SURF SCOTER - MELANITTA PERSPICILLATA

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Anseriformes Family: Anatidae Genus: Melanitta Subgenus: Melanitta Species: M. perspicillata

Habitat:

Biomes: Surf Scoters nest in some of the wildest parts of North America, in what's known as the taiga shield ecotone in northern Canada and Alaska. Here, the boreal forest begins to blend with the tundra in a patchwork of wetlands, lakes, tundra, forests, shrublands, and meadows. On the abundant medium-sized (25-acre) shallow lakes here, Surf Scoters nest at wetland edges and rear their broods on lakes with few predators (avoiding the large fish found in deeper lakes), shelter from wind, and plentiful food for ducklings. Where lakes abound, a female and her brood might use several adjacent water bodies. During the remainder of the species' life cycle, it is a bird of the ocean coasts, found usually in shallow waters close to land, although roosting flocks at night often move several miles offshore in good weather. Storms sometimes send flocks into sheltered bays and inlets in larger numbers, and bird watchers seeking migrants in the continent's interior are most apt to find them during foul weather (rain with fog or low ceiling is ideal).

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

Distribution:

In US: Unlike White-winged and Black scoters, the Surf Scoter is indigenous to North America; no populations in Eurasia. In Canada, this duck breeds from the Mackenzie River delta southeast across the central Mackenzie River, s. Nunavut and n. Manitoba.

In Other Countries: Most frequent Nearctic duck in nw. Europe; apparently increasing in occurrence on the eastern side of the Atlantic. Casual migrant in Greenland, the Faeroe Is., Ireland, Britain, France, Sweden, Finland, and e. Siberia. Accidental in Hawaii, Iceland, Norway, Denmark, Belgium, Netherlands, Poland, Spain, Switzerland, Czechoslovakia, and Japan

Holistic Description: The black-and-white patches on the heads of male Surf Scoters prompted this sea duck's nickname "old skunkhead," although the big, sloping orange bill is at least as distinctive. In winter, look for these dark-bodied ducks (and the browner females) near to shore, defying ocean waves with a quick dive just before they break. They breed in far northern Canada and Alaska, where the boreal forest gives way to open tundra.

Species Richness: There are no subspecies, but note that Anas latirostris Boddaert, 1783, and Pelionettatrowbridgii Baird, 1858, are junior synonyms of Melanitta perspicillata

Population Dynamic: Appreciable continental declines, although some evidence that populations have stabilized since the ~1990s. However, caution is required in interpreting population data, since most surveys are not well adapted for estimating Surf Scoter numbers. Better estimates clearly are needed in many parts of the range. All figures below are for Surf Scoters unless otherwise noted.

Evolution and Systematics:

Evolution: Earliest fossil species in the genus Melanitta is M. ceruttii from the late Pliocene of the San Diego Formation, San Diego Co., California. M. ceruttii is a scoter smaller than the three extant species. Four specimens of Surf Scoter were found at Old Crow River, oldest from presumed Sangamon Age.

Systematics: NONE

Number of Species: LOOK AT SPECIES RICHNESS

Number of Genera: LOOK AT SPECIES RICHNESS

Physical Characteristics:

Size and Length: Length: 18.9-23.6 in (48-60 cm) Weight: 31.8-45.6 oz (900-1293 g)

Wingspan: 29.9-30.3 in (76-77 cm)

Coloration: Adult males are jet black with orange, white, and black bill and white patches at the nape, forecrown, and base of the bill. Females are dark brown with dark gray bills and usually show two patches of white on the face.

General Body Features: NONE, USE GENERAL

Special Features of the Body: Bill large, slightly swollen on top and more or less on sides near base, truncated on sides, with black feathering extending on culmen to nearly over nostrils; bill multicolored, patterned with white, red, yellow, and a black patch near base, appearing mainly orange at a distance.

Special Features of the Head and Sensory Organs: IRIS: In adult male pale blue-gray, yellowish white, or white; in adult female usually pale gray, brownish gray, or yellowish. In hatchlings and during first cycle iris brown, becoming whitish in males and grayish in females at age 6-12 mo

