass inspection will be used to airdrop fuel to field camps and remote depots. Photo by Josh Landis.

### Quote of the week

"If we had to, we could run naked back to town."

*Diver Rob Robbins,  
on wearing extreme cold weather  
gear to Fish Hut 4 on the sea ice  
20 feet from McMurdo Station*

## Fish story

■ The ones that didn't get away

By Josh Landis  
*Sun staff*

In a row of clear, plastic tanks in the Crary aquarium, a life cycle is underway. Early this season, divers brought a cache of dragonfish eggs out of the sea to be hatched in captivity. Now, for the first time ever at McMurdo, scores of the fish are growing up under the watchful eyes of researchers, giving them a look at a process that's been largely unobserved: how their resistance to sub-freezing temperatures changes as they mature.

Gently pouring plankton-rich water into the tanks, Teri McLain watches the small fry swim and twitch with hungry vigor. Each day these tiny fish reveal a little more of their species' secrets of survival, and she records it all.



The droning of a gas-powered winch deafens the inside of an old ice shack. Through a gaping hole in

see Fish on page 4

# cracking up

## Sea ice under stress

By Jeff Inglis  
*Sun staff*

It's strong enough to land planes on, too thick for a small drill to get through and cracks under pressure. Sea ice is vital to the early-season research based at McMurdo Station. Scientists base themselves on the frozen ocean to study the marine

world. And when it breaks up and blows north, it leaves a spectacular expanse of open water.

David Cole and John Dempsey have forged a partnership out of the

see Sea Ice on page 5

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## News In BRIEF

### Bird's-eye view

Do penguins fall over backwards when watching aircraft fly overhead?

Two British scientists are traveling to South Georgia in the south Atlantic to find answers to that question and others from a study of the island's 400,000 king penguins.

Scientists have usually been skeptical about reports of penguins falling over backwards to watch aircraft flying above them. But a senior officer on the British navy ship *HMS Endurance*, which is taking the scientific team to South Georgia, said he believed the reports.

"The penguins always look up at the helicopters and follow them all the way until they fall over backwards," Stuart Matthews, the ship's operations officer, told the *Daily Telegraph*.

Dr Richard Stone of the British Antarctic Survey told Reuters that

scientists were concerned that low-flying aircraft could cause stress among penguins and affect their breeding performance.

"There may be an increase in heart rate as helicopters fly over," Stone said. "The worst possible effect is that there would be a reduction in their breeding performance. If they were incubating eggs this could be quite devastating for them."

Stone said helicopters from *HMS Endurance* would fly at different altitudes over the penguins to help in the research.

### New ice hotel to open doors

Canadian entrepreneurs have announced plans for North America's first ice hotel and said 1,000 tourists had already signed up to spend a night in a chilly building

made of ice and snow.

The hotel, built of 4,500 tons of snow and 250 tons of ice, is scheduled to open next January just outside Quebec City. It will stay open for three months before it melts in the spring.

The ice hotel's facilities will include a bar, a cinema and art galleries, with exhibits made of ice, as well as executive suites complete with an ice bed. The cost, US \$109 a night, will include a hot breakfast.

The concept of an ice hotel is being imported from Sweden, which constructed what its owners say was the world's first ice hotel in Jukkasjarvi, some seven hours' drive from Stockholm.

The Canadian structure will cost US \$230,000 to build, including over US \$80,000 from Quebec's government. ■

*from news and wire services*

## The skua: A bird for the ages

By Josh Landis  
*Sun staff*

The first skua sightings of the year have been reported, and within no time the boisterous birds will once again become fixtures of McMurdo Station.

Skuas are probably the least-liked of all Antarctic animals. In fact, they're almost universally despised. They get a bad rap, and it's nothing new.

Photographer and writer Herbert G. Ponting accompanied Robert Scott to Ross Island on the Terra Nova expedition in the early 1900s and became the first professional cameraman to shoot on the Ice.

He had his share of run-ins with skuas and wrote pointedly about his feelings for the species in his book *Great White South*.

*... the skua-gulls were with us for six months of the year, and nested within a hundred yards [sic] of our Hut. We did not find them altogether pleasant neighbors, for they were extremely noisy and of a most quarrelsome disposition; throughout the summer their raucous screaming never ceased, day or night, around us. ... These birds are greedy and selfish to the point of folly. ... Though numbers of these rapacious birds frequented our vicinity, we soon found that they had no kindred feeling whatever for*



photo by Walter Clark

*each other. Each individual regarded its neighbors as its mortal enemies....*

*Estimated by outward and visible signs, the skua-gull is a gentleman, and his mate a dainty, well-dressed lady – appearances being thus deceptive, for... there is nothing refined about either male or female; both are scamps and malefactors.*

*At Cape Royds, the gulls were even more savage than in our own vicinity and (had) the disgusting practice (of) vomiting on interlopers. They would fly toward us from the rear, and, carefully making allowance for speed and distance, discharge a nauseating shower of filth.*

Ponting tried to document the skuas in various stages of their lives, but was hardly a welcomed observer.

