

CANADA 21: SHEPODY BAY, NEW BRUNSWICK

Information Sheet on Ramsar Wetlands

Effective Date of Information: The information provided is taken from text supplied at the time of designation to the List of Wetlands of International Importance, May 1987 and updated by the Canadian Wildlife Service - Atlantic Region in October 2001.

Reference: 21st Ramsar site designated in Canada.

Name and Address of Compiler: Canadian Wildlife Service, Environment Canada, Box 6227, 17 Waterfowl Lane, Sackville, N.B, E4L 1G6.

Date of Ramsar Designation: 27 May 1987.

Geographical Coordinates: 45°47'N., 64°35'W.

General Location: Shepody Bay is situated at the head of the Bay of Fundy, 50 km south of the City of Moncton, New Brunswick.

Area: 12 200 ha.

Wetland Type (Ramsar Classification System): *Marine and coastal wetlands:* Type A - marine waters; Type D - rocky marine shores and offshore islands; Type F - estuarine waters; Type G - intertidal mud, sand, and salt flats; Type H - intertidal marshes.

Altitude: Range is from - 6 to 6 m.

Overview (Principle Characteristics): The area consists of 7700 ha of open water, 4000 ha of mud flats, 800 ha of salt marsh and 100 ha of beach.

Physical Features (Geology, Geomorphology, Hydrology, Soils, Water, Climate): The area is situated at the head of the Bay of Fundy, an area with the largest tidal range in the world (up to 14 m in Shepody Bay). Shepody Bay is a large tidal embayment surrounded by low, rolling upland. A narrow band of salt marsh occurs along the western shore, whereas the eastern side is characterised by a rocky, eroding coastline with sand-gravel beaches. The northern limit of the Bay is at the confluence of the Petitcodiac and Memramcook rivers.

Ecological Features (Habitats, Vegetation): The most striking feature of the wetlands here is the extensive intertidal mudflats on both sides of the Bay. At Grande Anse and at Daniel's Flats they extend seaward for over 2 km at low tide. The flats consist of fine silts that have been built up over time through deposition from muddy tidal waters. These extensive areas and their associated invertebrate fauna are critical feeding grounds for migrant sandpipers and plovers during late summer and early autumn.

Land Tenure:

(a) **Site:** The site is principally open water and exposed beach and is, thus, undeeded and under the jurisdiction of the Province of New Brunswick. The salt

marshes, which were previously drained and used for agriculture, have been abandoned; present ownership is unknown. Grindstone Island within the bay is owned by the Anglican Church of Canada. Environment Canada owns a small cabin and a 0.25 ha lot at the most critical portion of beach habitat. The Nature Conservancy of Canada has also been active in securing coastal habitat in the Johnson's Mills area with a focus on protecting uplands adjacent to the most highly used roosting sites along this shore.

(b) Surrounding Area: Most of the surrounding upland is under private ownership. A small provincial park, "The Rocks," abuts the site at Hopewell Cape.

Conservation Measures Taken: Shepody Bay, along with two other sites (Mary's Point and Minas Basin) in the upper Fundy region collectively form the Bay of Fundy Western Hemisphere Shorebird Reserve. The site is unprotected. However, it does abut the Mary's Point Unit of Shepody National Wildlife Area, which is protected under federal jurisdiction.

Conservation Measures Proposed: A Management Plan for the site is currently being drafted which will recommend securement for a number of key habitats.

Current Land Use/Activities in:

(a) Site: Starting in 1998, the Canadian Wildlife Service in cooperation with the Tantramar Tourism Association has posted naturalists at the Canadian Wildlife Service facility at Johnson's Mills. Visitors to the area are provided with a small off-road parking area as well as an observation deck.

(b) Surrounding Area: Consists of farms, woodlots, open fields, and cottages. There has been very little change in land use around the bay in the past 20 years.

Threats to Integrity of:

(a) Site:

(b) Surrounding Area: There is a proposal for the development of a scenic coastal highway, "The Fundy Trail," which would use existing highways on both the west and east sides of the bay; this would undoubtedly bring additional tourists to the area and possibly more seasonal tourism developments.

Hydrological/Physical Values: The Fundy coast at Dorchester Cape - Johnson's Mills is a very scenic coastal landscape.

