U.S. Fish & Wildlife Service

Threatened and Endangered Species

Steller's Eider

(Polysticta stelleri)

Karen Laing / USFWS

Laura Whitehouse / USFWS.

Male (foreground) and female Steller's eiders at the Alaska SeaLife Center. Inset: a female on her nest.

Steller's eiders are the smallest of the four eider species. In the winter, spring, and early summer, adult males are in breeding plumage with a black back, white shoulders, chestnut breast and belly, a white head with a greenish tuft, and small black eye patches. During the late summer and fall, males are entirely mottled dark brown. Females and juveniles are mottled dark brown year-round. Adults of both sexes have a blue patch with a white border on the upper wing, similar to mallards.

Status

In 1997, the Alaska-breeding population of Steller's eiders was listed as threatened under the Endangered Species Act (ESA) based on: 1) abandonment of significant portions of their former nesting range in Alaska; 2) a reduction in the number of Steller's eiders nesting in Alaska (particularly the Yukon-Kuskokwim, or Y-K Delta); and, 3) the resulting increased vulnerability of the remaining breeding population to extirpation from Alaska. In addition to protection they receive under the ESA, any take of this species is prohibited under the Migratory Bird Treaty Act. Breeding populations in Russia also declined, causing the World Conservation Union to list the entire species as vulnerable.

Range and Population Size

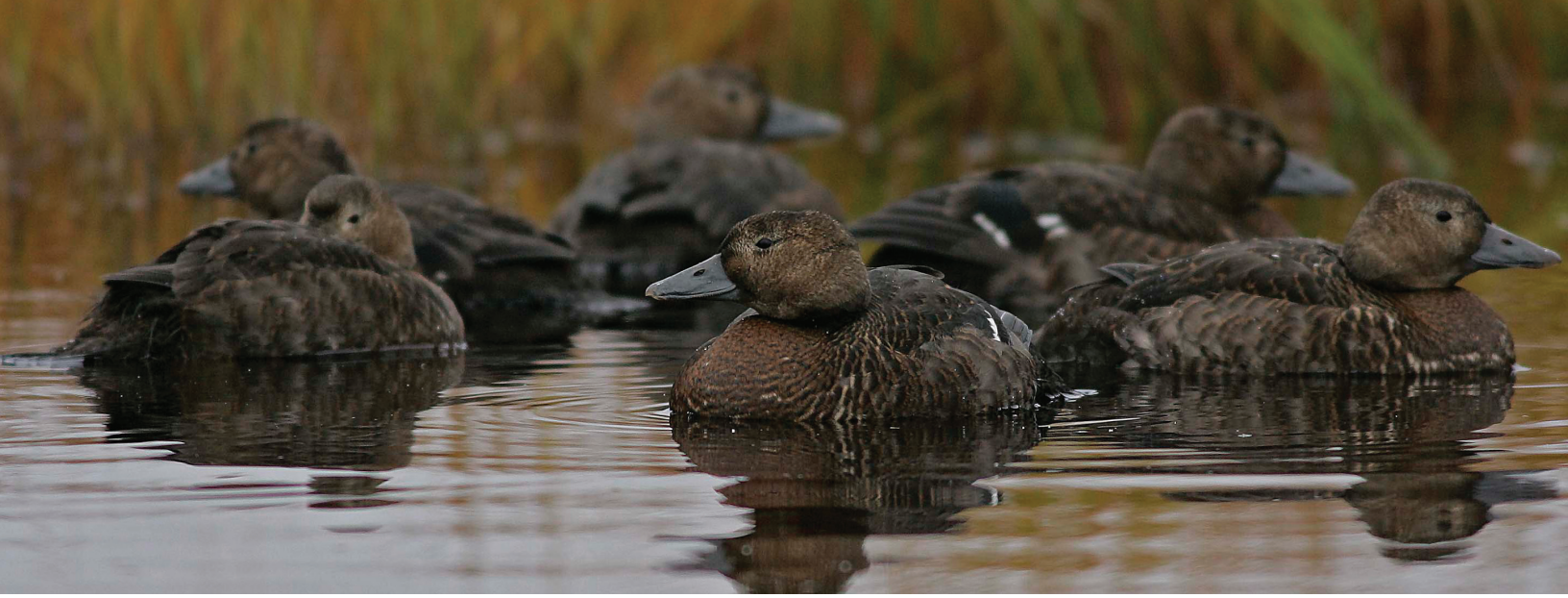
Three breeding populations of Steller's eiders are recognized: two in Arctic Russia and one in Alaska. Only Steller's eiders that nest in Alaska are considered threatened under the ESA.