*Once, at Cape Royds, when the skua chicks were hatching, I decided to kinematograph the process.... When I was recording the final phase ... the parents were swooping wildly around me, screaming with rage and fear as they heard the*

*'peeping' of the struggling little one. Just as I had finished the work and rose from my kneeling position, I received two blows in rapid succession, one on the back of the head and the other in the right eye...Suffering acutely, I lay on the ground for an hour or more, my eye streaming with water, and I could see nothing with it.*

He played biological theorist, too, with some startling conclusions.

*I noticed no instance where the mother had more than one chick after the first week. I do not know what became of the other: whether some cannibal neighbor made off with it, or whether the pangs of hunger had made the dainty morsel too tempting to one or other of the responsible pair, for – yes, I will state it, though it seems too horrible – I even suspect these unprincipled birds of the crime of eating their own young. ... Really, each fresh insight that I gained into the habits of these unlovable birds increased my antipathy to them. ■*

**web sites of the week**

**Virtual Antarctic expeditions**


- <http://www.terraquest.com/antarctica/>  
A shipboard journey from Argentina to Antarctica, visiting the South Shetland Islands and the Antarctic Peninsula.
- <http://www.foxnews.com/science/antarctica/introduction.sml>  
A Fox News expedition from Chile to the South Pole, with astronaut Jim Lovell.
- <http://svs.gsfc.nasa.gov/imagewall/antarctica.html>  
NASA's tour of Antarctica, using satellite photographs.



**B-15's big debut**

The first photos of iceberg B-15A were taken this week off the Ross Ice Shelf. When it formed in March, the original iceberg (B-15) was the size of Connecticut above the water and ten times as large below. It's now broken into relatively smaller pieces, but each one is still enormous. Satellites are tracking the bergs' movements, and later this season scientists will attempt to land on two of the larger ones to plant weather and GPS instruments. Photo by Josh Landis.

Medical still needs volunteers stretcher-bearers and recorders for the Mass Casualty drill.



Contact Dina Kasper, [kasperdi@mcmurdo.gov](mailto:kasperdi@mcmurdo.gov) or ext. 2551

**the week in weather**

**around Antarctica**

McMurdo Station	Palmer Station	South Pole Station
High: 21F/-6C	High: 41F/5C	High: -31F/-35C
Low: -6F/-24C	Low: 23F/-5C	Low: -84F/-64C
Windchill: -64F/-54C	Avg. Temp: 30F/-1C	Avg. temp: -59F/-51C
Wind: 58 mph/93 kph	Wind: 31 mph/50 kph	Wind: 36 mph/58 kph

**around the world**

Saturday's numbers

<b>Edina, Minnesota</b> High: 53F/12C Low: 30F/-1C	<b>Bridport, Vermont</b> High: 52F/11C Low: 32F/0C
<b>Dar es Salaam, Tanzania</b> High: 89F/32C Low: 62F/17C	<b>Istanbul, Turkey</b> High: 69F/21C Low: 55F/13C
<b>Punta Arenas, Chile</b> High: 57F/14C Low: 28F/-2C	<b>Colombo, Sri Lanka</b> High: 88F/31C Low: 74F/23C

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**Seuss-a-palooza**

BRING YOUR BAR-BA-LOOT SUIT

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

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

Call Recreation, ext. 2443, or The Antarctic Sun, ext. 2407, to sign up.

# Fish

from page 1

the sea ice, more than a thousand feet of steel cable makes its way up from the depths of McMurdo Sound. Research divers Ben Hunt and Kevin Hoefling watch as gleaming silver hooks the size of candy canes appear at regular intervals. Each one is empty except for the dead, bedraggled baitfish that failed to attract its target, the behemoth *mawsoni*.



Peering into a six-inch circular hole, Kim Praebel dangles a string. He peers expectantly through the slush-filled water and feels a tug on the line. Bare, icy hands moving quickly, he pulls up his catch – a six-inch long borch (*Pagothenia borch-grevinki*). He quickly unhooks the delicate-looking, translucent fish and tosses it into a cooler full of water pumped from right beneath the ice, all the while making sure the creature never gets warmer than minus 1.5 degrees Celsius. Back in town, Praebel will examine its spleen for signs of ice.



