

FEATURE**Braving the ice****Psychologists journey to Antarctica to evaluate those stationed there during the severe winters.**

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Psychologist Toni Anker, PhD, remembers looking out the port hole of a C-130 military transport plane in January 2001 at her first glimpse of Antarctica—an "immense sheet of ice" sparkling in colors of blue, purple, silver and white underneath a bright, crisp blue sky.

"It was the most magnificent thing I've ever witnessed," says Anker, a forensic psychologist in Denver. "It was like we were landing on the moon."

Anker never imagined that her training in psychology would one day take her to this place at the edge of the world—a continent composed of 98 percent ice and known as the coldest, windiest and driest place on earth.

Anker is one of a handful of psychologists who have spent time on this icy continent. In fact, the first American woman ever to work with the U.S. Antarctic Program—in 1969—was psychologist Christine Muller-Schwarze, PhD, from Utah State University.

Each year, a select few psychologists travel to Antarctica during the warmer summer months—October through February, when there is around-the-clock daylight—to do psychological evaluations of the personnel who endure the dark six-month winter. The personnel maintain U.S. research facilities for such topics as global warming and earth sciences.

Leading one of the personnel-evaluation efforts is psychologist John Nicoletti, PhD, who recently returned from his ninth trip to Antarctica. For the past five years, through his Denver firm, Nicoletti-Flater Associates, Nicoletti has sent psychologists to do on-site evaluations and counseling at the South Pole and McMurdo Station in conjunction with Raytheon Polar Services (which organizes Antarctic operations for the National Science Foundation). About 20 psychologists have visited Antarctica through his program.

Coping in a harsh environment

Why are psychological evaluations so necessary in Antarctica?

"These are very harsh and extreme conditions, and we have to discern who would do well in that environment and if they are psychologically qualified to remain on the ice for the winter," says Anker, who has been to Antarctica three times to do evaluations. Anker's most recent visit, with Nicoletti and industrial psychologist Susan McFarlin, PhD, was Dec. 2-19, 2002.

The psychological evaluations include questionnaires and interviews of those who plan to "winter-over" as well as consultations with supervisory personnel when indicated. No one can leave the base during the six-month winter because planes are unable to fly in 60-below-zero temperatures. Besides handling the cold, those who winter-over are also blanketed in darkness as the sun sets Feb. 20 and doesn't rise again until Aug. 20.

This year Nicoletti's program will screen about 60 people at the South Pole and 200 at McMurdo Station. Psychologists look for such disorders and problems as seasonal affective disorder, aggressive behavior, alcohol abuse and depression. Interpersonal skills are also crucial, Anker says. Those who winter-over work together in small groups, often with little or no privacy, so psychologists investigate indicators of social conflict that might occur among the group members.

Psychologists also offer on-site counseling and education services relating to such topics as depression, substance abuse and trauma. And they train some of the winter personnel to be peer-support counselors. Some psychologists might also continue counseling via video conferencing or e-mail from the United States.

Past work by psychologists has shown that the services are much needed. For example, psychologist Eric Gunderson, PhD, a major contributor to the field of Antarctic psychology, found that living and working under extreme Antarctic conditions for several months can produce moderate to severe psychological dysfunction. He has studied psychological screening predictors for winter-over candidates for more than 30 years.

In 1960, as director of the Navy's research program at the Naval Health Research Center in San Diego, Gunderson was assigned to develop guidelines for screening Antarctica candidates. From 1963 to 1969, the Navy sent a psychologist and psychiatrist team each year to visit six U.S. stations in Antarctica to evaluate more than 1,000 people who had spent winters there. Evaluations were based on attitudes and personality tests, clinical evaluations and biographical information. The researchers found that the effectiveness of individual performance centered on three behavioral components: emotional stability, sociability and industriousness.

Gunderson and his colleagues published more than 50 reports from data collected during their 1960s Antarctic research. NASA has even applied some of their research to space explorations.

"A colleague of mine had once called this assignment a dream project for a psychologist," Gunderson says. "And I think it really was, because we were able to do some original, innovative work in the field that was accepted all over the world."

An adventure

Yet psychologists must face the same dangers and extreme conditions as other Antarctic personnel. Gunderson felt the challenges firsthand during his three-week visit in the early 1960s. After braving sub-zero temperatures, 35-40 mph winds and zero visibility, he became ill with altitude sickness while at the South Pole—which is more than 9,000 feet above sea level.

As for Anker, she also encountered a hitch on her second trip to Antarctica—the worst summer blizzard in 50 years delayed her departure by five days. On another trip, a family of penguins covered the iceway, temporarily preventing the plane from landing.

But her colleague Susan McFarlin, PhD, says the adventure is well worth the trip.

"I truly didn't know much about Antarctica before I went down," McFarlin says. "I thought it would be this big block of white ice, but I suppose it exceeded my expectations in beauty, tranquility and purity. It's unlike anything I've ever seen, smelled or touched before. It's truly a unique place."

Anker agrees: "It's a unique environment and the kind of issues are so unique to observe as a psychologist....It's nice for the public to see us in this kind of setting too—it provides a visibility to what psychologists do."

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