

## Key Site 29: Northeast James Bay and Adjacent Coastal Lowlands, Quebec

**Location:** 54°29'40"N, 79°27'31"W

**Size:** 5463 km<sup>2</sup>

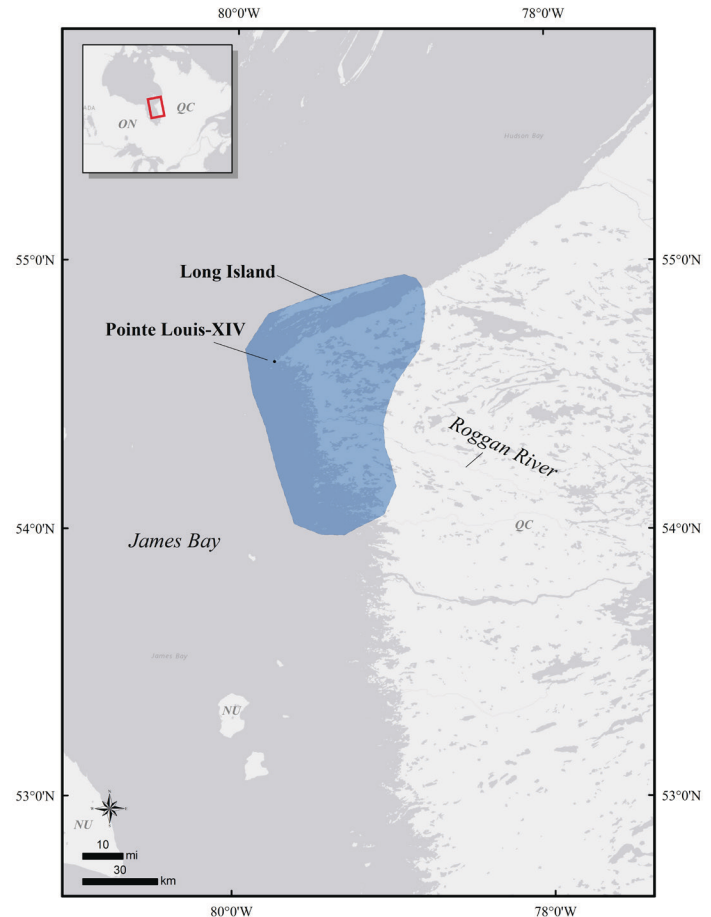
**Description:** Northeast James Bay, located in southeastern Hudson Bay, encompasses numerous bays, islands, and nearshore waters from the Piagochioui River to the east end of Long Island and Long Island Sound. It includes Pointe Louis-XIV (or Cape Jones) as well as a 20 to 35 km wide terrestrial stretch along the coast composed mainly of lowland taiga (open deciduous forest) in the south and tundra shrub habitat in the north, with salt marshes along the coast and numerous ponds, lakes, and rivers in the interior.

### Precision and Correction of Abundance

**Estimates Presented:** Abundance estimates presented for this key habitat site have not been adjusted to account for incomplete detection or other biases. Abundance estimates should, therefore, be treated as minimum estimates.

**Biological Value:** This site is important to sea ducks during migrations, for breeding, and for molting. During spring migration, Black Scoters (*Melanitta americana*), Surf Scoters (*Melanitta perspicillata*), White-winged Scoters (*Melanitta deglandi*), and Long-tailed Ducks (*Clangula hyemalis*) transit through the site for a short stay, mostly in May (Reed et al. 1996, SDJV 2015, Lamb et al. 2020). Other sea ducks observed during spring migration, but in smaller numbers, include Common Goldeneye (*Bucephala clangula*), Common Merganser (*Mergus merganser*), and Red-breasted Merganser (*Mergus serrator*) (Reed et al. 1996).

During the breeding season, more than 500 Common Eiders (*Somateria mollissima sedentaria*) also breed there, mostly dispersed in small colonies (typically having less than about 20 nests) on several of the islands in the area (Reed et al. 1996, Benoit et al. 1993). According to Curtis and Allen (1976), during the 1970s as many as a few thousand Common Eiders and Long-tailed Ducks, some of which were nonbreeders, were present from breakup until freeze-up, with both species nesting on islands in the area. The coastal and interior lowlands (tundra shrub habitat) are an important breeding area for scoters and Long-tailed Ducks (Benoit et al. 1993, Lamb et al. 2020, Lepage et al. 2020). The terres-



trial section between the Roggan River and Pointe Louis-XIV is an important area for breeding White-winged Scoters in eastern Canada (the majority of the species' known breeding range occurs primarily west of Hudson Bay); breeding densities are as high as 67 indicated breeding pairs per 100 km<sup>2</sup> or approximately 1700 pairs (Benoit et al. 1993). Other breeding sea ducks include Surf Scoter, Bufflehead, Common Goldeneye, and Red-breasted Merganser; most of these species build their nests next to ponds and lakes (Benoit et al. 1992, 1993, 1994) whereas Common Mergansers nest mostly along rivers (Benoit et al. 1994). Breeding density for all sea duck species combined has been estimated at 94 indicated breeding pairs per 100 km<sup>2</sup> or 2200 pairs in the site (Benoit et al. 1993).

