## Key Site 53: Baie des Bacon-Pointe Lebel, Quebec

**Location:** 48°52'18"N, 68°42'7"W

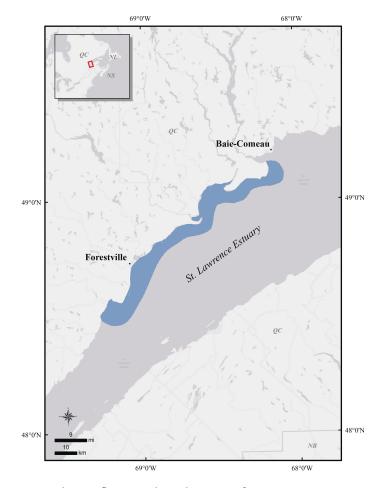
**Size:** 913 km<sup>2</sup>

**Description:** This key site stretches along the north shore of the St. Lawrence Estuary, Quebec, from the Baie des Bacon west to the Pointe Lebel, at the eastern end of the Manicouagan Peninsula. About 140 km long, it extends 5 to 12 km offshore. There are large areas of shoal water over sandy plateaus, including the Baie de Mille-Vaches, the section from Pointe à Boisvert to the mouth of the Portneuf River, the area nearby the Île Patte de Lièvre, the section from Baie des Plongeurs to the mouth of the Betsiamites River, the Papinachois sector, and the Baie aux Outardes.

## **Precision and Correction of Abundance**

**Estimates Presented:** Visual estimates of scoters and eiders from spring and molting surveys (Rail and Savard 2003) have been photo-corrected. Otherwise, abundance numbers presented for this key habitat site have not been adjusted to account for incomplete detection or other biases and should, therefore, be treated as minimum estimates.

Biological Value: This key site hosts tens of thousands of sea ducks during spring staging, molting, and fall staging (Lamb et al. 2020). During spring migration, scoters are by far the most numerous sea ducks transiting or staging. Conservative estimates of 15,000 Black Scoters (Melanitta americana) and 65,000 Surf Scoters (Melanitta perspicillata) can be extrapolated to this key site based on numbers found in a larger survey region in 1998 (Rail and Savard 2003); the sector within the key site with the greatest abundance was observed from Îlets Jérémie to Pointe Lebel, with an estimated 40,000 scoters. Based on estimates from wintering scoter surveys along the Atlantic coast (Silverman et al. 2012), we can estimate that at least 25% of the entire eastern population of Surf Scoters and at least 10% of the eastern population of Black Scoters pass through this key site during spring. The migration in this portion of the St. Lawrence Estuary peaks on May 8 to 10, with Black Scoters passing about a week earlier than Surf Scoters (Falardeau and Savard 2003). There may be spawning sites for Atlantic Herring near the mouths of the Rivière aux Outardes and Manicouagan



River that influence distribution of scoters in spring (MDDEFP 2013). White-winged Scoters (*Melanitta deglandi*), Long-tailed Ducks (*Clangula hyemalis*), and Barrow's Goldeneye also use this key site (SDJV 2015, Meattey et al. 2018, Lamb et al. 2020, Lepage et al. 2020), but numbers are unknown.

About 3500 Common Eiders (Somateria mollissima) and hundreds of Common Goldeneyes (Bucephala clangula), Common Mergansers (Mergus merganser), and Red-breasted Mergansers (Mergus serrator) have also been reported during spring aerial surveys in the key site (Canadian Wildlife Service unpublished data).

The Baie des Bacon–Pointe Lebel key site includes Common Eider (*S. m. dresseri*) breeding colonies on Île Laval (about 1700 nests) and islands in the Ragueneau area (1400 nests) (2020 counts; Duvetnor unpublished data), which together likely represents about 3% of the total *S. m. dresseri* population.

During the molting period, about 10,000 to 12,000 Surf Scoters and 4000 to 5000 White-winged Scoters use the key site (Lepage and Savard 2013). Scoter

abundance is especially high from Pointe à Boisvert to Île Patte de Lièvre and from Cape Colombier to Pointe aux Outardes (Rail and Savard 2003; Lepage and Savard 2013). Nonbreeding male scoters arrive first, as early as June, and there is a build-up of birds with breeding males arriving in July and breeding females arriving from August to mid-September (SDJV 2015; Lepage et al. 2020). Flightless scoters may be found in this key site over a three-month period (Lepage et al. 2020). Black Scoters are seen in very small numbers during that period (Rail and Savard 2003). Common Eiders also molt in the key site: nearly 10,000 birds have been estimated far offshore in the Baie de Mille-Vaches, as well as 3000 birds from Pointe aux Outardes to Pointe Lebel (Rail and Savard 2003). Important areas for hundreds of molting goldeneyes and mergansers occur a few kilometers offshore of the mouth of Rivière aux Outardes and Manicouagan River (J.-P.L. Savard, Canadian Wildlife Service pers. comm.). Two of five radio-tagged female Barrow's Goldeneyes molted at the mouth of the Rivière aux Outardes and stayed there from early August to late October or early November (Savard and Robert 2013).

