



Viewing Antarctica:

# JOURNEY into the Unknown



*Winter drags on. The chill, the wind, the snow, the icy rains. We soldier on, day after day after day, through weather that's in no rush to depart. But wherever we live, there's a place that's much colder, far windier, without any native inhabitants, and owned by no nation. A place more bitter than northern Alaska, more remote than Siberia, a place at the very bottom of the globe: the Terra Australis Incognita, Antarctica.*

*At the South Pole right now, the temperature is about minus fifteen degrees Fahrenheit. Doesn't sound that bad? That's their summer weather.*

by Esther Heller

The early explorers of one hundred years ago were determined to reach the South Pole and travel from one end of the continent of Antarctica to the other. They journeyed on ships that sometimes got stranded and crushed by the ice. They established makeshift huts along the way to live in and store their supplies. These huts can still be seen today; the cold has preserved everything intact, even tins of biscuits.

An explorer who traveled by foot hauling his own sledge needed 6,500 calories of food per day. Nowadays, a scientist working mainly inside a research station needs "only" 2,750 calories. The early explorers had none of the benefits of today's modern synthetics; they wore heavy layers of itchy wool and deerskin. Their outer layers would become moist and often freeze. Getting dressed in the morning meant putting on layers of fabric that were frozen stiff and solid. As they gradually warmed up, the clothing would become more flexible. They often slept in canvas huts.

The hardships experienced during these expeditions a century ago, known as the "Heroic Era," are hard to fathom. Frostbite, hunger, scurvy, snow blindness, and depression severely tested the limits of human endurance. Several explorers died during trips, but most survived, although many were killed a few years later as soldiers during World War I on a different battlefield.

Today's travelers are either adventure-loving tourists or the scientific and technical staff that run the forty-six stations found on the continent. They all benefit greatly from the use of modern equipment and technology. However, the dangers they face from high winds, extreme cold, and uninhabitable land, haven't changed.

In January, the middle of summer, cruise ships hover near the shore, their passengers debarking in shifts of less than one hundred at a time, to feel their boots hit the hard ice of the continent, to take pictures of the pristine landscape, to gaze in awe at the seals and penguins, and to daven Minchah.

*To daven Minchah? Do Jews go to Antarctica?*

For "wandering Jews," Antarctica is the ultimate travel experience.

Philip and Lily Schwebel of Kew Gardens, N.Y., took a *glatt kosher* cruise to Antarctica in December, 1999. "We do a great deal of traveling. The idea of being able to go to Antarctica was irresistible," explains Mrs. Schwebel. Lotus Tours arranged for a kosher kitchen on board, with a kashrus supervisor and cook. There were fifty cruise participants on the *glatt kosher, shomer Shabbos* plan. As their ship, the *Marco Polo*, neared the shore, they got their first view of the Antarctic continent.

**What was the weather like?**

"It was warm, thirty degrees Fahrenheit. It's a lot colder in New York today than it was on that trip."

The Schwebels wore the standard Antarctic uniform: bulky, insulated, windproof red parkas, and boots for walking on the ice. While ashore they saw penguins and seals, but were warned not to get close enough to disturb them. The ship's passengers debarked in shifts, in keeping with environmental regulations of not permitting too many people onshore at a time.

"It's the one place in the world where every country has agreed to abide by certain regulations, such as no trash, no military, and a limited number of people walking around."

The highlight of their two-hour expedition was davening Minchah. It was the first time a minyan was ever held in Antarctica.

**What about Maariv? The sun doesn't set in December in Antarctica. How did you daven?**

Mr. Schwebel explains, "You check the time of the closest habitable place, which for our trip was Ushuaia, Argentina."

**Was it hard to deal with such utter isolation?**

"No, I expected it," says Mrs. Schwebel. "I'm tempted to go again."

Martin and Golda Jacobs of Washington, D.C. were on the same trip. Mr. Jacobs recalls, "The surrounding mountains and landscape were so different in their beauty than anything we had ever seen, so stark. It added a deep spiritual dimension — as if we were at a much ▶▶



earlier stage in G-d's creation of the world.