Social/Cultural Values: The annual migration of shorebirds is a phenomenon that is attracting a growing number of naturalists and organized field excursions to the beaches of Dorchester Cape each August.

Noteworthy Fauna: The Bay is important for the large numbers of birds using the site. Along with Mary's Point, the Shepody Bay site hosts the largest numbers of Semipalmated Sandpiper *Calidris pusilla* with maximum numbers at roosting sites occasionally exceeding 400 000 birds. Smaller numbers of Semipalmated Plover *Charadrius semipalmatus*, Black-bellied Plover *Pluvialis squatarola*, Short-billed Dowitcher *Calidris minutilla*, and a variety of other species, also use the site. In total, over two million shorebirds use the wetland from

mid-July to early November. The salt marshes support several hundred Canada Geese *Branta canadensis* and Black Duck *Anas rubripes*, lesser numbers of Green-winged Teal *Anas crecca carolinensis* and Pintail *Anas acuta* during spring, and large numbers of Common Eider *Somateria mollissima*. Scoters move through the bay on route to more northerly breeding grounds. The endangered Peregrine Falcon *Falco peregrinus anatum* nests on cliff sides at two locations within the Bay.

Of particular importance to shorebirds is the occurrence of mud-dwelling amphipod *Corophium volutator* which, in North America, occurs only in the Bay of Fundy and in the highest densities in the World.

Noteworthy Flora: Grindstone Island has an interesting mature stand of red spruce.

Current Scientific Research and Facilities: Shorebird research projects conducted in the upper Bay of Fundy during the period 1974-1983 have documented the importance of Shepody Bay for shorebirds. The Canadian Wildlife Service of Environment Canada owns and maintains a small shorebird research station on the shores of the Bay. In 1986, over 2500 shorebirds were banded at Grande Anse and over 10 000 during the 1982-1988 period.

Current Conservation Education: Visitors to the area are provided with a parking area and viewing deck. Naturalists are on site throughout July and August each year. Lectures and field trips are also conducted in association with Elderhostel sessions at Mount Allison University held in Sackville, New Brunswick every August.

Current Recreation and Tourism: "The Rocks" Provincial Park on the northwest side of the Bay has a visitor centre in addition to the facilities noted above. The late summer shorebird spectacle at Shepody Bay is promoted in provincial government tourism literature and the number of visitors is increasing.

Management Authority: The site is under the authority of the Government of New Brunswick. The Rocks Provincial Park is a 72 ha protected area abutting the site.

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Jurisdiction: Provincial - New Brunswick Department of Natural Resources and Energy; Private.

Selected Bibliography:

- Harrington, B.A. and R.I.G. Morrison. 1979. Semi-palmated sandpiper migration in North America. Studies in Avian Biology 2: 83-100. Cooper Ornithological Society, Los Angeles, California.
- Hicklin, P.W. 1987. The migration of shorebirds in the Bay of Fundy. Wilson Bulletin 99(4): 540-570.
- Majka, M. 1978. Wings over Fundy. Nature Canada 7(3).

- Morrison, R.I.G. 1974 to 1978. *Annual reports of the Maritime Shorebird Survey*. Environmental Conservation Service, Environment Canada. Ottawa, Ontario.
- Morrison, R.I.G. 1976. Use of the Bay of Fundy by shorebirds. In Daborn, G.R. (editor). *Proceedings, Workshop of Fundy Tidal Power and the Environment*. Acadia University, Wolfville, Nova Scotia.

Reasons for Ramsar Designation: The wetland supports the largest numbers of mixed species of shoreline birds during fall migration in all of North America. Shepody Bay is a critical component of the Bay of Fundy Hemisphere Shorebird Reserve declared under the Western Hemisphere Shorebird Reserve Network. The reserve includes the Mary's Point and Minas Basin Ramsar sites.

Status of Management Plan: A management plan for the site, which will recommend securement for a number of key habitats, is currently being drafted. A *Protection Plan for the Western Hemispheric Shorebird Reserve and Ramsar Wetland of International Importance at the Grande Anse (Johnson's Mills) Section of the Shepody Bay Reserve, Bay of Fundy, New Brunswick, Canada* was released in draft form in mid-1994. At low tide, this covers about 2000 ha of critical intertidal mud and sand flats of Dorchester Cape.