This key site is also important during fall migration and fall staging (Lamb et al. 2020). For instance, a high proportion of the eastern Surf Scoter population is thought to stage in the St. Lawrence Estuary during that period (SDJV 2015, Lamb et al. 2019, Lamb et al. 2020). Given the importance of this key site relative to the entire estuary, it is likely that 150,000 to 175,000 Surf Scoters must be passing through (C. Lepage, Canadian Wildlife Service, pers. comm.). White-winged and Black scoters are far less numerous during fall staging, with estimated combined numbers of 20,000 to 30,000 (Canadian Wildlife Service unpublished data). Approximately 12,000 to 15,000 Common Eiders are also believed to use the key site during fall (S. Gilliland pers. comm.). A few thousand each of Long-tailed Ducks, goldeneyes (mostly Common Goldeneye), Common and Red-breasted mergansers, as well as a few dozen Harlequin Ducks (from the eastern population of special concern) have also been reported during irregular fall aerial surveys over the key site (Canadian Wildlife Service unpublished data).

Sea ducks that regularly overwinter in the key site include Common and Barrow's goldeneyes, Redbreasted Mergansers, and Long-tailed Ducks, about 1000 to 1500 each (Canadian Wildlife Service

unpublished data). Barrow's Goldeneyes have been reported in small numbers in the Baie de Mille-Vaches and in the Forestville sector (Robert et al. 2003), but they can form groups of 250 to 500 individuals in the Pointe aux Outardes–Pointe Lebel section, often at Pointe Paradis (Canadian Wildlife Service unpublished data).

**Sensitivities:** Prey densities, primarily softshell clam (*Mya arenaria*), are among the highest in Quebec (MDDEFP 2013). Availability and quality of food resources could be influenced by shellfish overharvesting, pollution, ice conditions in winter, environmental events (e.g., breaking waves, storms, and shoreline erosion; DFO 2017). Human disturbance from commercial softshell clam harvesting activities can displace foraging sea duck flocks from prime feeding locations. Flightless molting sea ducks are especially sensitive to disturbance (O'Connor 2008).

Potential Conflicts: Softshell clams are exploited by commercial and recreational harvesters in the key site. Although commercial harvest is regulated by the Department of Fisheries and Oceans Canada, there was a high level of harvest on the upper north shore in 2000, followed by a reduction until 2009, but several areas in the key site (e.g., Pointe à Boisvert and Pointe de Mille-Vaches) have not yet recovered (DFO 2017). Maritime traffic is expected to increase in the St. Lawrence Seaway (MTQ 2021); this comes with a concomitant increased chance of pollution (e.g., chemical or oil spills), and bird collisions with vessels. Disturbance associated with small vessel and all-terrain vehicles on the beach remains a potential conflict, especially for molting sea ducks. Aboriginal harvest of sea ducks (scoters, Long-tailed Ducks and eiders) in spring and fall within this site is low (R. Cotter, Canadian Wildlife Service, pers. comm.).

**Status:** The eastern portion of the key site is proposed as the Manicouagan Aquatic Reserve (MDDEFP 2013). If adopted, this reserve would extend from the mouth of the Betsiamites River to the mouth of the Manicouagan River. Almost all coastlines within the key site have been designated as Aquatic Birds Concentration Areas (*Aires de concentration d'oiseaux aquatiques*; MELCC 2018). The Waters of Île Patte de Lièvre Important Bird Area lies within the key site and was identified as an IBA primarily because of its importance for staging and molting scoters (QC151; IBA Canada 2018).

