

Key Site 64: South Shore, Nova Scotia

Location: 43°45'41"N, 64°56'17"W

Size: 1357 km²

Description: Nova Scotia is the easternmost province in Canada's Maritime Provinces, bordered by the Gulf of Maine to the southwest and the Atlantic Ocean to the south and east. The South Shore key habitat site is located on the south shore of Nova Scotia, extending from Shag Harbour in the south, northeast to Port Medway. It encompasses coastal areas, islands, and many estuaries, harbors, and bays around Cape Sable, Barrington, Lockeport, Port Mouton, and Liverpool. Several rivers flow into the area, including the Barrington River, Clyde River, Roseway River, Sable River, Tidney River, Mersey River, and the Medway River.

Precision and Correction of Abundance

Estimates Presented: Abundance estimates presented for this key habitat site have been adjusted to account for incomplete detection, either by applying species-specific visibility correction factors (VCF) estimated for surveys specific to this area, or from VCFs estimated from other similar areas and surveys (Canadian Wildlife Service unpublished data, Nova Scotia Department of Lands and Forestry unpublished data).

Biological Value: This site is predominantly important to molting American Common Eider (*Somateria mollissima dresseri*) from August to early September and to overwintering Eastern Harlequin Ducks (*Histrionicus histrionicus*).

Common Eider: Common Eider can be found on Nova Scotia's Atlantic and Bay of Fundy coasts throughout the year. During the breeding season, eiders nest in colonies along marine coasts, primarily on islands, islets, and narrow points of land (Goudie et al. 2000). Nesting islands are typically uninhabited by people and have rocky shorelines (Milton et al. 2016). During July and August, while females incubate, males congregate in large molting flocks along the Atlantic coast (Milton et al. 2006) primarily in the general area of nesting colonies, although farther offshore (Goudie et al. 2000). Fall migration occurs in October and November and peak abundance of eiders is reached by mid-December (Goudie et al. 2000). Adults forage primarily on benthic



invertebrates, including intertidal and subtidal mollusks (especially blue mussels, *Mytilus edulis*), crustaceans, and echinoderms (Goudie et al. 2000).

During the molting period, the number of Common Eiders at the site exceeded 20,000 birds in 2001 and 2002. A total of 21,045 and 23,730 birds were detected in August and September 2001, respectively, between Clark's Harbour and West Berlin. Photo-interpreted counts from an August 2002 aerial survey detected 38,830 birds, of which less than 1.5% were female (Milton et al. 2006). This represents between 7% and 13% of the continental population of American Common Eider in 2001 and 2002, respectively (NAWMP 2012). During the molting period, flocks of eiders are fairly evenly distributed throughout the site, with the highest concentrations of eiders variable annually but usually focused in offshore areas between Clark's Harbour and Kejimikujik National Park Seaside Adjunct. There has been a considerable decline in eider abundance at the site since 2002, with 11,275 birds detected in August 2008 and between 200 and 4415 birds

between 2014 and 2017 (Canadian Wildlife Service unpublished data, Nova Scotia Department of Lands and Forestry unpublished midwinter survey data).

Common Eider winter at the site between December and April (eBird 2019), and winter (January to March) eider surveys by the Canadian Wildlife Service and Nova Scotia Department of Lands and Forestry have detected between 645 and 5381 overwintering eiders (Canadian Wildlife Service unpublished data, Nova Scotia Department of Lands and Forestry unpublished midwinter survey data).

Harlequin Duck: Harlequin Ducks breed in only a very small number of rivers in the Maritime Provinces (Stewart et al. 2015) and no molting sites have been found here (Boyne 2008); however, a third of the eastern North American population winters in Nova Scotia and New Brunswick (Boyne 2008). During this period, birds use shallow, coastal rocky shorelines at exposed headlands and over subtidal ledges, where suitable prey (primarily marine invertebrates including crabs, amphipods, and gastropods) is found. They may also use boulders, rocks, and shorelines as haul outs (Robertson and Goudie 1999). Birds primarily stay very close to shorelines but can roost on open water farther from shore at night (Robertson and Goudie 1999).

