

CANADA 26: POINT PELEE NATIONAL PARK, ONTARIO

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, supplemented by information from the 1982 Park Management Plan, and updated by the Canadian Wildlife Service – Ontario Region in October 2001.

Reference: 26th Ramsar site designated in Canada.

Name and Address of Compiler: Canadian Wildlife Service, Environment Canada, Ottawa, Ontario, Canada K1A 0H3.

Date of Ramsar Designation: 27 May 1987.

Geographical Coordinates: 41°59'N., 82°30'W.

General Location: The park is a sandspit formation which extends into the western basin of Lake Erie and is situated in Mersea Township, County of Essex. Leamington is 6 km to the north.

Area: 1564 ha.

Wetland Type (Ramsar Classification System): *Inland wetlands:* Type Tp - permanent freshwater ponds, marshes, and swamps; Type W - shrub swamps.

Altitude:

Overview (Principle Characteristics): The park consists of 1113 ha of marsh and 451 ha of upland.

Physical Features (Geology, Geomorphology, Hydrology, Soils, Water, Climate): Point Pelee is located in the western extent of the St. Lawrence Lowlands, which includes the Carolinian zone of southern affiliated flora and fauna in Canada. These lowlands are dominated by till plains which were created as a result of the Wisconsinian ice advance and retreat. Point Pelee sandspit was formed as a direct result of glacial and fluvial forces. The terrestrial landscape combines till plains with shoreline landforms, while the aquatic substrate consists of clay and peat overlain by sand. The marsh has a closed drainage system which does not usually allow free water exchange with Lake Erie. However, if the barrier ridge is breached allowing water exchange, the marsh water level fluctuates with that of the lake.

Ecological Features (Habitats, Vegetation): Both the southern Great Lakes marsh and the Carolinian forest ecosystem at Point Pelee are dynamic, as both ecosystem's "seed bank" plant species are adapted to a range of conditions and shift their species composition according to changes in the moisture regime. The diversity of vegetation in the marsh is highest along the edge of marsh ponds and in the transitional zones between the marsh and the terrestrial environment. The marsh is dominated by four vegetation communities: shrub (woody emergents), herbaceous emergents, floating and submerged aquatics. Shrub communities are found in the marsh but usually on drier lands closer to

the marsh-forest edges. Characteristic of this community are willow *Salix* spp., buttonbush *Cephalanthus occidentalis* and Drummond's dogwood *Cornus drummondii*. Herbaceous emergents are dominated by cattail *Typha* spp., giant reed *Phragmites communis*, Canada bluejoint *Calamagrostis canadensis*, wild rice *Zizania aquatica*, elodea *Elodea canadensis*. Floating communities are characterised by yellow spatterdock *Nuphar advena*, common bladderwort *Utricularia vulgaris* and white water lily *Nymphaea tuberosa*. The submerged aquatic beds, which play a significant role in food chains for many of the amphibians, reptiles and fish species in the park, are dominated by naiad *Najas guadaloupeensis*, pond weed *Potamogeton natans*, common bladderwort, swaying rush *Scirpus subterminalis* and elodea.

There is an even larger diversity of vegetation found in the trough section of the Point Pelee marsh, since it is in the southern part of the marsh, the major transitional zone, and is subject to seasonal flooding. Along the eastern edge of the marsh lies the barrier ridge shoreline which represents critical habitat for many floral as well as amphibian and reptile species. The shoreline area is predominantly in early successional stages and is dominated by cedar-savannah communities in its drier portions, while the marsh edge is dominated by treed fen. The upland of the park is a dune system adjacent to the west side of the marsh. Of this area, 40% is early successional, resulting from agricultural abandonment since the park was established, while less than 10% is used for park interpretation and recreation. The remainder is composed of a variety of wet and dry forests.

Land Tenure:

(a) **Site:** The national park is federal Crown land.

(b) **Surrounding Area:** Mainly private land holdings.

Conservation Measures Taken: Point Pelee is administered as a National Park (declared in 1918) under the *National Parks Act*.

Conservation Measures Proposed: None currently.