Northeast James Bay is also an important molting area for many sea ducks (Lamb et al. 2020). Scoters molt abundantly in nearshore waters of this site: over 35,000 scoters were estimated in the early 1990s (Benoit et al. 1992, 1993, 1994, Reed et al. 1996), with a more recent estimate of about 20,000 scoters on

July 30–31, 2013 (Appendix 1; Badzinski et al. 2013). Because a single survey during molting provides only a snapshot of temporal abundance, it is likely that molting scoters are much more numerous. Satellite telemetry data indicate that this site is used by males and females of all three species of scoters in August and September (SDJV 2015, Lepage et al. 2020, Lamb et al. 2021). Curtis and Allen (1976) reported rafts of males and nonbreeders in July and August, with females and young joining by late August and overall numbers (tens of thousands, primarily Surf Scoters) peaking in September. Scoters use the open water among the offshore islands (Benoit et al. 1991) and eat blue mussels and other bivalves (Benoit et al. 1993). Other sea duck species molting in the marine portion of this site include mergansers (about 7000 individuals, both Common and Red-breasted; Benoit et al. 1994) as well as thousands of Common Eiders (Benoit et al. 1992). Male and female Barrow's Goldeneye (*Bucephala islandica*) from the eastern population (listed as a species of special concern by the Committee on the Status of Endangered Wildlife in Canada) are also thought to molt in coastal salt or brackish waters along this coast and on coastal freshwater lakes (Robert et al. 2002, Savard and Robert 2013), but numbers of birds are unknown. Hundreds of Hooded Mergansers (*Lophodytes cucullatus*), Common Mergansers, Red-breasted Mergansers, and Common Goldeneyes also molt in the coastal environment (including inland lakes; Benoit et al. 1992, 1993). Bufflehead (*Bucephala albeola*) and Common Goldeneye are also present during molt but are less abundant (Benoit et al. 1991, 1992). The Bay of Many Islands (just north of the Piagochioui River), between Rivière au Phoque and Pointe Louis-XIV, and Long Island Sound harbor the greatest number of molting sea ducks (Badzinski et al. 2013).

As many as 100,000 scoters and a few thousand Common Eiders and Long-tailed Ducks staged along the Northeast James Bay coastline during fall in the 1970s (Curtis and Allen 1976). Recent satellite telemetry data confirmed that the site is still used during fall by scoters and Long-tailed Ducks (SDJV 2015, Lamb et al. 2020, Bowman et al. 2021; Appendix 2, Appendix 3, Appendix 4). Sea ducks molting in James Bay may also stage within this site during fall, and many other birds that breed and molt farther north and west use it as a stopover during fall migration (SDJV 2015). Local Common Eiders may overwinter there (Reed et al. 1996).

**Sensitivities:** Human and vessel disturbance can affect flocks of birds, particularly while foraging or during the molting period, and can reduce the breeding success of colonial nesting Common Eiders.

**Potential Conflicts:** Hydroelectric projects on the adjacent mainland could affect the water regime and salinity in portions of James Bay. For example, since construction of the La Grande hydroelectric complex on the La Grande River (about 20 km south of this site) in the late 1970s and early 1980s, there has been an increase in freshwater discharge into James Bay during winter (Messier et al. 1986), which may alter local benthic communities and therefore food availability and have other impacts on the ecosystem. Climate change may also have implications for sea duck habitat and occurrence or abundance within this area. For example, climate change models predict increasing temperature and precipitation for Quebec's Taiga region (Berteaux et al. 2014), which could shift sea duck ranges north, influence prey species and abundance, and increase competition among species for food resources. Increased maritime traffic could increase risks of environmental contamination (e.g., oil spills) and collisions.

**Status:** Wildlife management in coastal waters is shared by the Eeyou and the Nunavik Marine Region Wildlife Boards. This site is part of the Northeast James Bay Coast Important Bird Area because of its importance for migrating waterfowl and shorebirds. This Important Bird Area covers the coastline from the northeastern corner at Pointe Louis-XIV southward to the Vieux Comptoir River (south of Wemindji; IBA Canada website). Part of this key site has also been proposed as a terrestrial protected area by the Quebec government (Réserve de territoire pour fin d'aire protégée: Lac-Burton-Rivière-Roggan-et-la-Pointe-Louis-XIV; MELCC 2021).

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