COMMON EIDER - SOMATERIA MOLLISSIMA

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Anseriformes Family: Anatidae Genus: Somateria Species: S. mollissima

Habitat:

Biomes: Breeds on coastal islands or along ponds and lagoons near the ocean. Winters offshore near marine shoals.

Temperature: Easily handle temperatures as low as -15 degrees Fahrenheit.

Distribution:

In US: Breeds locally in colonies along marine coasts, mostly on islands and islets—but sometimes narrow points of land, and occasionally on islands in freshwater lakes and river deltas near marine waters. In Alaska, breeds from Glacier Bay to Cook Inlet and Kodiak Archipelago along south side of Alaskan Peninsula through Aleutian Is., common along Bering Strait, and along sectors of Bering Sea into Coronation Gulf

In Other Countries: Circumpolar distribution breeding in many areas of Northern Hemisphere. In Europe, breeds from Novaya Zemlya and Franz Josef Land, along Barents Sea of n. Russia, Norway, Baltic Sea area (especially the Netherlands), North Sea (Scotland and England), and south to n. France. Breeds and winters in Iceland, Spitsbergen, and s. Greenland. More or less sedentary population in Faeroe Is. Also breeds in e. Siberia from Chaun Bay and along Bering Sea coast (Dement'ev et al. 1952). Winters as far north as open water permits, such as along ice edge of sw. Novaya Zemlya and unfrozen portions of White Sea and along Murmansk coast. Winters south along coastal Norway, North Sea, and into Baltic Sea and around British Isles

Holistic Description: A colorful duck of the northern seacoasts, the Common Eider is the largest duck in the Northern Hemisphere. The male's bright white, black, and green plumage contrasts markedly with the female's camouflaging dull striped brown.

Species Richness: From 6 to 7 subspecies recognized, 4 of these occurring in North America.

Population Dynamic: Currently declining in Canadian Arctic, Alaska, and Russia. Significant decline (75%) shown for S. m. sedentaria breeding in Belcher Is. likely result of a large winter die-off due to freezing of polynyas and open water-floe edges in 1991–1992 (Robertson and Gilchrist 1998). Hudson Bay population recovering. Farther south, in e. North America, subpopulations of S. m. borealis may be in decline (based on kill/hunter day in Goudie 1989b), whereas subpopulations of S. m. dresseri appear stable in the Maritimes (Erskine and Smith 1986) and St. Lawrence estuary

Evolution and Systematics:

Evolution: The species has been reported as fossil from Ireland, Scotland, Norway, Denmark, and Alaska, dating to the Pleistocene.

Systematics: More than 1 species may exist within Common Eider as currently classified. Pacific-Bering region birds distinct morphologically and genetically, and geographically most isolated; recognition at species level recommended by Livezey

Number of Species: LOOK AT SPECIES RICHNESS

Number of Genera: LOOK AT SPECIES RICHNESS

Physical Characteristics:

Size and Length: Length: 19.7-28.0 in (50-71.1 cm) Weight: 45.9-92.1 oz (1300-2611 g)

Wingspan: 37.4-38.6 in (95-98 cm)

Coloration: **Male Description**: *Breeding (Alternate) Plumage:* Back, face, and chest white. Sides, belly, and tail black. Black cap. Nape greenish, sometimes with greenish line below eye. White patches on flanks. Extensive white in wings. Bill gray-green, yellow, or orange. *Nonbreeding (Basic) Plumage:* Overall dark brown to blackish. Pale brown stripe through eye. Breast brown with white flecking. Back feathers white with black edges. **Female Description**: Brownish all over with black barring, especially on sides and flanks. Dark speculum in wing outlined in white. Bill pale greenish gray to olive green or dark gray. **Immature Description**: Immature female like adult, except darker and duller, without white at front of speculum. Immature male brownish black with varying amounts of white at base of neck and breast, usually with some white on back, head mostly dark.

General Body Features: Large, stocky duck. Distinctive wedge-shaped head with long bill. Finds food using the surface diving method.