A highly varied and very experienced team of researchers is combing McMurdo Sound for different specimens to find more answers to a complex question: How do fish living in sub-freezing waters prevent their blood from freezing?

Leading the inquiry is Art DeVries.

DeVries' work has become a mainstay of the U.S. Antarctic Program. Since the early sixties he's been coming south to learn more about fish that don't freeze. He's isolated a substance in their blood called antifreeze glycoprotein, or AFGP.

The substance doesn't actually prevent ice crystals from forming – it just keeps them from growing. Microscopic, isolated crystals floating around in a fish's bloodstream don't present a problem as long as they don't connect with other crystals. Only when many start to link together and form a kind of chain reaction do they pose a threat.

The new work with dragonfish (*Gymnodraco acuticeps*) will allow DeVries to chart the levels of antifreeze glycoprotein the fish produce as they mature. DeVries team member and science mercenary



Left: Kim Praebel transfers a catch of fish into a holding tank before dissecting them. He'll look for signs of ice in their systems and clues to how they process the crystals, which would otherwise be deadly.

Right: Pouring a meal of plankton and krill into an aquarium, Teri McLain feeds dragonfish hatchlings. Little is known about their developmental stages. Photos by Josh Landis.



McLain is the caretaker, and she dotes on the fish with a high level of attention that's required for their survival.

She faced a challenge early on when it came to feeding them. She started them out with a diet of dried krill, a food supply that works with other hatchlings. But one day the fish started to die off. To keep them alive, McLain went back to the sea.

Now each day she heads out to a "fish hut" on the sea ice, where a plankton net hangs more than a thousand feet underwater. After it drifts in the current for some time, she hauls it up with the winch. Her catch is a few liters of plankton-rich water.

The plankton is nearly invisible to the eye, and includes both plant and animal varieties. The larger krill make up the most visible portion of the catch. It looks like little bits of pink drier lint floating in the water.

But this deep-sound soup is the basis of the hatchlings' survival, and keeps the aquatic nursery thriving.

"They seem to go crazy and eat it and not die," McLain said about the food source. "That's all I need to know."

Each day she charts progress by taking magnified digital images, recording the animals' maturation, and fixing samples for further study.

This season, DeVries' team has a new mem-

ber with vast polar experience. Kim Praebel has spent years fishing in Arctic and sub-Arctic regions, and has brought new methods of fishing to McMurdo. One device is a specially weighted piece of sheet metal that sends a line scooting out under the ice instead of straight down. His "Greenland Glider" recently proved its worth by hauling a skate out of McMurdo Sound. It's a creature that's never been caught or even seen here before.

The most awesome player in DeVries' body of work, however, is *Dissostichus mawsoni*, commonly (and erroneously) called the Antarctic Cod. Weighing up to 200 pounds, these prehistoric creatures are an ample supply of blood, and antifreeze glycoprotein. They're also a favorite supply of thick filets for holiday meals at McMurdo.

On this day, however, the lines come up empty.

"The seals must have scared them away," said Hoefling. To the scientists' consternation, the seals capitalize on the fishing hole as a breathing hole and hunting site.

Praebel's Greenland Glider will be the answer. As soon as the empty line comes up, Praebel rigs the new line and sends it soaring into the icy depths in search of fish that don't freeze. ■

# Sea Ice

from page 1

study of fracture of sea ice. Their work has involved lab work and field research in Alaska and now Antarctica.

Cole, from the U.S. Army Corps of Engineers Cold Regions Research and Engineering Lab, and Dempsey, from Clarkson University, are studying how ice behaves when under stress, in the breaking process.

Their project has faced some difficulty this year. The sea ice is thicker than usual, which is hard on their equipment.

They were expecting to find some ice as thin as 36 inches, and have equipment that can cut ice up to 84 inches, though very slowly. The thinnest they've found is 45 inches, with most of the ice 55 to 60 inches thick.

The amount of time required to cut through this thickness of ice is more than the team has.

"Because of ice thickness we can't do the research we proposed," Dempsey said. "We probably need a Ditch Witch," a trenching machine for cutting through the ice faster.

Right now it takes too long to cut blocks the size they need. The biggest piece they've been able to study was three meters square. They would like to be studying deformation and fracture of blocks of sea ice up to 30 meters on a side, 100 times larger than they can get.

"The underlying theme of our research is to look at scale," Dempsey said. Without large blocks of ice to study, they can't get the data they would like.