"The utter remoteness made us feel like we were witnessing what it must have been like during Creation. We saw other people only when we spotted another ship and when we stopped at a weather base belonging to Chile. Other than that, it was desolate, except for the penguins and other birds — some so large that they couldn't take off from the water until the wind helped them — and marine mammals.

"We were surprised by the peaks and mountains and their shades of black and gray, as well as the various blues and other colors within the icebergs. It was also astounding to witness chunks of icebergs break off and fall into the sea."

**Few in Number: Jewish Scientists in Antarctica** Out of 1,000 scientists and other personnel at the U.S. McMurdo Station, there are about six Jews.

One of them is Dave Ginsberg, a graduate student working on his PhD at the University of Southern California. He's been on three research expeditions so far, spending a total of twelve months on The Ice. A substantial part of his dissertation is based on Antarctic developmental biology. This trip, he's also a teaching assistant for the only university course of its kind that's offered in Antarctica.

Dave flew from Los Angeles to New Zealand, and then continued on a USAF C-17 cargo plane that landed on the Ross Ice Shelf, near McMurdo. The flight took about four-and-a-half hours.

**What was your reaction to the cold?**

"I never realized what cold was until I got here! I grew up in L.A. — not very cold at all! I don't necessarily like the cold, but have learned how to deal with it. The main thing I had to learn was how to dress for cold weather through layering."

**What do you hear and smell?**

"Other than wind, nothing. Sometimes, you might hear a little glacial melt, but on the sea ice, it's totally silent. There aren't any smells unless you're near a seal colony or penguin rookery."

McMurdo Station is the main American base and the largest station in Antarctica. Built on bare volcanic rock, its eighty-five buildings include science labs, dorms, stores, warehouses, a fire-house, and water distillation plant. There's also a landing strip, helicopter pad, water, sewer, telephone, and power lines. At the peak of the summer, there are more than 1,000 people: scientists, doctors, technicians, cooks — even artists and writers. "It's like a small town, and not as remote as you think," Dave says. "We have a full gym and workout rooms, and even a small bowling alley."

**What's the hardest part of being in Antarctica?**

"Being away from my wife and family."

Dave does research with echinoderms. They are radial symmetrical invertebrates that are found near the bottom of the sea. He is studying the "energetics of protein metabolism during develop-

**What's the hardest part of diving in cold water?**

"Learning to use a drysuit and wear drygloves — gloves that keep your hands completely dry and free of water. The drysuit slows your swimming down some, but overall, it's no different than swimming back home."

In December 2004, while diving around eighty feet below the surface, Dave decided it would be nice to send a Chanukah card to his family and friends. Not content with the idea of a typical card, he decided to make something more unusual. "I collected echinoderms in a big collection bag and swam to a flat area. They're about the size of a racquetball and are spiny; not real sharp, but sharp enough to poke your gloves at times. I stacked a whole bunch of them together and then placed them in a shape of a menorah. I added the starfish as lights for that extra little touch. They were very much alive and kicking when I took the picture underwater."

**Did they cooperate with having their picture taken?**

"They don't move very fast and stayed fairly constant for the photo, but my guess is that within an hour after taking the photo they walked away."

**What is the winter like?**

"I spent about two months here in the winter in 2004, August and September. The temperature got down to minus eighty Celsius. But it sounds much worse than it was, because nobody works outside in those conditions!"

"I was here only for the last two months of winter, so there was some daylight. It's not real bright, kind of like dusk. When it was dark, I could see the moon and stars and an occasional aurora. Each day, the daylight would last a bit longer, until it was daylight for twenty-four hours a day, starting about the first week of October. We went outside lots during the interim period though. It's cold, as anyone can imagine, but not too bad if you're dressed properly!"