Special Features of the Body: NONE, USE GENERAL

Special Features of the Head and Sensory Organs: NONE, USE GENERAL

Dentition: Lamellae and Gizzard

Special Features of the Limbs and Digits: NONE, USE GENERAL

Any Special Internal Anatomy: NONE, USE GENERAL

Sexual Dimorphisms: CHECK COLOR
Differences Between Juvenile Stage and Adult: CHECK COLOR
Behavior:
Diurnal, Nocturnal, or Crepuscular: Diurnal
Activity: Generally, alternate between feeding and resting bouts averaging 20–30 min each (Ydenberg and Guillemette 1991); 56–57% of daylight may be spent in feeding in winter (Goudie and Ankney 1986, Guillemette 1998). As daylight decreases and/or environmental conditions worsen, may decrease proportion of days spent feeding (Goudie and Ankney 1986). Probably feeds to capacity during feeding bouts and, in part, resting bouts permit processing of food through muscular gizzard (Guillemette 1994, Guillemette 1998). At colony sites, more time spent in court-ship and pair-bond maintenance leading up to nesting activities. While molting, males spend considerable time resting (24.6–49.4%), swimming (16.0–25.2%) and in comfort behaviors (10.6–21.4%); only 20.9% of time spent foraging (Frimer 1995b). Aggressive behaviors rare, usually <1% of activity.
Locomotion:
Walking
Well-balanced gait when walking on land. Similar to Harlequin Duck and unlike scoters; Common Eider's legs more centrally located, permitting a balanced walk—even running—where head and neck may be held outstretched and low to ground (e.g., hens escaping from nesting cover). Rarely leaves water in winter, but this becomes more frequent as spring progresses. In spring, females arrive in colonies with considerable energy reserves, and their gait may be more labored than later on.
Flight
Strong, steady. In flocks; commonly fly in long strings at right angles to lines of flight; or curved or swept back, less often in wedges (with 1 side generally much longer than other), sometimes in fairly open groups. An approaching or receding string has a kind of rippling or undulating movement, unique to eiders. Wing motion comparatively slow; at times, flapping interrupted by short glides.
Swimming And Diving
Strong swimmers; when eager to reach shallow water to feed, water crests along edge of breast of advancing individuals. In se. Newfoundland, spent 21.3% of day swimming. Usually feeds in groups (up to thousands) but occasionally alone. Generally feeds by diving, at depths <10 m. Dives average <60 s but can be considerably longer. Length of resting period disproportionately longer with increasing length of dives.
Communication and Perception: Calls hoarse, grating and cooing sounds.
Home Range: No defense of a definitive area, but frequent conflicts when pairs happen to come close together on water or land; hence territory is moving space around pair. Both sexes defend pair space, although male generally more actively involved. Females will peck at other hens within reach of nest site.
Degree of Sociality: Generally a colonial nester with high densities reaching 100–400 nests/ha (Chapdelaine et al. 1986b). Nests tend to be more dispersed in some races (e.g., S. m. v-nigrum; Johnson et al. 1987d). Females nesting together on same island or mainland promontories tend to initiate their clutches synchronously; these females may be related (Schmutz et al. 1983). Frequently forms large flocks in nonbreeding season, ranging from tens to tens of thousands (Guillemette et al. 1993). Smaller groups may aggregate for roosting on open water. Foraging flocks form in response to clumped food resources (Guillemette et al. 1993). Dense compact flocking during winter may aid in heat conservation and in some cases help maintain open water leads during cold winter nights in the north. Molting aggregations can be quite large, especially for males. Concentrations of females with broods may be substantial in certain areas where rearing habitat near nesting colonies is extensive.
Level of Aggression: Fights rare and confined to breeding period, when drakes may occasionally fight and beat each other with their wings. Males, especially in groups, may actively pursue unattended females, including underwater chases following dives. For the most part, however, males do not behave aggressively toward females, but occasionally a male may break away from a displaying group and pursue a female across surface of water with lowered head and outstretched neck. Chases by males may also ensue when other pairs come too close together.
Migration: Short- to medium-distance, partial migrant. Some populations entirely sedentary, while others exhibit both regular migratory movements and facultative movements induced by advancing pack ice and freeze-ups in northernmost portion of winter range. South of Canada, most migrate along Atlantic and Pacific Coasts; very rarely on Great Lakes and appears only accidentally at other inland locations. Nonbreeders (immature) summer within portions of winter range.
Predators:
Predators: Large gulls, Ravens (Corvus corax), American Crows (Corvus brachyrhynchos), and jaegers most significant predators; most damage inflicted on eggs and downy young.

Anti-Predator Defenses: NONE, USE GENERAL

Diet and Nutrition:

Adult Diet: Aquatic invertebrates, especially mollusks, crustaceans, and sea urchins.

Juvenile Diet: Benthic invertebrates, especially intertidal and subtidal mollusks but also crustaceans and echinoderms. Food **preferences may change with age and season**; e.g., young select more readily digestible items (e.g., gastropods and amphipods; Cantin et al. 1974), and molters may opt for higher-energy food. Diet almost entirely animal, generally mollusks and crustaceans (Cottam 1939, Palmer 1976). Vegetable matter thought to be taken incidentally. Prefers blue mussels (Mytilus edulis) throughout much of its subarctic range but other mollusks (e.g., Macoma spp., Modiolus modiolus, Littorina spp., Thais spp.) are important

Special Adaptations for Getting Prey: Feeds by diving and "picking" food from bottom (epibenthos) with strong chisel-shaped bill (Goudie and Ankney 1986). Wings held partially open during dives and aid in propulsion and maneuvering while individuals use their large webbed feet. Rises to surface unaided by wings or feet. Most prey items brought to surface for handling and swallowing (Guillemette et al. 1992), although small prey items assumed to be swallowed underwater.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: At least seasonally monogamous (Spurr and Milne 1976a). Once incubation commences, drakes await return of hens to waters near colony, and may display toward and consort with females other than their mate. Trio bonds (2 males and 1 female, 2 females and 1 male) have been described.