Cole's part of the study happens first. He wants to know how ice deforms when under stress. His work stops when the ice actually cracks, but the information he gathers helps Dempsey watch the right area of a floe when they do crack it.

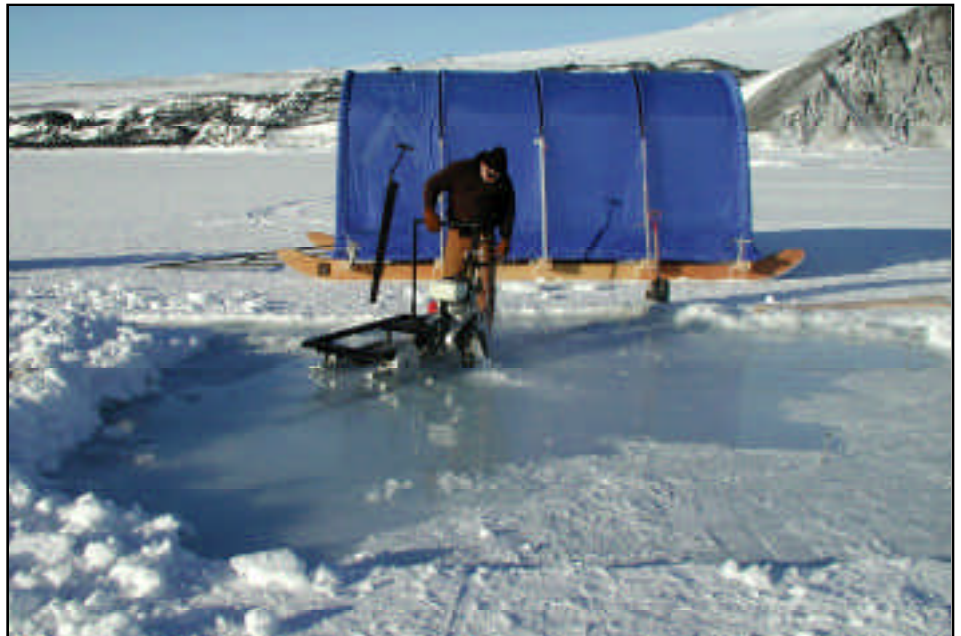
"It starts with the microstructure," Cole said.

The way ice crystals form and align themselves as the ocean freezes makes a difference in how the ice will crack, even months later. When there is a small current, ice crystals line up in one general direction. That, in turn, makes the ice relatively weak in one direction, so it tends to crack for long distances in straight lines, Cole said.

"The properties are different depending on the direction," Cole said. "It's not just a homogeneous material."

Some things are very different in the field from in the lab. For example, brine drains out of the ice when it's brought into the lab, which changes the characteristics of the ice.

They have a camp about three miles (five km) from the ice edge, on fast ice. Their cutting area is a short distance away,



Lew Shapiro uses an ice-cutting machine to make large blocks of free-floating sea ice for the group to study. Photo courtesy of David Cole.

but on much thinner, floating ice.

Cole and Dempsey and their two students mark out an area in which they want to work. They cut a block free of the ice sheet and then cut a starter crack, into which

**"Because of ice thickness we  
can't do the research  
we proposed."**

*- John Dempsey  
ice researcher*

they insert a balloon-like loading device. This "flat jack" has a computer-controlled inflation valve, which lets the team vary the pressure in the crack. The computer is set to stress the block of ice until they are ready to break it.

"We don't want to accidentally break it," Cole said.

As the ice deforms, they monitor it for stresses and tensions, as well as how it deforms in response to the pressure on the crack. Some of these processes, Cole said, vary with the size of the piece of ice, while others do not.

Eventually, though, they are ready to break the floe.

Ice breaking

"Ice fracture is a very complicated process," Dempsey said.

They have learned that at the tip of a crack that is about to break further, a series of micro-cracks form. They have equipment listening for the noise of those tiny cracks, to warn them before the block actually breaks.

Cole always looks carefully at the structure of the ice as well as these micro-cracks, to estimate where the block will break.

"It's nice to have nature verify your direction," Cole said. But he's never sure if he'll be right until the chunk of ice opens up entirely.

"Until you come down and try to do some tests you don't know," Dempsey said. "There are so many different types of ice."

The ice thickness affects the breakup, but the more significant factor is the nature of the ice itself, which depends on how old the ice is, how it formed, local landforms and other environmental factors.

"We're getting different ice wherever we move," Dempsey said.

