



Threatened and Endangered Species

Protecting Spectacled Eiders At Sea

Spectacled eiders (*Somateria fischeri*) were listed as threatened in 1993 under the U.S. Endangered Species Act (*Federal Register*, May 10, 1993). The eider was listed because the breeding population on the Yukon-Kuskokwim Delta, Alaska, declined 96% between the 1970's and the early 1990's. Since spectacled eiders spend most of their lives at sea, minimizing harm in marine habitats is crucial to the species survival and recovery.

At-Sea Distribution and Ecology

Until recently, little was known about the habits of spectacled eiders outside their summer breeding areas. Researchers are using satellite telemetry and aerial surveys to find the birds at sea, from coastal fall molting areas to offshore wintering areas in the central Bering Sea.

In the late summer and fall after breeding in northern and western Alaska and arctic Russia, spectacled eiders gather in flocks in coastal waters to molt. During molt, the birds become flightless as their old, worn feathers are replaced with new ones.

Four principle molting areas have been identified. Two molting areas on the coast of Alaska are eastern Norton Sound and Ledyard Bay, between Cape Lisburne and Point Lay. On the coast of Russia, eiders molt in Mechigmenskiy Bay on the Chukotka Peninsula and an



Wintering flocks of spectacled eiders, such as this flock of over 80,000 birds, gather in the pack ice southwest of St. Lawrence Island. USFWS photo by Bill Larned.

area between the Indigirka and Kolyma river deltas. Molting areas are typically less than 36 meters deep.

Eastern Norton Sound appears to be the primary molting area for females nesting on the Yukon-Kuskokwim Delta in Alaska, while females nesting in northern Alaska migrate to either Ledyard Bay or Mechigmenskiy Bay to molt. Males from all three breeding areas have been found molting in Ledyard Bay, Mechigmenskiy Bay, and in the area between the Indigirka and Kolyma river deltas.

Males reach molting areas first, beginning in late June, and may remain through mid-October. Females that did not breed or whose breeding efforts failed begin arriving in late July. Successfully breeding females reach

molting areas in late August or September, and may remain through October. Consequently, flightless eiders are present in molting areas from July to October.

By late October, spectacled eiders follow coastal and offshore migration corridors through the Bering and Chukchi seas to offshore wintering areas. The primary wintering area is in the central Bering Sea south and southwest of St. Lawrence Island. Additional wintering areas have not yet been identified.

In early winter, spectacled eiders have been seen within 50 kilometers of St. Lawrence Island, moving farther offshore as winter progresses. Their late winter location appears to move with annual ice coverage as the birds search for open water. When ice cover is



While in breeding plumage (October to June), adult male spectacled eiders have a black chest, white back, pale green head with a long sloping forehead, and white spectacle-like patches around the eyes. From July to September, males are entirely mottled brown. Females and juveniles are mottled brown year-round with pale brown eye patches. One of the largest sea ducks, spectacled eiders average 52-56 centimeters (20-22 inches) in length. Illustration by Joseph Hautman.

extensive, dense flocks of many thousands of eiders gather in small ice-free openings.

While at sea, spectacled eiders appear to be primarily bottom feeders, eating molluscs and crustaceans at depths of up to 70 meters in the wintering area. As spring approaches, food abundance is especially important as females accumulate nutrient reserves needed for egg-laying and incubation.

