

## A South Pole Summer

### Amundsen-Scott South Pole Station:

The National Science Foundation manages and funds the U.S. Antarctic program. The Amundsen-Scott South Pole Station is under reconstruction. The station's geodesic dome, which became habitable in 1975, is being replaced by a \$153 million research station. All the building blocks and supplies arrive via Hercules LC-130 cargo planes. The new structure, not likely to be ready before 2005, will stand on adjustable stilts to allow snow to blow under it, instead of on top of the station.

### South Pole Facts:

- No nation owns Antarctica. Forty-three nations have signed treaties to protect and study the huge frozen landmass, about the size of Mexico and the U.S. combined.
- The Amundsen-Scott South Pole Station is one of three U.S. stations in Antarctica that are staffed year around, although during the eight months of darkness, only a minimal group stays.
- Research: astronomy, astrophysics, atmospheric and seismological studies.
- Elevation: 9,300 ft.
- Humidity: 0.03 %
- Temperature: (winter) gets down to -115 degrees F
- (summer) gets as warm as -10 degrees F
- Geography: 2-mile-thick glacier.
- Time zone: New Zealand time.
- Wild life: No living animals. Closest penguins and seals are 900 miles from the pole.
- Pole: The geographical South Pole is marked by a metal rod with a U.S. Geographical Service surveyor marker on top. There's also a ceremonial pole, striped red and white with a metallic mirror ball on top.

I'm writing this from the warmth of a practice on Cape Cod this winter. A few years ago I wrote an article for *Dynamic Chiropractic* (7/29/96) on the research vessel/ice breakers in Antarctica. I have returned there many times over the past few years in the same capacity as before.

In January 1998, I had the great fortune of being stationed at the U.S. Amundsen-Scott South Pole station for the remainder of the summer season. Summers in the extreme southern latitudes run from early November to mid-February. The station is named for the Norwegian and British

explorers who first reached the pole in 1913.

My work was to guide LC-130 aircraft to their parking spot and assist with unloading cargo and the transfer of fuel to the station's underground storage tanks. This was a busy time of year, since it was the beginning of a complete rebuilding of the station, with an estimated completion date of 2005 to 2007.

Late January is when the station is in high gear to complete projects and receive cargo and fuel before the station "closes" in February. After that date, there is no physical contact with the outside world until late October or early November. There were 28 people who stayed at the station during those months. Temperatures dropped to over -100 degrees F. The weeks of darkness require these hearty individuals to fend for themselves in an extreme environment, but one which they are well prepared (see *Outside Magazine*, Feb. 1998).

The South Pole is located about 9,450 feet above sea level. The thin atmosphere at the pole contains about 50 percent less oxygen than you'd breathe at more habitable latitudes. This is further exacerbated by the constant changes in atmospheric barometric pressure, which the body experiences as being even higher above sea level. On average, I experienced being at 10,500 feet above sea level my entire stay. Like most people, it took a couple days to get used to the altitude. A fair amount of that time was spent moving slowly and resting to ward off headaches. Others don't fare as well and find themselves nauseous and fatigued for days. Diamox is often given a few days before arrival to assist in acclimatization.

The temperature hovered around -14 degrees F when I arrived, and was averaging -80 degrees F at my departure in mid-February. Like most of the crew, my day was spent working outdoors, 8-10 hour days, six days per week. This required wearing many layers of clothing and covering most exposed skin. With all this encumbrance, movement was slow. I never saw anyone running. The use of snowmobiles on occasion gave us a sense of speed.

This South Pole station is located on a vast, white, barren, polar plateau. The only colors you really experience are white and an occasional blue when the sky clears. Of the 9,450 feet above sea level, most is ice, and it is steadily moving at 30-33 feet per year in a constant direction. This means everything is sliding along slowly. Being over 800 miles inland there is no immediate danger of any of the facilities plunging into the freezing ocean.

This was a fascinating place to live imbued as it is with the history of discovery and exploration and knowing you are truly at the bottom of the earth. No matter which direction you begin walking, you will always go north. Of course it only takes a few seconds to walk "around the world" at the geographic South Pole.

The station's summer community of approximately 190 is a closely knit group. The research being done centers on astrophysics. I arrived with the intent to just do my job, feeling privileged to even be there. My stay there proved once again that "it's a small world after all." The hometown of Sally, the head cook, is adjacent to mine. We attended the same high school. Sally had a staff of five who created incredible meals for a crew that constantly required fuel to survive the extreme cold. Despite eating more on a daily basis than I have ever before consumed, I lost 10 pounds. Another familiar face was the arriving winter site manager who had been a student of mine years earlier during a sail training cruise.

Naturally, the word finally got out about my being a chiropractor. I was approached frequently to help with the generalized aches and pains of a very fit community that was constantly experiencing a lot of physical stress. A fancy office with the latest gear wasn't needed. I used the examining

tables in sick-bay or a massage table set up in an observation tower. It felt good to provide a service without cash changing hands or dealing with paperwork. Despite my best efforts to discourage any compensation, I was rewarded with homemade fleece hats, gaitors, scarves and T-shirts, and certainly one of the most unique experiences of my life.

Although I don't practice full time, I have been able to provide this valuable service to folks from all walks of life in some remote settings where it is greatly appreciated. I know many in this profession are very often dealing with the constraints imposed by the formidable politics at play in the health care arena. In the big scheme of things this is a very young profession that has come a long way. I hope that in the near future many more chiropractors will be able to thrive and continue being able to provide their very valuable and underutilized skills.

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