



## Sea Duck Information Series

# King Eider (*Somateria spectabilis*)

French: Eider à tête grise

### Description

King eiders are a moderately large sea duck, weighing 1200-2100 g (2.6 – 4.6 lbs). Male king eiders are one of the most ornately plumaged ducks in North America. In breeding plumage (late fall through mid-summer), males sport a large orange-yellow knob between their bill and forehead. Their forehead, crown, and nape is pearl blue, with iridescent pale green cheeks and a reddish-orange bill. The lower portion of their head, neck, upper back, and breast is white with the remainder of the body black. The longest feathers along their upper flanks have triangular extensions that form a sail-like projection on their back.

Female king eiders in breeding plumage are mostly dark reddish brown with extensive black barring along their sides and flanks. Their bill is olive or yellowish-gray and lacks the knob that the male has.

King eiders migrate in large undulating flocks and their wings whistle in flight. On the water, it's mostly the male that makes sounds, including a soft dovelike urrr urrr urrr. Females make various growls in flight and growls and grunts on the water when disturbed or threatened.

### Range

Breeds in coastal areas of remote high arctic regions, including the arctic coasts of Canada and Alaska and nearly all islands in the Canadian arctic. In the western Canadian arctic, the majority breed on Banks and Victoria islands.

King eiders winter in marine environments. There are two distinct wintering populations for birds breeding in North America, one in the Atlantic and one in the Pacific. King eiders breeding roughly from the Queen Maud Gulf area to Melville Island may winter in either the Pacific or Atlantic.

In western North America, they winter mostly in the Bering Sea south of St. Lawrence Island, including the Aleutian Islands eastward to mainland Alaska, with a few scattered localities further east. King eiders breeding in western North America also winter in eastern Russia south to the Kuril Islands.



Photo: USFWS

*King Eiders in breeding plumage*

In eastern North America, king eiders winter primarily at sea along the coasts of Labrador and Newfoundland, with smaller numbers south to Virginia and in the eastern Great Lakes. Some unknown portion of the eastern breeding population also winters along the coast of southwestern Greenland.

### Habitat and Habits

King eiders are long distance travelers that migrate in flocks sometimes numbering >10,000 birds. They are highly gregarious and immense flocks (>50,000) congregate in Bristol Bay, Alaska during spring migration. In western North America, migration begins in April and birds arrive on breeding areas by mid-June.

The entire western population, including birds that winter in North America and in Russia, migrates past Point Barrow, Alaska, on its way to breeding grounds in Alaska and Canada. They pass Point Barrow in late April and early May and passage is complete by late May. Estimates of population size are based largely on counts of birds migrating past this site. More than 110,000 have been estimated passing Point Barrow during one 30-minute period.

King eiders arrive paired on breeding grounds and females begin

nest-building and egg laying within a week of arrival. Females lay one egg per day and clutch size averages 4-5 eggs. Incubation lasts about 23 days. Ducklings can fly when about 50 days old.

Males depart breeding areas when females begin incubation. In western Canada and Alaska, they migrate west along a broad front but become concentrated within a few km of shore between Simpson Lagoon and Point Barrow. Primary molting areas are along the southern and eastern shores of the Chukotka Peninsula, Russia. Most females follow males to molting areas in the Bering Sea a few weeks later but a few molt near nesting areas as well.

In eastern North America, male king eiders depart in July for molting areas in Greenland. These birds depart molting areas in November and December to wintering areas along ice-free coasts of southwest Greenland. Most females follow males to molting areas a few weeks later but a few may molt near nesting areas or in northeastern Canada.

Females are believed to breed when three years old. Reliable estimates of life span are lacking. Principal nest predators are arctic fox, jaegers, and glaucous gulls. Survival of adults is believed to be high.

## Population Size and Status

Based on spring migration counts at Point Barrow, Alaska, the western North American population currently numbers 300,000-400,000 birds. This represents a decline of approximately 55% between 1976 and 1996. Causes of the decline are unknown.

Estimates of the size of the eastern North American population are poor, but probably number 200,000-250,000 birds. Based largely on counts of birds molting or wintering in Greenland, it is likely the eastern population has declined as well.

## Management and Conservation

This is an important species in the subsistence harvest by rural Alaskans and Canadian aboriginals, with an estimated 20,000 taken annually. The level of harvest in Russia is unknown. Sport harvest throughout North America is low.

Many eastern Canadian king eiders winter in Greenland, where they are harvested commercially and caught incidentally during fishing activities. Current levels of harvest may be unsustainable and recent liberalization of harvest is a serious cause for concern.



Photo: Tim Bowman, USFWS

Mass starvation of adults during spring migration occurs occasionally, due to lack of open water or adverse weather. An estimated 100,000 died in the Beaufort Sea in 1964 because of these factors. These mass mortality events may be a principal mechanism for regulating population size.

Recent research has used satellite telemetry to identify migration



*Distribution of King Eider in North America*

corridors and habitats along the Beaufort Sea coast where offshore oil development is increasing and may pose a risk to migrating eiders. Satellite telemetry is also being used to determine how many king eiders breeding in eastern Canada winter in Greenland and are subject to commercial harvest there.

Breeding biology studies are being carried out in northern Alaska and the Canadian arctic. Examination of stable isotopes in tissues of birds breeding in the central Canadian arctic will further determine where these birds winter.

Duck Joint Venture  
Suydam, R. S. 2000. King Eider (*Somateria spectabilis*). *In* The Birds of North America, No. 491. (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Woodby, D. A., and G. J. Divoky. 1982. Spring migration of eiders and other waterbirds at Point Barrow, Alaska. *Arctic* 35: 403-410.



Photo: Jim Zelenski, USFWS

## References and Resources

Dickson, D. L., R. C. Cotter, J. E. Hines, and M. F. Kay. 1997. Distribution and abundance of king eiders in the western Canadian Arctic. Pp. 29-39 *in* King and Common eiders of the western Canadian arctic (D. L. Dickson, ed.). Can. Wildl. Serv. Occas. Pap. No. 94. Environ. Canada, Canadian Wildlife Service, Ottawa.  
[Seaduckjv.org](http://Seaduckjv.org) – web site for the Sea



The Sea Duck Joint Venture is a conservation partnership under the North American Waterfowl Management Plan

To learn more about the Sea Duck Joint Venture (SDJV), visit [seaduckjv.org](http://seaduckjv.org) or contact:

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