The models Dempsey and Cole have made about the behavior of ice under tension are based on smaller, more homogeneous sections of ice. They are checking to see how well those models predict the behavior of the ice they find in McMurdo Sound, and in larger sections.

They've wrapped up for this season, but are ready to come back and keep working, perhaps with better equipment and ice conditions.

"We have two field seasons," Cole said. ■

# Truckin' on thick Ice

"We've got a crack to cross."

- John Wright,  
Delta driver

By Beth Minneci  
Sun staff

Veteran Iceman John Wright is tense this morning. Through a Delta's windshield he scans the frozen sea. The sky is as white as the ice and strong winds throw snow around, blotting any trace of a horizon.

Today Wright is scheduled to drive heavy cargo to Marble Point, 55 miles across McMurdo Sound. The season is young, with the route barely traveled, so the tracks are vague and the trail is sparsely flagged.

"We have our eyes and, hopefully, tracks to follow from our last traverse," Wright says with a hint of optimism. But because of the white-out, he drives the cargo truck slowly, at about the speed of a

lawnmower.

Minutes into the trip, he throws his gloves on the dashboard and bear-hugs the steering wheel, glaring through the window in search of tracks.

"Oh shit," he says, and in an instant the truck's door is open. Out front, Wright walks along a thin, humped ridge that rolls across the ice like the spine of a sea monster. He gets back in the truck. "We've got a crack to cross and I want to make sure we do it in the right place."

Cracks are OK, as long as the solid ice edge is a couple of meters thick. This one's good, and Wright drives over it. Soon the wind is lighter. The tracks become visible. Off to the west,

**continued on next page**



Right: John Wright and a forklift driver move cargo off a Delta at Marble Point. Photos by Beth Minneci.



Waste from field locations such as the McMurdo Dry Valleys is piled up at Marble Point.



Wright and Ralph Horak hauled waste from Marble Point and huts from Cape Roberts to McMurdo Station.

From previous page

where Wright is heading, a swath of blue sky evolves over Blue Glacier.

"Blue sky over Blue Glacier; isn't that like poetry," Wright cracks, falling back against his seat. Now he can relax. "This is excellent."

For two months each summer, drivers like Wright make a series of seven-hour treks across McMurdo Sound at Marble Point. The Point serves as a depot for people working in places northwest of Ross Island, such as the McMurdo Dry Valleys and Cape Roberts, where they are dismantling the former drilling site.

Is driving across cracked ice with tons of cargo dangerous? No, says McMurdo Station operations manager Bill Haals. People have been traversing to Marble Point for decades.

But in a white-out a driver could roam off-track and onto unstable ice. By the third or fourth traverse of the season, however, much of the route is flagged at least every quarter-mile.

Driving a 15-ton Delta, a vehicle that can carry its weight again on six, 850-pound tires, the drivers haul tons of supplies and relieve them of thousands of pounds of waste in drums and boxes.

In addition to cargo delivery and waste removal, Marble Point is a station for helicopter pilots who shuttle the cargo and waste the Delta's deliver to and from the field camps. The pilots fuel their choppers at the pumps. They can have a hot meal or stay in a warm bed at a stop-over there.

For the Delta drivers, the overnight trek serves as a reprieve from crowded McMurdo Station.

On a clear day the views are stunning. Seals lounge along the tracks. White tabular glaciers appear to rise out of the ice. Between the mountains, huge ice sheets plunge toward the sea.

In addition to the scenery, a traverse offers a chance to check out the sea ice cracks and pressure ridges, which is kind of interesting, says Ralph Horak, who is working his third season in Antarctica, but is new at driving a Delta.

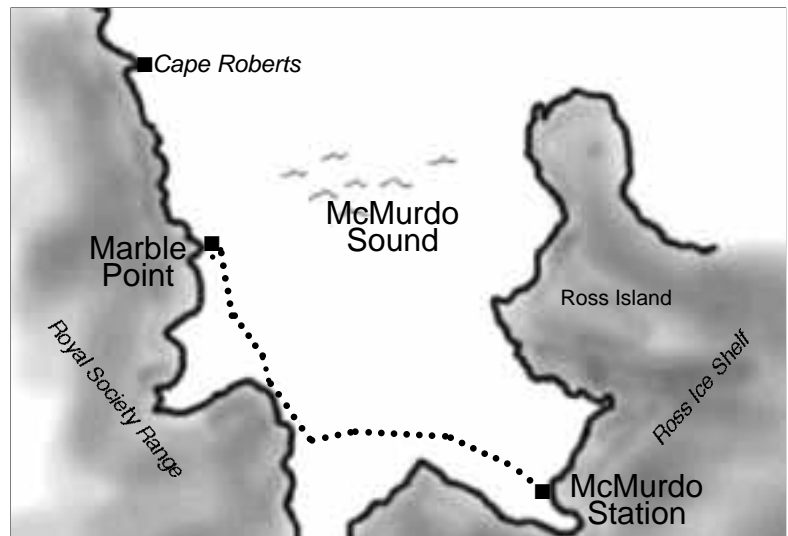
"The 'scape of it all, it's so cool to be out here so far out, to actually get onto the continent and off McMurdo," Horak says. "When I get back home I always feel like I've been gone a week."

