

# Shifting bird distribution indicates a changing Arctic

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A male Spectacled Eider wears a surgically implanted satellite transmitter after its release in northern Alaska. Credit: USGS

Shifts in the distribution of Spectacled Eiders, a predatory bird at the top of the Bering Sea's benthic food web, indicate possible changes in the

Arctic's marine ecosystem, according to new research in *The Condor: Ornithological Applications*.

Matt Sexson of the USGS Alaska Science Center and his colleagues compared recent satellite telemetry data from molting eiders with data from the mid-1990s. They found that in two of the species' four primary molting areas, the birds have shifted their range significantly in the intervening decades, and the researchers interpret this as an indicator of ecosystem change—eiders go where their prey is, and their movements could indicate big changes in the community of bottom-dwelling, cold-water-dependent invertebrates they eat.

It's easier to track marine predators than it is to track their prey, explains Sexson. "It's tough to speculate on the connection with climate change because the data are so sparse, but we know that the north Pacific is changing," he says. "There's a lot of corresponding evidence that together all says something big is happening here, and eiders provide a readily available indicator that changes are occurring."

Sexson and his colleagues spent months at a time in the remote Arctic to catch eiders on land during their breeding season, luring them into nets before making a two-hour trek back to base camp with each bird to surgically implant a satellite transmitter. "It's a lot of hard work, but it's a lot of fun," Sexson says. "I used to just flip past the eiders in bird field guides, thinking I'd never see any of these. Now five years later I'm catching them and holding them. I've really developed a love for this group of [birds](#)—how unique they are, how beautiful they are. I've just become attached."

According to the University of Maryland's Jackie Grebmeier, an expert on Arctic marine ecosystems who was not involved with the new study, "The results of this research provide an important finding of biological response of an upper-trophic-level seabird to climate warming and sea

ice retreat, another piece in the puzzle to address ecosystem change in the Pacific Arctic region." As Arctic water warms, whole communities of animals are moving north—and there's only so far they can go.

**More information:** "Shifts in the distribution of molting Spectacled Eiders (*Somateria fischeri*) indicate ecosystem change in the Arctic" will be available June 1, 2016 at [www.aoucospubs.org/doi/full/10.1650/CONDOR-15-139.1](http://www.aoucospubs.org/doi/full/10.1650/CONDOR-15-139.1)

Provided by The Condor

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