Dentition: Lamellae and Gizzard

Special Features of the Limbs and Digits: In adult male, legs and feet reddish orange, with dusky webs. In adult female, legs and feet yellow to brownish red, with dull black webs. Legs and feet in first cycle birds like female but duller, the feet more yellow; become brighter reddish in males at age 6-12 mo. In ducklings, legs and feet more-or-less uniformly blackish brown.
Any Special Internal Anatomy: NONE, USE GENERAL
Sexual Dimorphisms: Check coloration, males are slightly larger as well.
Differences Between Juvenile Stage and Adult: Juvenile: young males pale brown, with white patch behind eye, red bill with white and black markings; young females light brown, with faint patches similar to adult, bill grey.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal
Activity: Surf Scoters begin courtship and pairing in their wintering areas, near shore. The male swims back and forth with head erect (the "sentinel posture"), occasionally dipping the colorful bill in the water. He then faces a female, shaking his head, preening his breast and giving a gurgling call. He rears up out of the water with head back. Males also make short flights around the female, raising both head and wings vertically when landing near her. A female inclined to respond might perform a "chin-lift" display, in which she tilts her head upward and gives a raspy crowing call. The male responds in kind, also raising his tail and shaking his head, then turns away with his white nape patch raised. As with other ducks, many males may display to a female simultaneously. Migrating, molting, and wintering Surf Scoters form large flocks that can sometimes be heard for miles on calm days, as their wings produce pleasant whistling sounds.
Locomotion: Compared to other scoters, seldom flies in line and generally more agile. Flight less heavy than that of White-winged Scoter; more like flight of Black Scoter. Flies low over water in everyday movements, but to considerable heights during migration. Uses feet to help maneuver during courtship flight
Communication and Perception: Courting males give a gurgling call, a guttural croaking, and a popping puk-puk. Female give a harsh crowlike crahh during courtship and when defending ducklings.
Home Range: Male defends only a moving space around the female. Defense is irregular, and space defended is quite variable. Pairs sometimes associate temporarily without interactions. Unpaired birds are excluded from near the female. Both males and females participate in expelling conspecifics, although males are most often involved. Aggression of males is also directed toward strange females. Pairs tend to stay at 1 location for days at a time, but no territory as such is defended. Broods show a similar type of spacing, but can be quite tolerant of other broods. They also concentrate their activities in particular locations for days at a time and are not territorial.
Degree of Sociality: Breeders are usually spaced as pairs on lakes, although groups of pairs are sometimes observed. Males regroup in small flocks (2–10 birds) once incubation has started and then quickly leave breeding areas. Unsuccessful breeding females associate in small groups; some associate temporarily with broods (a few seconds at a time), but occasionally may be aggressive toward young. A female attending a brood often does not tolerate other females. Young are very social, leading to brood-mixing and sometimes to partial or complete brood amalgamation
Level of Aggression: Occurs in large flocks, in courtship parties, and between pairs on non breeding sites, breeding lakes, and during brood-rearing. Interactions in large flocks are still unquantified and poorly described, but include threats and rushes. On breeding lakes and marine sites, paired males threaten and attack unpaired males that approach their mate too closely, and females often do the same. Similar types of interactions occur in courtship parties in which several males compete for the attention of a single female. Small fights between males break out occasionally.
Migration: Complete, medium-distance migrant, traveling from breeding areas in n. Canada and Alaska to wintering areas mainly along the Pacific and Atlantic coasts. Cross-continental migration has been speculated; satellite telemetry has not revealed bi-coastal migration, but does indicate some overlap for Pacific and Atlantic coast birds in (1) breeding areas in e. Northwest Territories and n. Manitoba, and (2) molting areas on Hudson Bay coast in n. Manitoba/s. Nunavut (Perry et al. 2006; Takekawa et al. 2011; Sea Duck Joint Venture 2014a; J. R. Evenson, Washington Dept. of Fish and Wildlife, unpubl. data). Most sub-adults likely move directly from wintering or spring staging sites directly to molting sites, but this needs assessment.

Predators:

Predators:
Eggs. No detailed studies, but potential nest (egg) predators include American mink (Neovison vison), red fox (Vulpes vulpes), American Crow, and Common Raven (C. corax).
Ducklings. No detailed studies, but Common Loons occasionally prey on ducklings (JPLS). For White-winged Scoter ducklings, intense predation by gulls (Larus spp.) was likely the main factor affecting survival (Traylor and Alisauskas 2006).
Adults. For marine habitats, reviewed predator diet studies and used field observations to identify that the following species prey on live Surf Scoters: Bald Eagles (Haliaeetus leucocephalus), orcas (Orcinus orca), Steller sea lions (Eumetopias

jubatus), sea otters (Enhydra lutris), and American mink. Potential predators include Snowy Owls (Bubo scandiacus) and river otters (Lontra canadensis), because Surf Scoter remains were found in association with feeding sites of these species.
Anti-Predator Defenses: When Common Loons are present, females with broods are disturbed and lead their brood toward shallow water. Females have been observed decoying loons away from their young (JPLS). In marine habitats, often dives to evade aerial predators, including mainly Bald Eagles (Haliaeetus leucocephalus). Rapid scattering of flocks may be a reaction to underwater predators.