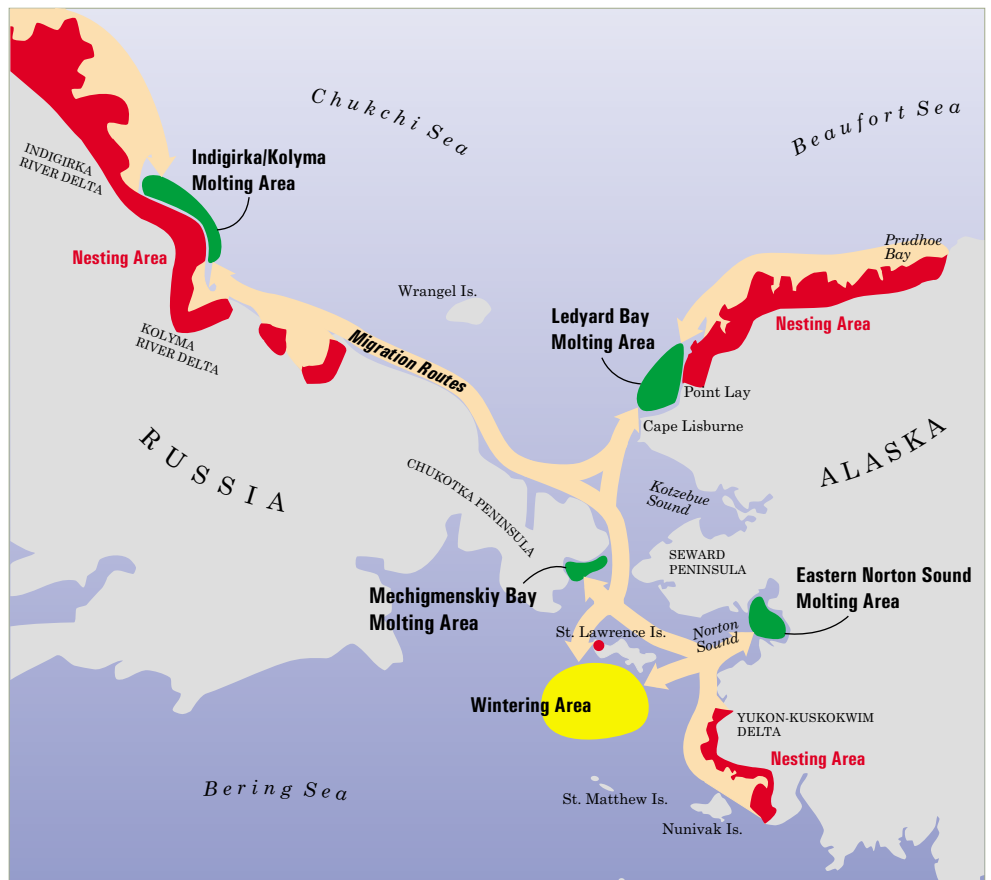
In March and April, spectacled eiders depart wintering areas. Breeding adults migrate to coastal nesting areas, arriving by mid-May or early June. Males remain on shore for just a few weeks, returning to sea by the end of June after eggs have been laid. Breeding females and their young remain on the nesting grounds until late August or early September. Most females whose nests have failed return to sea by late July.

The location of non-breeding spectacled eiders from May to October is not well known. They probably occur in shallow coastal areas throughout their range in the Bering and Chukchi Seas in scattered small flocks of less than a few hundred birds

Protecting Spectacled Eiders At Sea

The following measures are suggested to avoid harm to eiders in their molting and wintering areas:

- Comply with the Endangered Species Act, section 7 regulations; consult with the U.S. Fish & Wildlife Service prior to permitting, funding, participating in, or conducting any activities at sea that may affect spectacled eiders.
- Prevent oil spills. Even a small amount of oil destroys the insulating properties of feathers and can weaken or kill an eider.
- Always use absorbent booms when transferring fuel to shore-based facilities.
- Store adequate oil and fuel clean-up equipment on-site at fuel transfer locations.
- Do not discharge oily bilge water near molting areas during summer or fall.
- Avoid disturbing or harvesting benthic communities in eider molting and wintering areas during any time of year.



Distribution of spectacled eiders. Molting areas (green) are used July through October. Wintering areas (yellow) are used October through April. The full extent of molting and wintering areas is not yet known, and may extend beyond the boundaries shown.

References

Federal Register. 1993. Final rule to list the spectacled eider as threatened. Federal Register 58(88):27474-27480.

Petersen, M.R., W.W. Larned, and D.C. Douglas. 1999. At-sea distribution of spectacled eiders (*Somateria fischeri*): 120 year-old mystery resolved. *Auk* 116:1009-1020.

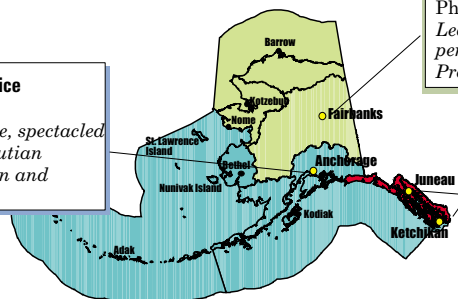
Petersen, M.R., J.F. Piatt, and K.A. Trust. 1998. Foods of spectacled eiders *Somateria fischeri* in the Bering Sea, Alaska. *Wildfowl* 49:124-128.

U.S. Fish & Wildlife Service. 1996. Spectacled eider recovery plan. Anchorage, Alaska, 157 pp.

For more information on this and other threatened and endangered species, contact the U.S. Fish & Wildlife Service, Ecological Services Field Office near you.

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