Traverse season starts mid-October, but preparations can start as early as August when Haals and others fly over the ice, looking for cracks and ridges. Maps show that the cracks develop in the same spots every year, Haals said.

By late November or early December the traverses are finished. By then Haals needs the equipment operators for other projects.

The flying, mapping and miles of flag-

## MARBLE POINT TRAVERSE



The Marble Point traverse is about 55 miles from McMurdo Station across McMurdo Sound.

ging might seem like a lot of work for just two months of traversing once or twice a week, but using the Deltas saves time, and therefore money, over using helicopters to deliver the tents, survival kits, off-terrain vehicles and other supplies. Likewise, it's cheaper to haul the waste across the sound in a Delta than with helicopter trips.

One day last week, Wright and Horak hauled to Marble Point flat-beds stacked with snowmobiles, propane and diving gear.

They returned with, among other things, 20 empty propane tanks, 16 drums of human waste and 6,000 pounds of iron bars left by the U.S. Navy, which used to have a camp there.

About halfway home, the men hooked up ski-equipped huts that were used at Cape Roberts and pulled them to McMurdo, where New Zealand's Antarctic program will take them. The trash will go to Washington, where it will eventually be recycled, sold, burned or buried.

Like on the way to Marble Point, on the way home visibility is flat. But this time there's no wind. The Delta rocks as it moves across the ice. Sometimes it swaggers, like a car on a bumpy, dirt road. Other times it bounces hard, like a boat slamming against choppy water.

But most of the ride is as smooth as skating on an ice rink.

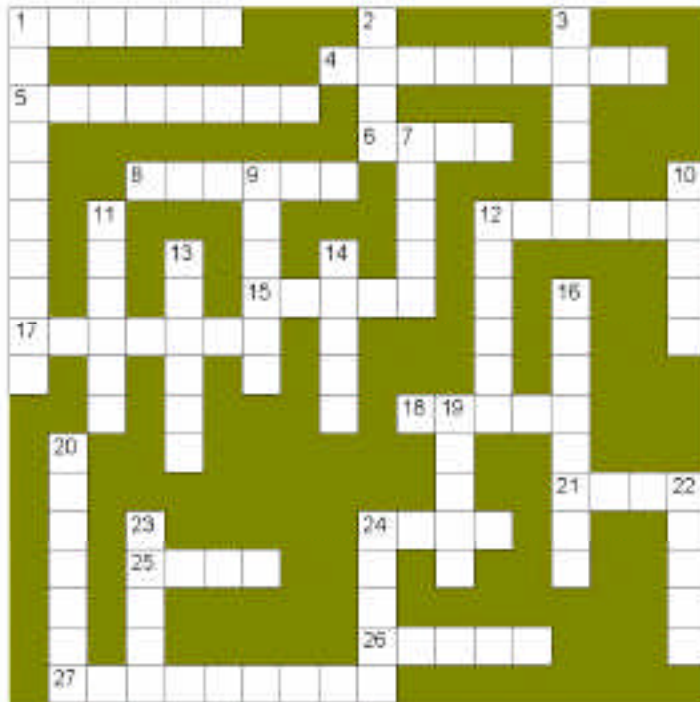
The trip home is seven more hours on the same route. But that doesn't faze Horak.

"I think I'd have to be doing this a long time before it got boring, he says. ■



Top: Ralph Horak drills next to a crack to test the ice's thickness. Above: A seal and her pup hang out close to the traverse tracks. Photos by Beth Minnecci.