Current Land Use/Activities in:

(a) **Site:** The national park is zoned and follows the five zone national park zoning system, each zone differing with the intensity and type of visitor use, as well as the degree of natural resource protection desired. Zone 1 is the special preservation zone and is designed to preserve essentially unimproved and nationally unique, rare and endangered areas or features. This zone has the highest degree of resource protection and in the park includes the eastern barrier ridge and several marsh areas important for rare plants and nesting birds. The purpose of Zone 2 (wilderness) is to protect areas that represent natural history themes, while allowing primitive low-intensity recreational activities. This zone includes the majority of the marsh area within the park. Zone 3 (natural environment) is designed to maintain a natural environment setting, while allowing recreational opportunities that require a minimum of man-made facilities. East Beach, much of the sand plain area, and beaches with few or no support facilities, fall within this zone at Point Pelee. Areas that can withstand a full range of visitor uses and support-related facilities may be located in the

outdoor recreation area, or Zone 4. Zone 5 is the park services zone where concentrations of visitor services and support facilities are required to manage and operate the park.

In addition to the five basic management zones, there are other small areas containing significant natural or cultural features that are particularly sensitive to development and use. These environmentally-sensitive sites do not have the characteristics necessary to designate them as Zone 1 areas and need to be specially protected. The degree of protection required is determined by an assessment of the importance and sensitivity of the resource. There are three specific activities that attract the most use at Point Pelee; bird watching, smelt fishing and beach-related activities. Duck hunting within the park was considered an anomaly and was proposed to be eliminated in 1992.

(b) Surrounding Area: Lands to the north of the park are mainly used for agriculture or are urban and rural settlements.

Threats to Integrity of:

(a) Site: The threats to the park result from effects of human land use in southern Ontario and on Lake Erie. The park is close to major industrial centres in the United States such as Detroit, Toledo and Cleveland, and prevailing westerly winds constantly expose it to airborne pollution. Lake Erie, while improved in its water quality, is still subject to industrial, urban and agricultural pollution. This deteriorated water quality directly affects the ecology of the marsh of Point Pelee National Park.

High Lake Erie water levels and the subsequent erosion and breaching of the eastern barrier ridge, have substantially altered the water quality, due to increased turbidity and direct mixing of Lake Erie with marsh water. The high water levels have increased wave action in the open ponds. This has initiated break-up of the cattail mat and movement of floating sections. Structural shoreline protection, particularly north and east of the park, has interrupted the dynamics of the coastal sand budget. Point Pelee no longer receives sufficient sediment on its eastern barrier ridge to ensure its re-establishment after water levels in Lake Erie drop. In future this may lead to a marsh that is more open to Lake Erie.

Faunal and floral composition has been altered with the introduction of Lake Erie species into the marsh and due to adjacent agricultural land use. Control of exotic species is ongoing in the park. Agriculture immediately north of the park poses a threat of additional eutrophication of the marsh due to fertilizer run-off. Chemical pesticide and herbicide residues may also enter the marsh ecosystem. The effects of chemicals have yet to be determined. The location along the major Great Lakes shipping channel poses the threat of oil and toxic chemical spills. Previous oil spills have washed up on the park shoreline and have adversely affected the beach flora and fauna. However, park contingency plans address these situations.

(b) Surrounding Area: As above.

Hydrological/Physical Values:

Social/Cultural Values:

Noteworthy Fauna: The park's location and exposure to the moderating waters of Lake Erie produce a definite southern climate, and many Carolinian faunal species which are rare in Canada occur here. Of note are 25 bird species, eight butterfly, seven fish, two amphibian and three turtle species that are rare in the Province of Ontario. Of these, eight bird species, seven fish, two amphibian and three turtle, as well as one snake and one mammal species, are considered rare, threatened or endangered in Canada. The park's location along the Mississippi Flyway makes this area a critical stop-over for 347 species of migratory birds. This total includes 102 waterfowl and shorebird species. Large waves of migrants often number in the tens of thousands as they descend onto Point Pelee for rest and feeding, especially during the spring and autumn migration periods.