*Facts about Antarctica*

- Antarctica is the size of the United States and Mexico combined.
- The nearest landmass is South America, which is over 620 miles from the tip of the Antarctic Peninsula.
- Ninety-eight percent of Antarctica is covered in ice; two percent is barren rock.
- Coldest temperature ever recorded: -128.5 degrees Fahrenheit, at Vostok Station.
- Average temperatures: summer - thirteen degrees Fahrenheit; winter - minus sixty-five degrees Fahrenheit.
- Strongest winds on earth: up to 199 mph.
- The sun rises once a year at the South Pole, in late September. It sets in late March. Six months of daylight are followed by six months of darkness.
- Blizzards: In a typical Antarctic blizzard, very little, if any, snow actually falls. Instead the snow is picked up and blown along the surface by the wind, resulting in blinding conditions in which objects less than a yard away may be invisible.
- Animal life: Penguins. The Adelie penguins, Antarctica's most common species, outnumber people by about 5,000 to one, in the winter.
- No country owns Antarctica; it operates under international treaty.
- There are no native inhabitants. The population, based at research stations, is 1,000 during the winter and 4,000 during the summer. Number of tourists who visit in a year: 27,324 (2004/2005).
- Because of the extremely cold temperatures and low absolute humidity, dry skin and cracked lips are continual problems. Visitors must drink frequently to replace the water they exhale with every breath.
- Cost of gas: \$37/gallon. A van gets about 1.5 miles to the gallon.
- Phoning Antarctica is not as expensive as one might expect. Outgoing calls from the McMurdo Station are charged as domestic U.S. calls, due to a satellite hookup to Washington state. Twenty phone lines are available, for 1,000 people.
- The South Pole Station operates thirteen hours ahead of GMT (Greenwich Mean Time), but you can walk through all twenty-four time zones in a few seconds!

(CIA World Factbook and other sources)

*Highlights of an Antarctic Time Line*

- 1773:** Captain James Cook was the first person to cross the Antarctic Circle.
- 1840:** Jules-Sebastien-Cesar Dumont d'Urville became the first person to set foot on Antarctica.
- 1841:** James Clark Ross discovered what is now known as Ross Island, and sailed along a huge wall of ice that was later named the Ross Ice Shelf.
- 1911:** Norwegian Roald Gravning Amundsen and his party reached the South Pole.
- 1912:** Captain Robert F. Scott and members of his crew died on a trip to the South Pole.
- 1929:** Richard E. Byrd and three others were the first to fly over the South Pole.
- 1955:** The U.S. opened the McMurdo Research Station.
- 1959:** The Antarctic Treaty was ratified by twelve nations, establishing the legal framework for the management of Antarctica.

**The Jewish Presence**

**Closest Jewish community to Antarctica:** Dunedin, New Zealand.

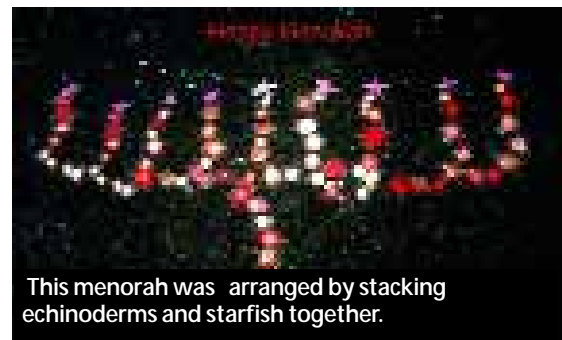
**November 1957-58:** Dr. Raymond Bayer, a recent immigrant to Australia, became the first Jewish surgeon to work in Antarctica. (He had to agree to have his appendix removed for preventative reasons before going, as he was the only doctor at the Australian station on Macquarie Island.)

**April 1996:** The first documented Seder was held on a cruise ship off the coast of Antarctica.

**December 1999:** Lotus Tours provided a *glatt kosher* cruise to Antarctica aboard the *Marco Polo*. First known minyan was held on The Ice.

**January 10, 2002:** Jonathan Silverman, age eleven, visited the South Pole; he was the youngest person in the world to visit both the North and South Poles and was cited in the *Guinness Book of World Records*.

**Jan 1, 2004:** A group called "Breaking The Ice," comprised of four Israelis and four Palestinians embarked on a thirty-five-day expedition to Antarctica.



This menorah was arranged by stacking echinoderms and starfish together.

Photo: Dave Ginsberg

ment." In order to do his research, he needs to dive through a twenty-foot hole drilled in the ice, in temperatures averaging thirty degrees Fahrenheit.



Dave Ginsberg diving at Cape Evans, Antarctica.

Photo: Dr. Adam Marsh



The Dark Winter “Weather and ice, not clocks and calendars, set the schedule for a journey here. No matter what the reason for your visit, you’ll be at the mercy of the continent’s changing moods and weather patterns.” — marine biologist Paul Ward.