# Crossword



## Across

- 1 Home base of 109th Expedition Airlift Squadron
- 4 South Pole's MAPO: Martin A. \_\_\_ Observatory
- 5 The leader of the first expedition to reach the South Geographic Pole
- 6 Captain of the Erebus
- 8 New England sailing captain after whom a U.S. research vessel is named
- 12 Small lake in Barwick Valley
- 15 Shackleton's last pony on his trek to reach the furthest south
- 17 Great Lakes closest in size to Lake Vostok
- 18 Wife of Sir Clements Markham, as in \_\_\_ Bluff
- 21 Off-used mode of transport for early Antarctic explorers
- 24 Captain of the first ship to cross the Antarctic Circle
- 25 West \_\_\_ Hill, above Cape Evans hut
- 26 Cape \_\_\_ site of smallest hut on Ross Island
- 27 The ship which first brought Scott to the Antarctic

## Down

- 1 This enduring leader is buried on South Georgia Island
- 2 Number of Air National Guard LC-130H aircraft in use this season
- 3 Island on which Palmer Station sits
- 7 Man who was "going out and may be some time"
- 9 He crossed most of George V Land alone, after the deaths of two companions
- 10 The leader of the first expedition to reach the South Magnetic Pole
- 11 Coldest place on Earth
- 12 Highest mountain in Antarctica
- 13 Shape of the sun's path around the South Pole
- 14 With 5-Across, the man after whom South Pole Station is named
- 18 This year's icebreaker
- 19 Adm. Byrd's dog
- 20 Author of "The Worst Journey in the World"
- 22 Common gull in the Ross Sea region
- 23 Two of Scott's party members bore this last name
- 24 First person to reach both poles: Albert P. \_\_\_

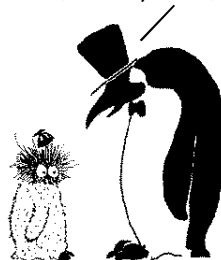
## Ross Island Chronicles

By Chico

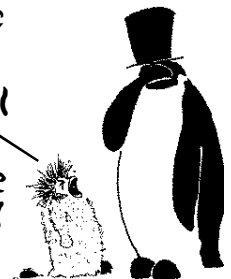
Well, Junior, I think it's time to start teaching you how to swim.



The only thing we have to watch out for is killer whales and leopard seals.



If you want to get rid of me, why don't you sell me to Sea World and be done with it!



The water is extremely cold but we have a layer of fat that helps keep us warm.



That's great! If a killer whale doesn't eat me I'll die of high cholesterol!



On second thought, why don't you go and see if your mother needs help with anything.



Chico



# Highway <sup>1</sup> *one*

The U.S. presidential election is approaching. Voters will have to choose a new leader. But what about Antarctica?

## Who would you want as president of Antarctica?



**“It would have to be someone who didn’t want the job, so I’d have to vote for Commander.”**

Drew Logan  
*Computer guy*



**“Tennessee Tuxedo, the cartoon penguin.”**

Tom Gorman  
*Housing*



**“Fred the Adélie penguin that we chased off the runway.”**

Elise Welterlen  
*Firefighter*



**“I would let Margaret Thatcher do it.”**

Whit Mather  
*Housing*

# Cold hard facts

Radios are crucial to safety, logistics and general communication in the U.S. Antarctic Program. There are three major types of radios in use in the Antarctic: HF, VHF and UHF.

HF waves don't bounce very well, and can only reflect off big things like the surface of the Earth or the ionosphere. VHF waves bounce off mountains and big buildings. UHF waves can bounce off walls.

High frequency (HF) radios are best for communications between distant locations such as Siple Dome and McMurdo Station.

HF waves bounce off the ionosphere and can even travel through the earth.

Very high frequency (VHF) radios are for medium-distance line-of-sight communications. Two groups near each other but separated by hills or mountains cannot communicate via VHF, except via a repeater, which receives and re-transmits signals.

UHF is used for radio telephones or “opti-phones,” which connect with a normal telephone but do not use telephone wires for a portion of the communication. Camps in the Dry Valleys use radio telephones.

As with VHF radios, UHF radio telephones require a line-of-sight transmission or a repeater.

## OUR ANTARCTIC WEEK

### Sunday Nov. 5

- Science lecture: “Sex, Seals, Poop, and Videotape: Sewage Discharge from McMurdo Station,” by John Lisle, Jim Smith, and Rob Robbins (poop diver), 8 p.m., Galley

### Monday Nov. 6

- Slide presentation: *Tramping on New Zealand’s South Island*, by Janet Huddleston, 8 p.m., Galley

### Wednesday Nov. 8

- Bingo hosted by Waste Management, 8 p.m., Gallagher’s
- Science lecture: “Life at the frozen edge: how Antarctic animals avoid freezing,” Art DeVries, 7:30 p.m., Crary conference area

### Thursday Nov. 9

- Shift workers special: Slide presentation: *Tramping on New Zealand’s South Island*, by Janet Huddleston, 8 a.m., Galley

### Saturday Nov. 11

- “The Dating Game,” Gallagher’s, 8 p.m.