At least 100 bird species are known to breed in the park, including American Black Duck *Anas rubripes*, Blue-winged Teal *Anas discors*, Mallard *Anas platyrhynchos* and Wood Duck *Aix sponsa*, and rare species such as Prothonotary Warbler *Protonotaria citrea*, King Rail *Rallus elegans*, Sedge Wren *Cistothorus platensis*, Least Bittern *Ixobrychus exilis* and American Bittern *Botaurus lentiginosus*. The marsh habitat is used seasonally by many ducks, geese and other waterfowl. In the marsh itself, many species congregate in the shallow ponds, including Double-crested Cormorant *Phalacrocorax auritus*, American Coot *Fulica americana*, herons *Ardea* spp., plovers *Charadrius* spp. and grebes *Podiceps* spp. Rafts of 10 000 or more Common Merganser *Mergus merganser* and up to 50 000 Red-breasted Mergansers *Mergus serrator* often gather during migration just to the east and west of the park's shoreline on Lake Erie. Seven of the recorded species have been designated as rare in Canada. These are Bald Eagle *Haliaeetus leucocephalus*, King Rail, Piping Plover *Charadrius melodus*, Loggerhead Shrike *Lanius ludovicianus*, Prothonotary Warbler, Red-shouldered Hawk *Buteo lineatus*, and Eastern Bluebird *Sialia sialis*.

Of the 42 species of mammal reported, muskrat *Ondatra zibethicus* is the most visible within the marsh. Mink *Mustela vison* and raccoon *Procyon lotor* are the major marsh predators. Other mammals include long-tailed weasel *Mustela frenata*, meadow vole *Microtus pennsylvanicus*, white-footed mouse *Peromyscus leucopus*, deer mouse *Peromyscus maniculatus*, jumping mouse *Zapus hudsonius* and, in winter, cottontail rabbit *Sylvilagus floridanus*, coyote *Canis latrans* and white-tailed deer *Odocoileus virginianus*. Some 28 species of reptiles and amphibians have been recorded. Common in the marsh are American toad *Bufo americanus*, green frog *Rana clamitans melanota*, northern leopard frog *Rana pipiens* and, becoming less common, bullfrog *Rana catesbeiana*. The eastern barrier ridge is a valuable turtle nesting habitat. The spiny softshell *Trionyx spiniferus*, a rare turtle, utilises this bench area for nesting, as do other species of turtle. The marsh area is also used. Thirty-four species of fish inhabit the marsh, both sport and non-sport species.

Point Pelee is also internationally recognised as a major staging area for migratory monarch butterflies (up to 20 000) and other invertebrates such as dragonflies.

Noteworthy Flora: Many Carolinian floral species which are rare in Canada occur here. Of note are over 70 species of vascular plants. Of these, eight plant species are considered rare, threatened or endangered in Canada. Herbaceous emergents include two nationally rare species, American water willow *Justicia americana* and swamp rose mallow *Hibiscus palustris*. The trough section of the Point Pelee marsh contains rare

species such as wild potato vine *Ipomea pandurata*, yellow giant hyssop *Agostache reptoides* and Florida lettuce *Lactuca floridana*.

Current Scientific Research and Facilities: The unique, diverse southern character of Point Pelee has encouraged much research, particularly in the floral aspects of the Park. Its location as a bird-watching site on a major migratory route has also encouraged research. The Park management plan and the resource management analysis are the cumulative result of years of research and study within the park. Numerous universities such as Windsor, Guelph, Waterloo and Western have utilised the Park for research. Studies have covered a wide range of topics including shoreline erosion, various mammals, rare southern affiliated vegetation, fish, herptiles, invertebrates and geomorphology, as well as problems arising from protection and recreational use. Park staff have inventoried and monitored the fauna and flora of the marsh area throughout its history, from early muskrat-trapping surveys to present-day muskrat population status studies.

Current Conservation Education:

Current Recreation and Tourism: Boardwalks, a viewing tower, trails, picnic facilities, interpretive centre and services are on site.

Management Authority:

Superintendent
Point Pelee National Park
R.R. #1
Leamington, Ontario
N8H 3V4

Jurisdiction: Federal - Department of Canadian Heritage.

Selected Bibliography:

- Bayly, L.L. and T.A. O'Neill. undated. An aquatic vegetation map and inventory of Point Pelee National Park marsh. Carleton University. Ottawa, Ontario.

Reasons for Ramsar Designation: The park's location along the Mississippi Flyway makes this area a critical stop-over for migratory birds, waterfowl and shorebird species. The Park is of particular value in maintaining the genetic and ecological diversity of the region. There are very few sizeable protected natural areas in the Carolinian zone of Canada and over 97% of the immediate region's wetlands have been lost. Therefore, the park's expanse of natural area with resident populations of significant species is of special value.

Status of Management Plan: The park is comprehensively covered by national park management planning and land use zoning provisions of the *National Parks Act*. Natural resources protection and appropriate visitor-related use and facilities are outlined by the 1982 *Point Pelee National Park Management Plan* which is reviewed every five years.