



BIG BAY WETLAND TYPES

Fen, marsh, open bog, coniferous bog, coniferous swamp, shrub carr

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ASHLAND COUNTY



ECOLOGY & SIGNIFICANCE

Big Bay, located in the Apostle Islands on the east coast of Madeline Island, is protected as a State Natural Area within Big Bay State Park. Big Bay features a lagoon bordered by an abandoned interior sandspit on the west and an active sandspit on the east. The interior sandspit, now ¾ of a mile inland from the lake, separates an oddly patterned acid peatland from the wetland habitats that surround the lagoon. The peatland areas have such deep accumulations of sphagnum peat that they are hydrologically isolated from Lake Superior, groundwater and runoff from upland areas. Big Bay is rich in rare and uncommon species and the mosaic of natural communities at this site is one of the most unusual, diverse and pristine in the Great Lakes.

FLORA & FAUNA

Big Bay's central lagoon is surrounded by a floating fen mat of woolly sedge, coast sedge, twig rush, sweet gale and buckbean. Further from the water's edge, the mat is more anchored and boggy with sphagnum mosses, leatherleaf, bog rosemary, bog laurel, small cranberry, pitcher plant, white beakrush, sweet gale and woolly sedge. A strip of small tamarack trees borders the interior spit on the east; understory plants here include speckled alder, Labrador tea, crested shield fern, lake sedge, beaked sedge, few-seeded sedge, three-seeded sedge and cinnamon fern. West of the interior spit is a highly patterned acidic peatland with several

natural community types. The interior is open bog, with sphagnum mosses, ericaceous shrubs, few-seeded sedge, few-flowered sedge, poor sedge, tussock cottongrass and round-leaved sundew. Coniferous bog habitat dominated by a mature stand of black spruce and a carpet of sphagnum moss lies in the eastern part of this peatland. Labrador tea, three-seeded sedge, false Solomon's seal, and creeping snowberry are common understory plants here. Two state-threatened plant species are found on the site: linear-leaved sundew and coast sedge. Rare plants documented at Big Bay include Michaux sedge, pale sedge, sparse-flowered sedge, livid sedge, crinkled hairgrass, brown beakrush, common bog arrowgrass and narrow false oats.

The Apostle Islands in general are excellent habitat for migrating birds, especially in fall, hosting tens of thousands of passerines and raptors, particularly falcons. The islands also contain important nesting habitat for colonial waterbirds and bald eagles, and host a variety of breeding songbirds. Surveys conducted at this site have documented several rare bird species including Le Conte's sparrow, red crossbill and merlin. Other birds found on site include northern harrier, American bittern, yellow-bellied flycatcher, common merganser, palm warbler and Lincoln's sparrow. The rare butterfly, bog copper, has also been documented on site.

THREATS

The main threats to this site are inappropriate or intense use by park visitors and invasive species. Heavy deer browsing pressure threatens regeneration of the site's conifers. Declining Lake Superior water levels have altered these and other coastal wetlands in recent years and may continue to do so if this pattern continues with global climate change.

ACCESS

Madeline Island is accessible by ferry from Bayfield. The park offers several hiking trails and a "cordwalk" that allows visitors to view these wetlands without disturbing sensitive vegetation. For details, visit the Big Bay State Park website: www.dnr.state.wi.us/org/land/parks/specific/bigbay.

Sources:

- Wisconsin State Natural Areas Program (WDNR)
- Wisconsin Land Legacy Report (WDNR)
- Coastal Wetlands of Wisconsin's Great Lakes (WDNR)
- Wisconsin's Strategy for Wildlife Species of Greatest Conservation Need (WDNR)
- Wisconsin Important Bird Areas (WBCI)

BIG BAY

Property Owner: WDNR

Recognitions & Designations: WI State Natural Area, WI Land Legacy Place, WI Coastal Wetland Inventory Primary Site, WI Wildlife Action Plan Reference Site, The Nature Conservancy Priority Conservation Area, WI Bird Conservation Initiative Important Bird Area

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Common merganser — Dennis Malueg