## **Literature Cited**

- Falardeau, G., and J.-P. L. Savard. 2003. Migration printanière des macreuses sur la Côte-Nord et dans la baie des Chaleurs. Série de rapports techniques no. 406. Environnement Canada, Service canadien de la faune, région du Québec. Sainte-Foy, Quebec. 47 pp.
- Fisheries and Oceans Canada (DFO). 2017. Assessment of softshell clam stocks in Quebec coastal waters. DFO Canadian Science Advisory Secretariat, Science Advisory Report 2017/024.
- IBA Canada. 2018. http://ibacanada.ca/.
- Lamb, J. S., P. W. C. Paton, J. E. Osenkowski, S. S. Badzinski, A. M. Berlin, T. Bowman, C. Dwyer, L. J. Fara, S. G. Gilliland, K. Kenow, C. Lepage, M. L. Mallory, G. H. Olsen, M. C. Perry, S. A. Petrie, J.-P. L. Savard, L. Savoy, M. Schummer, C. S. Spiegel, and S. R. McWilliams. 2019. Spatially explicit network analysis reveals multi-species annual cycle movement patterns of sea ducks. Ecological Applications 29:1–17.
- Lamb, J. S., P. W. C. Paton, J. E. Osenkowski, S. S. Badzinski, A. M. Berlin, T. Bowman, C. Dwyer, L. J. Fara, S. G. Gilliland, K. Kenow, C. Lepage, M. L. Mallory, G. H. Olsen, M. C. Perry, S. A. Petrie, J.-P. L. Savard, L. Savoy, M. Schummer, C. S. Spiegel and S. R. McWilliams. 2020. Assessing year-round habitat use by migratory sea ducks in a multi-species context reveals seasonal variation in habitat selection and partitioning. Ecography 43:1842–1858.
- Lepage, C., and J.-P. L. Savard. 2013. Surf Scoter *Melanitta perspicillata*. *In* C. Lepage and D. Bordage (eds.), Status of Quebec Waterfowl Populations, 2009, pp. 160–167. Canadian Wildlife Service, Environment Canada Technical Report Series No. 525, Quebec City. 243 pp.
- Lepage, C., J.-P.L. Savard, and S.G. Gilliland. 2020. Spatial Ecology of White-winged Scoters (*Melanitta deglandi*) in Eastern North America: A Multi-year Perspective. Waterbirds 43:147–162.
- Ministère du Développement durable, de l'Environnement, de la Faune et des Parcs (MDDEFP). 2013. Réserve aquatique projetée de Manicouagan: Plan de conservation. https://www.environnement.gouv.qc.ca/biodiversite/aquatique/manicouagan/plan-conservation.pdf.
- Ministère du Développement durable, de l'Environnement et de la lutte contre les Changements

- climatiques (MDDELCC). 2018. Registre des aires protégées par désignation. https://www.environnement.gouv.qc.ca/biodiversite/aquatique/manicouagan/plan-conservation.pdf.
- Ministère de l'Environnement et de la Lutte contre les changements climatiques (MELCC). 2021. Aires projetées au Québec (version du 31 mars 2021) [in French only]. https://services-mddelcc.maps.arcgis.com/apps/MapSeries/index.html?appid=8e624ac767b04c0989a9229224b91334.
- Ministère du Transport du Québec (MTQ). 2021. Avantage Saint-Laurent. https://www.transports. gouv.qc.ca/fr/ministere/role\_ministere/avantage-st-laurent/Documents/avantage-st-laurent.pdf.
- O'Connor, M. 2008. Surf Scoter (*Melanitta perspicillata*) ecology on spring staging grounds and during the flightless period. M.S. thesis, McGill University, Montreal, Quebec. 91 pp.
- Rail, J.-F., and J.-P. L. Savard. 2003. Identification des aires de mue et de repos au printemps des macreuses (*Melanitta* sp.) et de l'Eider à duvet (*Somateria mollissima*) dans l'estuaire et le golfe du Saint-Laurent. Environnement Canada, Service canadien de la faune, région du Québec, Série de rapports techniques no. 408. Sainte-Foy, Quebec. 54 pp.
- Robert, M., R. Benoit, C. Marcotte, J.-P. L. Savard, D. Bordage, and D. Bourget. 2003. Le Garrot d'Islande dans l'estuaire du Saint-Laurent: Calendrier de présence annuelle, répartition, abondance, âge-ratio et sex-ratio. Environnement Canada, Service canadien de la faune, région du Québec, Série de rapports techniques no. 398. Sainte-Foy, Quebec. 129 pp.
- Savard, J.-P. L., and M. Robert. 2013. Relationships among breeding, molting, and wintering areas of adult female Barrow's Goldeneyes (*Bucephala islandica*) in eastern North America. Waterbirds 36:34–42.
- Sea Duck Joint Venture (SDJV). 2015. Atlantic and Great Lakes sea duck migration study: Progress report June 2015. https://seaduckjv.org/wp-content/uploads/2014/12/AGLSDMS-Progress-Report-June2015\_web.pdf.
- Silverman, E. D., J. B. Leirness, D. T. Saalfeld, M. D. Koneff, and K. D. Richkus. 2012. Atlantic Coast wintering sea duck survey, 2008–2011. Division of Migratory Bird Management, U.S. Fish & Wildlife Service, Laurel, Maryland. 27 pp.