Diet and Nutrition:

Adult Diet: Along sea coasts, Surf Scoters prey on benthic invertebrates—creatures near or on the sea floor. Small mollusks, especially mussels and clams, form a large part of the diet, as well as marine snails, small crabs, sea squirts, hydrozoans (related to jellyfish), various marine worms, and (particularly in the Pacific) herring spawn. They also consume aquatic vegetation. During the breeding period, adults and ducklings eat freshwater invertebrates, including insects, and some plant matter.
Juvenile Diet: ^^^
Special Adaptations for Getting Prey: Food is captured mainly underwater, and consumed whole (i.e., with shells). Observations of feeding at or above waterline are rare and mainly entail juveniles feeding at low tides, sometimes on artificial structures, and in one reported case while hauled out 1.5 m above waterline on a rocky reef.

Reproduction:

Mode of Reproduction: Monogamous
Mating System: NONE
Mating Season: Mid-March to Late May
Courtship: Courtship displays have been described in other research. Male adopts a Sentinel Posture (swims to and fro rapidly, neck erect, at intervals dipping bill in water), and facing female, performs Breast-scooping Display—a combination of lateral head-shaking and breast-preening movements, accompanied by “liquid gurgling call.” One display that is apparently not found in other scoters is the Chest-lift, in which a bird rapidly throws back its head and raises its chest out of the water. Fly-away Display is similar to Short Flights of Black Scoters: while landing, stretches neck upward and raises wings momentarily into Wings-raised-upward Posture (both wings extended vertically).
Territoriality: NONE
Mating: Main male precopulatory displays are Water Twitch (dipping of bill while shaking head laterally), Preen-behind-the-wing (most frequent), and False Drinking (Myres 1959a). In the Prone Posture, the female lies flat, with her neck below water and bill upward (Myres 1959a); does not maintain this posture long (< 2 min). Male mounts female slowly, with a single flick of the wings. Upon dismounting, male may lift chest suddenly and briefly; he performs no other movements. Female may sometimes stretch upward and flap wings
Nesting: Nests are usually well concealed on the ground beneath vegetation (tree branches, fallen trees) or rocky ledges, a short distance from a lake but generally well upland from marsh vegetation. The female shapes a nest bowl and adds her own down feathers and plant matter such as mosses, grasses, needles, twigs, and bark from spruce and fir. Nests measured in Quebec averaged 12 inches across, with the interior of the bowl 6.7 inches across and 2.4 inches deep.
Egg-Laying: Clutch Size: 6-9 eggs Number of Broods: 1 brood Egg Length: 2.5-2.7 in (6.4-6.8 cm) Egg Width: 1.8-1.9 in (4.5-4.8 cm) Incubation Period: 28-30 days Egg Description: Creamy white.
Hatching and Incubation/Gestation: Downy and eyes open. Leave nest soon after they dry. Feed themselves immediately. Precocial and downy. Down is sooty brown, with silvery gray below and indistinct grayish white cheek-patch.
Development: Rapid growth; mass increases 18-fold in 55 d, from about 44 g to 817 g
Parental Care: Female leads young to food-rich wetlands. Young feed independently upon reaching water. At Lake Malbaie, females with broods preferred areas with water depths < 2 m and where islands or wooded shorelines offered protection from dominant winds; these factors reduced wave amplitude, which may have facilitated feeding by ducklings
Lifespan: 9.5 years

Conservation:

Official Federal Status: Least Concern
Special Statuses in Individual States: NONE
Threats: There is little information on Surf Scoter population trends. Partners In Flight estimates the global breeding population at 470,000 and gives the species a 13 out of 20 on the Continental Concern Score, indicating it is a species of low conservation concern. Surf Scoters are common, but populations may be declining owing to degradation of habitat, oil spills, and heavy metal or organochlorine pollution. Like other ducks, Surf Scoters are hunted. In the mid-2010s, a total of around 46,000 scoters (including Surf, Black, and White-winged) were taken by hunters each year in the U.S., according to the U.S.

Fish and Wildlife Service; studies in the 2000s indicated about 20,000 Surf Scoters were shot each year. Scientists expect that birds such as Surf Scoter that nest in the high latitudes will be severely impacted by global climate change in the near future, owing to seasonal mismatches in snowmelt and prey emergence.

Conservation Efforts: ^^^

Extra Facts:

Surf Scoters are "molt migrants," meaning that after nesting, adults fly to an area where they can molt their flight feathers. They briefly become flightless before continuing to their wintering range, and molting areas provide some protection from weather and predators. These spots include sheltered waters from southeastern Alaska to Washington's Puget Sound, and Quebec and New Brunswick.

Surf Scoters breed on freshwater lakes, where the male defends a moving area around the female. The female with a brood is not territorial.

On crowded lakes, young Surf Scoters often switch from one brood to another. Because the mother provides no parental care other than guarding the chicks, evolutionary selection against such mix-ups may not be very strong.

Some Surf Scoters (mainly immature) skip the summer trip north to breeding grounds, and hang around bays and estuaries southward to Baja California or New Jersey.

The oldest recorded Surf Scoter was a male, and at least 11 years, 7 months old when he was found in Maryland in 2015. He had been banded in the Newfoundland/Labrador area in 2004.