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New killer whale at risk from Antarctic warming

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WASHINGTON: A new study has indicated that two newly identified types of killer whales that hunt prey off of Antarctic sea ice risk losing food sources to global warming and melting.

According to a report in *National Geographic News* , the study reveals that killer whales that feed primarily on fish that congregate under ice shelves are more or less "homebodies," sticking close to the ice, whereas seal-eating killer whales wander wide and seemingly aimlessly.

The differences in movement patterns likely correlate to differences in the whales' foraging strategies and how they interact with their prey, according to the study.

For example, fish-eating whales can stay local because the main anti-predator strategy of fish is to bunch up into schools, often under the ice shelves, according to researchers.

On the other hand, the seal-eating whales chase prey with a wider range, as seals wash off of ice floes and travel farther.

Both types of killer whales tracked are heavily dependent on ice cover, according to Robert Pitman, a study co-author and marine biologist with the National Oceanic and Atmospheric Administration in La Jolla, California.

"If there are changes in the amount of ice cover (in the Antarctic) then it means there are going to be changes in the amount of habitat that (the whales) have available to them," said Pitman. "And we're not sure how adaptable they are to living in a different kind of habitat," he added.

Pitman and his colleagues have spent nearly ten years compiling evidence to show that three species of killer whales, not one, ply the icy Antarctic waters.

To date, the researchers have identified three "types" of killer whales, each with distinct looks, habits, and diets, and perhaps even unique genes.

One type swims under the cracked ice and eats fish and another feeds on seals and other mammals, such as penguins, from ice floes.

The third, a more transient and more studied species, swims in the open ocean and preys primarily on minke whales, which are a small filter-feeding species of marine mammal. The three types do not interbreed.

"In fact, they completely avoid each other," said Pitman, whose studies of Antarctic killer whales are revealing patterns similar to those in the North Pacific.

While scientists are hesitant to call the whale types different

species because their differences could be culturally enforced, the whales are "clearly on a trajectory to become separate species," Pitman said.

According to John Ford, a killer whale expert with Fisheries and Oceans Canada's Pacific Biological Station in Nanaimo, British Columbia, the addition of the satellite tagging technology that Pitman used on his most recent study of killer whales will help focus conservation efforts for particular populations that might be in trouble.