The Southfield Eccentric

Suburban Life

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Snowbound

Tackling an icy frontier

By Dave Lore
special writer

McMurdo Station, Antarctica — Louis Sugarman isn't your typical Michigander going south for the winter. As usual, he overdid it.

That's why Sugarman, 19, of Southfield wound up scooping "plankton puke," building snow shelters and tagging seals 12,000 miles away in Antarctica while his classmates dozed through classes at the University of Michigan. His friends, laughed Sugarman, "would kill for this labor."

The U-M junior left for Antarctica in October, representing the Boy Scouts of America as part of a program that teams a top Eagle Scout with scientists working on the ice. A committeeman in Troop 1674 at St. Ive's Catholic Church, Louis is the son of H. Arthur and Mary M. Sugarman, 21115 Potomac Street, Southfield.

"He's always been addicted to applying for things," explained his mother. "If there's a mountain to climb, Louis wants to climb it."

ANTARCTICA is the place for people who like challenges. The continent, larger than the United States and Mexico combined, is an alien place of violent storms, terrible cold and jagged mountains buried in oceans of ice. A 100-mile-wide moat of treacherous sea ice kept sailors at bay until the 19th Century, and only in this century have explorers been able to pierce into the interior.

The National Science Foundation, which describes the seventh continent as "the coldest, driest and windiest place on Earth," requires that anybody visiting U.S. stations in Antarctica first complete rigorous medical checks. On the ice, people routinely carry a survival bag of extra thermal clothing whenever they leave the security of permanent stations and camps.

Those few who can "winter over" between March and September — the dark months when temperatures can drop below 100 below zero and remote stations are isolated except for air-drop deliveries — have to undergo special psychological screening.

Nevertheless, about 3,000 scientists, civilians and military support personnel from 18 nations work in Antarctica each year. Most of this occupation is during the summer months (November, December and January) when temperatures zoom up to freezing, at least in the more benign coastal areas. The short season, and the 24 hours of sunlight during summer months, encourage workaholics.

Sugarman, a slight but athletic youth who competed in track and cross country at Southfield-Lathrup High School, had to complete a two-day survival school at McMurdo Station before he could go into the field. McMurdo is the U.S. headquarters and logistics base on the Ross Sea. The training includes use of field radios, glacial climbing techniques and construction of emergency snow huts.

"TO BUILD the shelter, you make a large snow mound about six feet high," he said. "Then you tunnel into it. They're quite secure inside. The light from the sun comes into your shelter through the snow, casting a beautiful blue light. You can't hear anything outside because the walls are two feet thick. You don't even hear the wind howling."

The work never gets boring in Antarctica.

Sugarman's first assignment was pulling up traps full of what he called "plankton puke" from the bottom of Murdo Sound as part of a study on factors affecting sediment formation along the Anarctic Shelf. Working 13-hour days, Sugarman and his teammates drilled holes out on the sea ice and set up tripod-anchored series of cone-shaped cups which collected *minerals and micro organisms as they settled* to the bottom.

The job didn't get any easier in the Dry Valleys where Sugarman joined geologists digging at the edge of a moraine to determine the relative ages of various rock formations. A moraine is cluster of rocks moved out of its normal position by a glacier, and it can provide information about both glacial movement in the past and rock formations now covered by thick ice.

"I've only had one year of college, so I don't have enough training to do the glamorous things," said Sugarman. "But I could swing a pick ax. I can learn to do that pretty quickly. You don't need a master's degree to shovel dirt."

BEFORE LEAVING the Dry Valleys in early November, Sugarman also helped scientists at Lake Hoare — a small, frozen lake at the tip of the Canada Glacier — collect water samples for oxygen analysis. The lake has unusually high oxygen levels, and the tests are to determine what kind of life can exist in such water.

Algae is the most exciting wildlife at Lake Hoare, but at Hutton Cliffs, a protected cove in the Ross Sea ice, Sugarman got a close-up look at the Weddell seal, the most common kind of seal in Antarctica.

The seals, usually preoccupied with their pups, seem friendly and lethargic compared to more aggressive fur seals to the north. But they do have two-inch teeth, and can do a lot of damage when humans get careless. "You can't relax," biologist Donald Siniff warned Sugarman. "You constantly have to talk to yourself and be alert."

At Hutton Cliffs and out on the sea ice where Weddells sunbath, Sugarman and other members of Siniff's team worked on a long-term census of the colony, clamping identification tags on the pups' tails and noting the return of adult seals earlier tagged.

"You can walk right up to them," Sugarman said. "They'll try to bite you if you give them a chance, but they won't go after you. The trick during tagging is to stay behind the flippers. You put the tags on the pups' tails, and it makes an awful 'ka-chunk' sound but I don't think it hurts the seals. You'd sneak up on a pup that was sleeping and it wouldn't jump when you tagged it. I don't think their flippers are that sensitive."

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Louis Sugarman's housing varied from two-man Scott tents such as these in the Dry Valleys to a cabin bunk at Hutton Cliffs to a room in the Mammouth Mountain Inn, a no-frills hotel at McMurdo Station.