

## Snowy owl – a marine species?



Photo: Gilles Gauthier

Wildlife satellite studies could lead to a radical re-thinking about how the snowy owl fits into the Northern ecosystem.

“Six of the adult females that we followed in a satellite study spent most of last winter far out on the Arctic sea ice,” said Université Laval doctoral student Jean-Francois Therrien, who is working with Professor Gilles Gauthier as part of an International Polar Year (IPY) research project to better understand key indicator species of Canadian northern ecosystems.

The finding flabbergasted the biologists who are now curious to find out if Inuit seal hunters ever encounter the large white birds on the ice in winter darkness.

“As for what the birds were doing there, they were possibly preying on seabirds,” said Gauthier. “Bird researchers at coastal field sites have observed snowy owls attacking eiders in winter. This hypothesis will be strengthened if we can match up the locations of our birds with the position of open water leads in the ice as recorded by other satellite data.”

The researchers find it intriguing that the top Arctic bird predator, like the top mammal – the polar bear, is also part of the marine ecosystem. The possible implications for the species will be discussed by Therrien this Wednesday in Quebec City at the Arctic Change Conference, one of the largest international research conferences ever held on the challenges facing the north.

It was very surprising, said Therrien, how far the individual birds migrated from where they were banded on their nesting grounds on Bylot Island, north of Baffin Island.

“The satellite data showed just how dramatic the owl movements are. They flew huge

distances. One owl went to Ellesmere Island, another flew straight to North Dakota and a third ended up on the eastern point of Newfoundland," he said.

The researchers say that this winter should provide many southern Canadians with a better than normal opportunity to see the magnificent birds.

"We had the largest abundance of lemmings in many years in our study area this past summer," said Gauthier. "The owls had no problems raising young, so we were informally predicting a strong outward movement of young owls this winter."

And indeed, judging by numerous newspaper reports and naturalist sightings, that prediction has already come true.

In fact, if anyone has a really ingenious idea to keep them away from airports, there is at least one airport authority that would like to hear from you. One owl-plane collision has already been reported this year at Montreal-Trudeau International Airport in Dorval.

"The support from IPY and NSERC and the advances in satellite technology have given a huge impetus to what promises to be a revolution in our understanding of this key northern species," said Gauthier. That knowledge can't come soon enough, the two researchers said.

Jean-Francois Therrien's presentation "Reproductive success and long-distance movements of snowy owls: Is this top predator vulnerable to climate change" will take place at the Arctic Change Conference in Quebec City on Wednesday, December 10 at 11:30 a.m.

Therrien received an NSERC Northern Internship for his work, which was also conducted as part of the NSERC IPY ArcticWOLVES project based out of Université Laval. Arctic WOLVES stands for Arctic Wildlife Observatories Linking Vulnerable Ecosystems ([www.cen.ulaval.ca/arcticwolves/en\\_intro.htm](http://www.cen.ulaval.ca/arcticwolves/en_intro.htm)).

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