ESTUARIES & COASTAL WETLANDS OF LAKE SUPERIOR

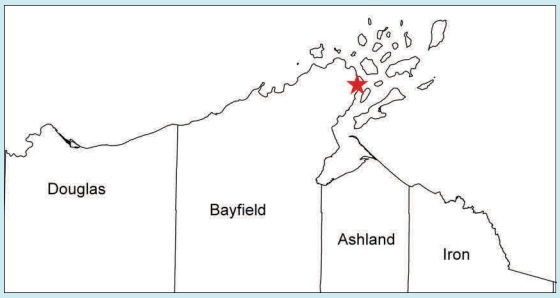
Red Cliff Bay (*aka* Schooner Bay)

Approximate Size: 70 acres*

Ownership: Private, Red Cliff Band of Lake Superior Chippewa

Year Last Surveyed by WDNR/NHI: 2012

GLCWC Classification: Open Drowned River Mouth



Ryan O'Connor

Amy Staffen

Site Description

Red Cliff Creek is a cold mainstem, headwater stream that flows into Red Cliff Bay southwest of Red Cliff Point. Areas of Emergent and Submergent Marsh grade to Sedge Meadow and Alder Thicket at the periphery of this small bay, especially along the north shore. Numerous channels and rivulets transect the wetlands. The surrounding uplands harbor mesic forest of varying ages and quality. Red Cliff Creek, another unnamed stream, and scattered spring seeps flow through the forested uplands, increasing overall floral diversity. Schooner Bay Marina lies to the southeast. This site lies within the exterior boundaries of the Red Cliff Reservation.

Tussock sedge (*Carex stricta*) and rice cut grass (*Leersia oryzoides*) dominate areas of sedge meadow, with lesser amounts of Canada bluejoint grass (*Calamagrostis canadensis*) and the non-native invasive Canada thistle (*Cirsium arvense*). Common species of areas with more consistent inundation include soft-stem bulrush (*Schoenoplectus tabernaemontani*), wool-grass (*Scirpus cyperinus*) and rice cut grass, while common aquatic species are slender naiad (*Najas flexilis*) and American eelgrass (*Vallisneria americana*).

Northern Mesic Forest occurs on shallow slopes and ridge tops, whereas mature mesic forest occurs on steeper north/northeast-facing slopes. Large northern white-cedar (*Thuja occidentalis*; 24" diameter average, up to 36") dominate older mesic forest stands, with lesser amounts of yellow birch (*Betula alleghaniensis*) and supercanopy white pines (*Pinus strobus*). Northern white-cedar, balsam fir (*Abies balsamea*), sugar maple (*Acer saccharum*), yellow birch, paper birch (*Betula papyrifera*), and white spruce (*Picea glauca*) create a variable subcanopy. Shrubs grow sparsely, and include mountain maple (*Acer spicatum*), thimbleberry (*Rubus parviflorus*), and American fly honeysuckle (*Diervilla lonicera*). American starflower (*Trientalis borealis*), intermediate wood fern (*Dryopteris intermedia*), lady fern (*Athyrium filix-femina*), ostrich fern (*Matteuccia struthiopteris*), and Sphagnum are common at ground level; these are typical boreal elements. Abundant downed decaying logs, old-growth indicators, provide soil nutrients as well as food and habitat for a wide range of organisms, thus increasing overall species diversity.

*Area includes bay, lower creek, associated wetlands, adjacent uplands.

Please see last page for Ojibwe plant names

Threats

The non-native invasives common reed grass (*Phragmites australis*) and reed canary grass (*Phalaris arundinacea*) are uncommon here, whereas purple loosestrife (*Lythrum salicaria*) has moderate abundance, and Canada thistle is common. Invasive plants out-compete native plants by monopolizing light, water, and nutrients, and can have negative impacts on soils, nutrient cycling, etc. Surface water run-off associated with development and logging in the area may result in sediment deposition in the bay, causing degradation of wetland and aquatic resources.

Additional Comments

The Lake Superior Binational Program has identified Red Cliff Bay as important to the integrity of the Lake Superior ecosystem for coastal wetlands.

Abbreviations and Helpful References

GLCWC - Great Lakes Coastal Wetland Classification.- http://glc.org/wetlands/pdf/wetlands-class_rev1.pdf

Lake Superior Binational Program - http://www.epa.gov/glnpo/lakesuperior/

Red Cliff Band of Lake Superior Chippewa - http://www.redcliff-nsn.gov/

WDNR Coastal Wetlands webpages - http://dnr.wi.gov, Keyword: "coastal wetlands"

WDNR/NHI - Wisconsin Department of Natural Resources, Natural Heritage Inventory Program. http://dnr.wi.gov , Keyword: "natural heritage"

Amy Staffen

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Large northern white-cedars are common at Red Cliff Bay. NHI Ecologist Ryan O'Connor sizes up a cedar (left), while Red Cliff Tribal Interns Brady Defoe and John Grant measure them (above); Anastasia Walhovd, Intern Crew Leader and NHI Botanist Kevin Doyle observe in the background.

Suggested Citation

A. Staffen, K. Doyle, and R. O'Connor. 2012. Site Description for Red Cliff Bay. Wisconsin Department of Natural Resources. Madison, WI. http://dnr.wi.gov, Keyword: "coastal wetland red cliff bay"

Please see last page for Ojibwe plant names

Ojibwe names of some plants mentioned in this document

English	Ojibwe
balsam fir	zhingob
northern white-cedar	giizhik
paper birch	wiigwaas, wiigwaasi-mitig
sugar maple	aninaatig, ininaatig
thimbleberry	datgaagmin
white pine	zhingwaak
white spruce	gaawaandag
wool-grass	anaakanashkj
yellow birch	wiinizik

Sources:
"Onjiakiing – From the Earth. Non-medicinal Uses of Plants by the Great Lakes Ojibwe.." An electronic resource (CD) compiled by the Great Lakes Indian Fish & Wildlife Commission (GLIFWC) in 2002 as a product of the elders from the 11 member Ojibwe tribes of the GLIFWC.

The Ojibwe People's Dictionary. An online resource at http://ojibwe.lib.umn.edu.

WISCONSIN DEPT. OF NATURAL RESOURCES

WISCONSIN COASTAL MANAGEMENT PROGRAM

NOAA NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION U.S. DEPARTMENT OF COMMERCE

RED CLIFF BAND OF LAKE SUPERIOR CHIPPEWA HUB OF THE CHIPPEWA NATION

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