

Survey of tour sites widely read

By Kristan Hutchison

Sun staff

As science papers go, Ron Naveen writes a bestseller. The results of his annual Antarctic Site Inventory used in treaty discussions, research plans and by just about every tour operator headed to the Antarctic. The Environmental Protection Agency recently printed a second edition of his 382-page *Compendium Of Antarctic Peninsula Visitor Sites* and copies have been sent to all members of the International Association of Antarctic Tour Operators. Some already hang enlargements of his site maps in their ships.

"It's very, very nice to have our work so respected and so used," said Naveen, who operates the inventory under the auspices of his Maryland-based educational and science foundation, Oceanites.

Launched in 1994 with a National Science Foundation grant, the site inventory involved a simple, yet novel, concept. Catching rides on the many tour ships already going to the Antarctic, Naveen and a team of associates survey each tourist stop. Penguins, shags and other seabirds, lichens and mosses are tallied and photographed. During the past decade the inventory team made 570 visits to 89 sites on the peninsula, creating a comprehensive document of what's where and how it's been affected by tourism.

"What that document's great for is it looks at over 50 of the sites the tour ships go to in Antarctica, where all the wildlife is, where the nesting sites are," said Denise Landau, Executive Director of the International Association of Antarctic Tour Operators, which distributed the inventory's compendium to its members. "It's really good site information."

After hitching rides around the Antarctic Peninsula for 10 years, Naveen has taken his research a step further with a new five-year grant from the NSF. On Nov. 14 Naveen landed back at Petermann Island, where he's been many times before. This time the ship dropping him off was the research vessel *Laurence M. Gould* and when the *Gould* pulled away, Naveen and his research group stayed. They pitched tents in several meters of snow, then mapped the mile-long rocky island using handheld GPS and began the census work.

By staying on the island for a month in November/December and again in



Photo by Kristan Hutchison/The Antarctic Sun

Researcher Anne Petzel watches an emperor penguin on the sea ice near Cape Royds, Ross Island, Antarctica. Penguins are curious and often approach scientists and tourists. Researcher Ron Naveen tracks how those interactions may affect the sea birds.

January/February, Naveen's team was able to make a more careful and complete count of the Adelie and gentoo penguins, along with their eggs and chicks. The gentoos in particular tend to nest in nooks and crannies scattered around the island rather than central rookeries, so counting all the nests or chicks can take a day. By staying a month, Naveen could survey the birds several times and ensure the censuses were achieved at appropriate times.

"These are really the best counts we've ever gotten there," Naveen said. "When you're working off a ship and getting in for three or four hours, it's a different thing."

Camping on the island also gave Naveen a chance to observe different tour groups coming ashore. Among the 245 Antarctic locations tours visit, Petermann Island ranks sixth for number of visits. In November and December Naveen had only a few visitors, but in January and February tourists came ashore almost daily. The 30 tour groups Naveen met were all careful not to disturb the plants or animals, he said.

"For the most part there's a lot of expe-

rience among the operators. They know where to go, what to do, what not to do," Naveen said. "My view is they're doing a fairly good job and, frankly, they need to do a good job, because if they're not and the resource falls away they lose their business."

The swift growth of tourism to the Antarctic has led to growing concerns for the frigid and fragile ecosystem. In the past decade, the number of tourist landings on the Antarctic Peninsula each season increased more than 400 percent, from 164 to 858. While the majority of landings are concentrated in the Shetland Islands and a dozen sites on the northwestern part of the Peninsula, tours have also been expanding to new sites each year. Palmer Station ranks among the top 20 most visited locations in Antarctica.

The dramatic increases in visits have led the international bodies governing Antarctica to consider a coordinated monitoring system for all human activity, including tourism. In accordance with a decision made at last year's Antarctic Treaty Consultative Meeting, experts met in Tromsø, Norway, in March, to discuss ways tourism might be managed. Naveen was part of the U.S. delegation and will be part of the discussions that continue at the Antarctic Treaty Consultative Meeting in Cape Town in May.

He brings a uniquely rounded perspective to the talks, having been to the Antarctic first as a tour leader in the 1980s and then as a scientist.

"The inventory database is right in the thick of things," Naveen said. "Everybody seems to want our information."

Over time the inventory should show whether penguins and other Antarctic animal populations are changing because of tourists. So far, in 10 years Naveen hasn't seen any evidence that tourists are hurting the birds. The only definitive change Naveen's surveys have shown is a decrease in the number of blue-eyed shags throughout the Peninsula, irrespective of the amount of tourism. Naveen believes the shags are reacting to changes in the climate and prey availability rather than tourism.

"For the most part we scientists are rather convinced there's global forces causing change," Naveen said.

*NSF funded research featured in this story:
Ron Naveen, Oceanites Inc.*



**Like a photo?
Find it, save it, use it**

www.polar.org
**Antarctic
Photo Library**