# Profile



The American Women's Antarctic Expedition. From left, Sunniva Sorby, Anne Dal Vera, Sue Giller, Ann Bancroft. Photos courtesy of Anne Dal Vera.



Anne Dal Vera skis across the polar ice cap.

# Women's movement

## World-class expeditioner finally makes it to McMurdo

## Antarctica Style

By Beth Minneci  
*Sun staff*

It's been eight years since Anne Dal Vera made history as part of the first group of women to ski from Antarctica's edge to the South Pole.

The monumental, 678-mile journey, however, was only a piece of their original plan to cross the continent.

But after 67 days of skiing, upon reaching the Pole, the four women were weeks behind schedule and one was injured and ill. They decided to stop.

"It was sad," Dal Vera said. "We had mixed feelings because we were very excited to get to the Pole, and that was a significant accomplishment. And yet, that wasn't the dream that we had, so we hadn't done what we set out to do."

Today, Dal Vera, 47, is in her fifth year with the U.S. Antarctic Program. She'll be here in February to greet former teammate Ann Bancroft, who is expected to start across Antarctica this summer, and hopefully complete the task she didn't finish in 1992.

The trip this year is especially exciting to Dal Vera and Bancroft because Bancroft spearheaded the earlier effort and was most disappointed by the decision not to continue.

"I think it was hardest for Ann to let go of the dream," Dal Vera said.

Dal Vera and Bancroft met through mutual friends in the mid-1980s. Bancroft was already a polar pioneer, having been the first woman to reach the North Pole over land, in 1986.

The other two teammates were mountaineer Sue Giller and Sunniva Sorby, who came aboard only six months before the Antarctic adventure, which was dubbed the American Women's Antarctic Expedition.

One of the largest hurdles before the trip was coming up with \$1 million for transportation to and from the continent. The money was also for supplies and rescue staff in Antarctica and at training runs in Yellowstone National Park, Canada and

Greenland.

When the women approached corporations for sponsorship, company after company turned them down.

"I think that's because there had not been an all-women's expedition that was successful before us," Dal Vera said. "Corporations were skeptical whether we could do it. We planned on making history."

Incrementally, however, donations and profits from T-shirt sales, garage sales, small concerts and golf tournaments added up to more than half their expenses. The rest they paid for years after the trip.

"We planned on making history."

- Anne Dal Vera  
1992 American Women's  
Antarctic Expedition

"It was an extraordinary experience to have all these people give what they could," she said. "Some would send us a letter with a \$5 bill and say, 'This is all I can give you, but I'm excited and wanted to help.'"

From St. Paul the women flew on an airplane to Punta Arenas, Chile, then to the Ronne Ice Shelf. On Nov. 9, 1992, they shoved off the ice edge, each pulling 185-pound sleds toward the Pole.

In the next two months they faced 50-mph winds, put up with subzero temperatures, confronted frostbite, heat exhaustion and weight loss.

Moreover, they dealt with each other. On the Antarctic plateau there were no distractions, Dal Vera said. "So that means every

single thing one person did was noticed or had an impact on the rest of us. It was probably the most intense situation I've ever been in."

On Jan. 13, while approaching the Pole, the women calculated the miles left to McMurdo Station - 882. At McMurdo, a private ship was scheduled to take them home on Feb. 15. They didn't have enough time to get there on skis, they concluded.

"It was a tough call," she said.

Hours after Dal Vera's group reached the South Pole, two men who were also attempting to ski across the continent also arrived.

"They had lost about one-quarter of their body weight, and they looked very, very gaunt. They had frostbite and scars on their cheeks and their feet were all blistered."

Still, the men went on.

"Ann went out to watch them go. She just stood there for a long time and watched them. You could tell that she really wanted to do it, but that wasn't the year to go. Hopefully this year is."

Dal Vera is not interested in trying to cross the continent again. The cost of the first trip was too burdensome. Upon returning to the United States, it was five years before the group's \$385,000 debt was paid.

But for Dal Vera, the Ice does have an affinity. In 1995 she started working with the Antarctic Program at McMurdo as a general assistant, returning for the next five austral summers. She has worked at the South Pole, and now works with waste management in McMurdo.

In the past she has taught cross-country skiing, worked with Outward Bound and as wilderness guide. But now, she's happy to work and live here.

"I just had quite a strong bond with the land here and the ice, so I wanted to come back," she said. "A lot of it has to do with the great people down here. They're just adventurous souls." ■