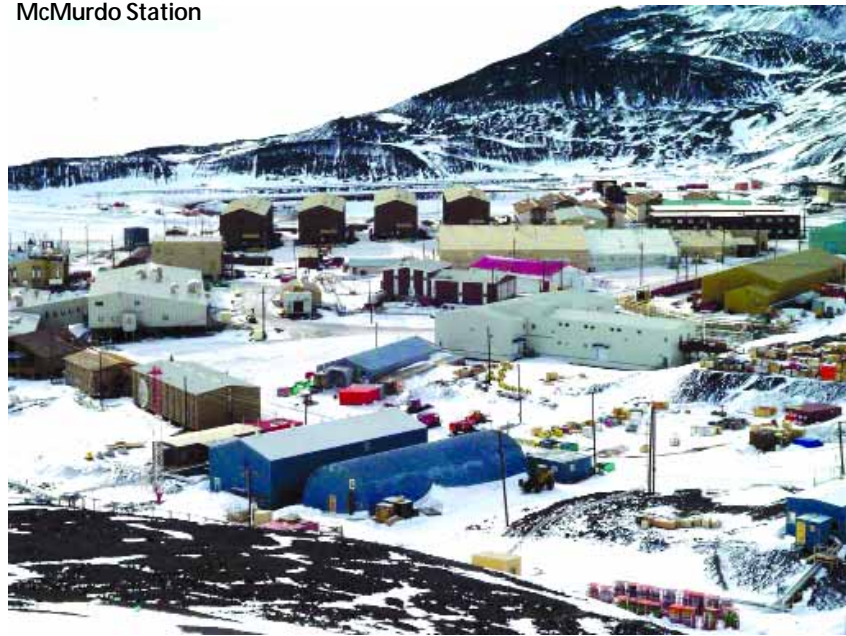
Obviously, winter in Antarctica is not for everyone. Sir Ernest Shackleton, one of the early explorers, described it as “A blinding, shrieking blizzard all day, with the temperature ranging from minus sixty to minus seventy degrees Fahrenheit.”

In August, in the thick of the Southern Hemisphere’s winter, the thermometer plummets down to an average of minus fifty degrees Fahrenheit. The sun rises for only a few minutes and the vast icy waste-



The South Pole

McMurdo Station



land is cast into a plague of darkness for about twenty-three hours and fifty-seven minutes a day.

Only a select number of scientists from all over the world tough it out on “The Ice,” as they call Antarctica. For eight to nine months, it’s difficult for a plane to land in Antarctica. Deep into the continent, near the South Pole, it’s impossible.

In March 1999, Dr. Jerri Nielsen, a physician at the U.S. Amundsen-Scott

Station, realized that she was stricken with a life-threatening illness. She knew, as did everyone at the South Pole, that it was impossible for planes to land during the harsh winter, to take her back to civilization. She went several months without treatment. Meanwhile, she listed instructions on all her medical supplies, in case she became too incapacitated to treat the other forty workers at the station.

As Dr. Nielsen’s condition worsened, in an attempt to save her life, an

unprecedented winter flight was undertaken to airdrop packages containing medicine and medical equipment. The South Pole crew searched blindly in the dark on the frozen ground until they found the six bundles. Being the only doctor at the South Pole, Dr. Nielsen had to administer the intravenous medication herself. Finally in October, when there was the possibility of warmer weather — a minimum ground temperature of minus fifty-eight degrees Fahrenheit was required to ensure that the fuel wouldn’t freeze — she was airlifted to a hospital for treatment, and survived.

Hashem could have made the whole earth frigid and barren, like Antarctica. We would have had to build igloos (called snow domes in the South) and subsist on sea life the way the penguins do. If it was the only life we’d ever known we probably would have managed and accepted the hardship without even realizing how difficult it was.

But Hashem, in His infinite kindness, gave us land where the air is easy to breathe, and not excessively dry, where we can dwell comfortably, grow the food we need, and have twenty-four-hour cycles of day and night. Where we can live our days without devoting all our energy and time to our most basic survival needs.

To view Antarctica is to appreciate what wasn’t. To view Antarctica is to catch another profound glimpse of Hashem’s infinite kindness. ■