

around the continent



Photos by Rebecca Shoop / Special to *The Antarctic Sun*

Palmer Station residents have been treated to views of icebergs recently as good weather has allowed them to go boating.

PALMER

Mighty midges

By Kerry Kells

Palmer correspondent

Two cruise ships and a yacht visited Palmer Station last week. The M/V Ushuaia and the M/V Explorer II stopped by, and their passengers visited station for a quick tour. The passengers on the Ushuaia included college students in an environmental literature class from Pacific Lutheran College in Tacoma, Wash., and many European visitors. The Explorer II was a larger ship with many American, New Zealander and Australian visitors.

Richard Lee, from Miami University, gave the science lecture. He began with a slide show of Palmer Station from 1980 and 1981. At that time, Lee was working as a post-doctoral researcher with the University of Houston and traveled to the station on the research vessel, *Hero*. The photos showed a decidedly different place, with fewer buildings and with the old Navy dump sites still existing.

Lee spoke about four common Antarctic terrestrial arthropods found in the Peninsula area. These include a springtail, which can float by the hundreds in a limpet shell and has been studied extensively by the British Antarctic program; the mite, of which there

are six to seven species; the tick, which feeds on penguins and other seabirds; and the midge, a flightless fly known as *Belgica antarctica*, the largest land animal and year-round inhabitant of Antarctica.

Lee's project focuses on the stress tolerances of the midge, which is the southernmost insect. This fly has four larval stages and pupates into an adult that lays eggs in egg masses. It takes two years to reach maturity. The *B. antarctica* lives in diverse microhabitats and is located only in this area of the Antarctic Peninsula. This species exhibits remarkable resistance to various environmental stresses such as cold, heat, desiccation, anoxia (lack of oxygen), and changes to pH level.

His group will define microclimate variability and environmental extremes, and then duplicate the midges' natural environmental conditions and investigate their physiological and molecular mechanisms of stress tolerance in the lab.

Marianne Kaput, a sixth-grade science teacher with the group, spoke about her part in an educational outreach program funded by the National Science Foundation. Kaput will maintain an interactive Web site and online journals, and will develop activities for elementary to high school students. She also hopes to publish some of her articles in teaching journals and plans to conduct distance-learning lessons from Palmer for 30 different classrooms.

With the winds calm and several days

of sunny skies, boating allowed for some fantastic viewing of the icebergs around station. Some icebergs continue to float just off Palmer. However, we now anticipate storm activity in our near future as the winds begin to pick up speed.

SOUTH POLE

Continued progress

Tom Lohr

South Pole correspondent

Things continue to change at light speed at the Earth's southern axis.

Another string of neutrino detection modules has been deployed at IceCube, one of the world's largest science projects, moving humans a step closer to better understanding the origins of the universe.

The "graying" of the new elevated station continues at an impressive clip. The gunmetal gray siding is steadily covering the yellowish particleboard that has given the station a banana-like hue.

An ice crystal-rich atmosphere produced some of the season's most spectacular sundogs, sending Polies scrambling for their cameras to catch images of the fleeting beasts. A sundog is an atmospheric optical phenomenon associated with the reflection and refraction of sunlight by the numerous

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the week in weather

McMurdo Station

High: 40F / 5C

Low: 17F / -8C

Max. sustained wind: 30mph / 48kph

Windchill: -13F / -25C

Palmer Station

High: 45F / 7C

Low: 32F / 0C

Max. sustained wind: 37mph / 60kph

Precipitation: 7mm

South Pole Station

High: 1F / -17C

Low: -22F / -30C

Peak wind: 33mph / 53kph

Max. physio-altitude: 3,146m