Winter occupation by Harlequin Duck has been documented in the region since at least the 1960s (Boyne 2008), but surveys primarily since 1994 by boat, plane, and helicopter have identified a number of locations at which birds regularly congregate between December and April (Bird Studies Canada 2015, Canadian Wildlife Service unpublished data, Nova Scotia Department of Lands and Forestry unpublished midwinter survey data, Gutowsky et al. 2019) ([Appendix 1](#)).

January through March surveys of the Little Port L'Hebert site by boat and helicopter between 2002 and 2019 have detected at least 78 Harlequin Ducks per survey (Canadian Wildlife Service unpublished data, Nova Scotia Department of Lands and Forestry unpublished midwinter survey data). A maximum of 224 birds was detected on March 6, 2013, representing approximately 5.6% of the continental population (NAWMP 2012). Because aerial surveys may cause birds to flush early, stay close to shore, and flock in tight groups, they tend to underestimate bird abundance (Boyne 2008); therefore, maximum abun-

dance at this site is likely higher. The highest concentrations of Harlequin Duck occur from Hardings Island to L'Hebert Rocks and around Ram Island.

Other species. Other sea duck species found here uncommonly during August and early September include Hooded Merganser (*Lophodytes cucullatus*), Common Merganser (*Mergus merganser*), Red-breasted Merganser (*Mergus serrator*), Surf Scoter (*Melanitta perspicillata*), Black Scoter (*Melanitta americana*), and White-winged Scoter (*Melanitta deglandi*) (Bird Studies Canada 2015, eBird 2019). Other species found here in winter include Surf Scoter (*Melanitta perspicillata*), Black Scoter, White-winged Scoter, Long-tailed Duck (*Clangula hyemalis*), Bufflehead (*Bucephala albeola*), Common Goldeneye (*Bucephala clangula*), Common Merganser, Red-breasted Merganser, and rarely, Barrow's Goldeneye (*Bucephala islandica*) and Hooded Merganser (Bird Studies Canada 2015, eBird 2019).

Sensitivities: Waterfowl are sensitive to human disturbance, particularly small vessel or ship traffic, during winter periods. Food resource availability and quality could be influenced by industrial, urban, and agricultural pollution and invasive species. Because Common Eider aggregate in dense flocks, they can be susceptible to hunting pressure, disease, predation, oil spills, vessel collisions, and pollution.

Potential Conflicts: Commercial fisheries, aquaculture, and rock weed harvesting might reduce habitat quality and quantity. Harvest in Nova Scotia has declined dramatically from 10,000 to 15,000 Common Eiders in the early 1990s to fewer than 1000 per year since 2011 (Canadian Wildlife Service 2017), but harvest along the Atlantic coast is still above a sustainable limit at approximately 18,000 annually (2011 to 2014 average; Canadian Wildlife Service 2017). Disturbance associated with small vessel and ship traffic remains a potential conflict. Chemical and oil spills and water contamination from several sources, including shipping, urban, industry, and agriculture, might be of concern. Coastal development could reduce habitat quantity and quality in near-shore areas. For example, Little Port L'Hebert is currently undergoing heavy summer home development. Common Eider food availability is a growing concern as large declines in blue mussels (*Mytilus edulis*) have been reported in the Gulf of Maine (Sorte

et al. 2016). High mortality of female Common Eider at breeding islands within the site could be caused by high rates of mammalian and avian predators, some of which is the result of human activity such as mink farm escapes (Milton et al. 2016). Despite a ban on hunting of Harlequin Ducks, some are still shot by hunters who misidentify birds as other species or lack vigilance when hunting.

Status: This area is part of Bird Conservation Region 14, Atlantic Northern Forest, and Marine Biogeographic Unit 11, Scotian Shelf and Bay of Fundy (Environment Canada 2013). The site intersects four Important Bird Areas: Eastern Cape Sable Island, South Shore (Barrington Bay Sector), South Shore (Roseway to Baccaro), South Shore (Port Joli Sector), and Kejimikujik National Park Seaside. It is adjacent to the Bon Portage Island Important Bird Area. The site also intersects five Ecologically or Biologically Significant Areas: Port Joli and Surrounding Areas, Green Point to Ram Island, Southwest Scotian Shelf, Cape Sable Island, and Medway Harbour (Hastings et al. 2014).

Numerous protected areas lie within or immediately adjacent to the site, including six land trusts or conservation easements, one national park, two nature reserves, and five provincial parks.

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American Common Eiders. Photo: Tim Bowman.