Mating Season: Mid-March to Late May

Courtship: Male displays commence in fall and may not be directed toward a particular female. Displays includes much upward tossing of head, cooing, neck-stretching, and ritualized wing-flapping by drakes. Copulations common in fall–early winter and occasionally throughout winter, presumably to reinforce pair bonds. Courtship activities in flocks generally more frequent under calm weather conditions. In spring, and especially near nesting locations, flocks may be active and noisy. More displays performed at flood tides, while individuals are resting and preening

Territoriality: NONE

Mating: May occur at intermittent times throughout year (but peaks before egg-laying). Female generally assumes a Prone Posture on water (neck stretched forward) while male swims around her performing a variety of displays including Mock-preening, Neck-stretching, Shakes, Head-rolls, and, to a lesser extent, Wing-flapping and Head-turning. Cooing Movements rare and influenced by presence of other birds nearby. Male mounts female; may last just a few seconds. Male dismounts and assumes an upright alertlike posture and performs a Cooing Movement (3). He proceeds to swim in vicinity of his mate while performing a Head-turning Display. Female may initiate similar postcopulatory behaviors, but more often begins to bathe at once. Especially after unsuccessful copulation attempts, female may chase or threaten male

Nesting: A scrape on the ground, usually near water, lined with vegetation and down from the female.By females only. Reuse of previously used site, or nearby, is the norm. On first visit to site, female uses bill to churn up old material in depression; this permits air circulation and drying. During formation of a new nest, female squats on ground, pushing downward with her breast and scraping backward with her feet; by rotating in this posture, she forms a circular hollow.

Egg-Laying: Clutch Size: 3-8 eggs Number of Broods: 1 brood Egg Length: 3.0-3.1 in (7.55-7.84 cm) Egg Width: 1.9-2.1 in (4.92-5.28 cm) Incubation Period: 24-26 days Egg Description: Olive or greenish, usually unmarked.

Hatching and Incubation/Gestation: Covered in down and able to leave the nest soon after hatching. Precocial. Fully covered with down and eyes open at hatching. Leave nest about 24 h after hatching and feed themselves while maintaining close association with hen.

Development: Accelerated growth that levels off to approximate adult body mass at about 10 wk of age (Pethon 1967). Fledging varies with individuals, but probably averages 60–65 d (Palmer 1976). Ducklings hatched from larger eggs are larger up to 12 d of age (Erikstad et al. 1998). Mass at 12 d, fed ad libitum, 300–350 g (Erikstad et al. 1998). Ducklings with above average body masses more likely to survive to recruitment (Christensen 1999).

Parental Care: Mothers lead young to water and may be accompanied by other (nonbreeding) hens (so-called "aunts"). When approached on land by gulls, mother assumes defense posture: wings open and tail spread, head pointed toward predator and moves up and down repeatedly. Young rush under her and she may settle over them; "aunts" may also adopt same posture. Broods often amalgamate to form crèches that average 20–30 young, but there may be fewer or even >150 ducklings. Once formed, crèches tend to be stable throughout brood-rearing period.

Lifespan: Common Eiders can live 20 years, one of the longest lifespans among sea ducks. However, the expected lifespan for eider populations which are heavily harvested may be much shorter.

Conservation:

Official Federal Status: Near Threatened
Special Statuses in Individual States: NONE
Threats: Market hunting reduced southern populations of Common Eider in the Atlantic to near extinction by the end of the 19th century. Currently populations are healthy, though Arctic populations are declining. They are not on the 2014 State of the Birds Watch List. Degradation of habitat, disturbances at nesting, down collecting, contaminant/toxins, shooting.
Conservation Efforts: Status of sea ducks is currently of conservation concern as most populations are in long-term decline and some are listed under endangered-species programs. This concern, however, has not changed management approaches to most sea duck populations; the group remains subjected to increasing hunting kill and extremely liberal hunting regulations. Especially in Atlantic Flyway, hunting of eiders has increased recently, as other waterfowl seasons (notably Black Ducks) have become more restrictive. Current hunter harvest levels are poorly measured, and on some of those, stocks probably not sustainable.
Extra Facts: The Pacific form of the Common Eider is distinct genetically and morphologically from the other forms, and may be a different species. The male has a thin black V on its chin and a bright yellow or orange bill.
Mother Common Eiders lead their young to water, and often are accompanied by nonbreeding hens that participate in chick protection. Broods often come together to form "crèches" of a few to over 150 ducklings. Attacks by predators may cause several broods to cluster together into a crèche. Once formed, a crèche tends to stay together throughout the brood rearing period, although some of the different females attending it may leave.
The oldest recorded Common Eider was a male, and at least 22 years, 7 months old, when he was found in eastern Canada.
Notable Species:
S. m. mollissima (Linnaeus, 1758)
(European eider)
S. m. faeroeensis C. L. Brehm, 1831
(Faeroe eider)
S. m. v-nigra Bonaparte and G. R. Gray, 1855
(North Pacific eider)
S. m. borealis (C. L. Brehm, 1824)
(North Atlantic eider)
S. m. sedentaria Snyder, 1941
(Hudson Bay eider)
S. m. dresseri Sharpe, 1871
(American eider)