Steller's eiders historically nested in western and northern Alaska. They were locally common in portions of the Y-K Delta and were recorded nesting on St. Lawrence Island, the Seward and Alaska Peninsulas and the Aleutian Islands. Today, however, they are extremely scarce on the Y-K Delta (the last nest was observed in 2005 at Kigigak Island and prior to that in 1998 at Hock Slough) and have not been found breeding elsewhere in western Alaska for several decades. The species' current breeding range is confined to the Arctic Coastal Plain between Wainwright and Prudhoe Bay, with a notable concentration near Barrow. The number of Steller's eiders that breed near Barrow is highly variable every year.

After nesting, Alaska's Steller's eiders move into the nearshore marine waters of southwest and south-central Alaska where they mix with the much more numerous Russian Pacific population.

Adults undergo a flightless molt in autumn in northern Kuskokwim Bay near Cape Avinof. along the coast of Nunivak Island and lagoons on the north side of the Alaska Peninsula. Although some remain in molting areas throughout winter, others disperse into the coastal waters of the eastern Aleutian Islands, south side of the Alaska Peninsula, Kodiak Archipelago, and southern Cook Inlet. During their spring migration, Steller's eiders concentrate in the Kuskokwim and Bristol bays to await the retreat of sea ice and opening of overwater migratory routes.

Population sizes are only imprecisely known. The Russian Atlantic population is believed to contain 30,000 to 50,000 individuals, and the Russian Pacific population likely numbers between 50,000 to 100,000. The threatened Alaska-breeding population is thought to include hundreds on the Arctic Coastal Plain, and possibly dozens on theY-K Delta.



Above, a brood of Steller's eiders in Barrow, Alaska. Below, male Steller's eider flying. Ted Swem / USFWS

Habitat and Habits

Steller's eiders are diving ducks that spend most of the year in shallow, nearshore marine waters. Molting and wintering flocks congregate on exposed shoals, in protected lagoons and bays, as well as along rocky headlands and islets. They feed by diving and dabbling for molluscs and crustaceans in shallow water. In summer, they nest in tundra adjacent to small ponds or within drained lake basins and frequent tundra ponds, lakes, and wetlands.

Understanding and Reducing Threats

The Steller's Eider Recovery Plan establishes recovery criteria that include reducing known threats and ensuring that the Alaska-breeding population has < 1% probability of extinction in the next 100 years; and subpopulations in each of the northern and western subpopulations have < 10% probability of extinction in 100 years and are stable or increasing. The Plan also identifies recovery actions addressing information needs; threats to Steller's eiders, such as shooting, lead poisoning, and predation; and re -establishment of a breeding population on the Y-K Delta.

- The Fairbanks Fish and Wildlife Field Office has actively researched Steller's eider breeding ecology near Barrow since 1999, providing managers with estimates of breeding effort, nest success, brood survival, identification of nest predators, interspecific relationships, and information on habitat use.
- The U.S. Fish and Wildlife Service (Service), in partnership with the Bureau of Land Management and ABR Inc., monitor the population near Barrow and the Pacific population during spring migration in southwest Alaska to learn more about population status and trend.
- The Eider Research Program at the Alaska SeaLife Center (ASLC) is successfully breeding Steller's eiders and providing vital information on disease, diet, causes of egg infertility, and techniques to enhance egg survival through research on their captive flock of Steller's and spectacled eiders.
- Partner-supported education programs on the Arctic Coastal Plain, Y-K Delta and on other refuges encourage the use of non-toxic shot, and send the message that shooting Steller's eiders is illegal and harmful to the population. On the Arctic Coastal Plain, an outreach team of biologists, outreach specialists and law enforcement agents from the Service, State of Alaska and North Slope Borough visits villages to present a unified message and to encourage dialogue with local residents.
- Control of arctic foxes, a major egg predator, near Barrow on the North Slope in 2005-2011 appears to have improved nest success.
- In 2005-2006, the ASLC and the Service collected eggs from nests at Barrow which were used to develop a captive flock of Alaska origin. This flock is now reaching maturity, and progress in developing captive-breeding techniques has been rapid. To determine if reintroduction should be used as a recovery tool, particularly on the Y-K Delta, the ASLC is leading development of a reintroduction structured decision analysis, a multifaceted process to assess methodologies, risk factors, success indicators, and long term projections of reintroduction to support recovery. TheASLC is uniquely qualified for this effort due to the staff's experience with existing research flocks, state-of-the-art sea duck facilities, expertise in animal health and husbandry, and the Center's location in Alaska. The Service will use this analysis, along with recommendations provided by the Eider Recovery Team and input from stakeholders, to determine if reintroduction should be used as a tool to achieve recovery criteria.

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