

AXE LAKE PEATLAND

UTM. Ref. 17TPA180260

Stisted Township, Huntsville
Cardwell Township, Muskoka Lakes
Status: Recommend Heritage Area

Area: 607 ha

Site Characteristics

The lowland around Axe Lake is one of the more extensive peatlands within the District Municipalities of Muskoka and Parry Sound. Vegetation communities are dominated by Black Spruce-Tamarack-Eastern White Cedar swamp forests, treed poor fens and open bogs. The lake is situated on the remnant shoreline deposits of postglacial Lake Algonquin and is shallow, sand-bottomed and nutrient rich. It supports an extensive aquatic community of emergent and floating-leaved species, as well as an exceptionally rich assemblage of relict Atlantic Coastal Plain Flora. These coastal plain species are concentrated on the open, sandy-peaty shoreline at the north end of the lake (within the District of Parry Sound).

The south end of the lake shoreline is dominated by floating shrub mats with Pitcher Plants, Sundews, Calopogon, Bladderworts and Virginia Chain Fern.

On knolls within this wetland, and bordering its sides, there are intrusions of gneissic bedrock with a thin mantle of sandy till, supporting upland Sugar Maple-Balsam Fir-Eastern Hemlock mixed hardwood forests.

Axe Creek flows out of the lake eastward toward Buck Lake and south to Lake Vernon. The lake is thought to be an important oxidation - sedimentation basin (OMNR, 1977) and the surrounding wetlands are likely to moderate downstream flows. In addition there is a natural water level fluctuation up to one metre annually, which is essential for the maintenance of the Atlantic Coastal Plain Flora.

Flora and Fauna

Total numbers of species recorded were:

Vascular Plants	174 native; 12 introduced 16 A.C.P.F. with a score of 77 (High)
Birds	44 observed during breeding season
Mammals	10
Herpetofauna	7
Butterflies	7
Dragonflies	17
Mushrooms	48

Significant Natural Values and Selection Criteria Met

1. **Representative Landform** - (A2) The Axe Lake Peatland area was identified by Bajc, (1992) as the best representative example of swamp and organic deposits within the District Municipality of Muskoka.

2. **Hydrologic** - (A3) The extensive wetland area serves as a source for the Muskoka watershed system and functions as a storage and discharge system to moderate downstream flows.

3. **Representation** - (B1) The Axe Lake Peatland contains an area of open Treed Black Spruce Bog (cooler/organic/very wet). This community type is of limited distribution in Muskoka. It shares representation with Shack Creek Wetland.

4. **Quality and Disturbance** - (B3) The Axe Lake Peatland contains wetland community types in various successional stages and high quality habitat for Atlantic Coastal Plain Flora. The diversity of dragonflies indicates a high quality wetland environment. The lake and shoreline has been designated a provincially significant aquatic and shoreline complex ANSI since 1987.

5. **Rare Species** - (B4) The Axe Lake Peatland provides habitat for the following rare species:

Wildlife

Coccyzus americanus Yellow-billed Cuckoo [RR]

Dendragapus canadensis Spruce Grouse [RR]

Picoides arcticus Black-backed Woodpecker [RR]

Vascular Plants

Bartonia paniculata Screwstem [NR PR RR]

Carex flava Yellow sedge [RR]

**Potamogeton bicupulatus* Two-cupped Pond Weed [NR PR]

**Potamogeton confervoides* Pond Weed [PR RR]

**Rhexia virginica* Virginia Meadow Beauty [NR PR]

**Xyris difformis* Slender Yellow-eyed Grass [PR]

*located on the Parry Sound side of Axe Lake

In addition, one snake, three birds and nine vascular plant species were recorded as regionally uncommon.

6. **Size and Linkage** - (B6) Axe Lake peatland is one of the most extensive peatlands in the District of Muskoka and is one of the six largest Heritage Areas. The large size supports good populations of large mammals such as Black Bear and Moose.

7. **Biogeographic Significance** - (B7) In the Keddy and Sharp (1989) assessment of Atlantic Coastal Plain lakes, Axe Lake is rated as the second most significant in Ontario. Within Muskoka, Axe Lake ranks third for significant representation (second only to Morrison Lake for whole lake assessments). There are 16 coastal plain species present with a score of 77.

Axe Lake also supports fauna with a northern influence, such as Spruce Grouse, Black-backed Woodpecker, Gray Jay, Golden-crowned Kinglet and Southern Red-backed Vole.

Ownership and Disturbance

The majority of the site (approximately 80%) is situated within Crown land. The area within the ANSI boundaries is virtually undisturbed. The east shore of the lake is used as an unserviced campsite and is the only part of the lake shore suitable for recreation. Much of the ANSI is bordered by logging roads which were used to cut timber in the upland forests. These forests show evidence of recent logging and are in a regenerating early successional stage. Snowmobile trails are common in the area and hunting activities occur adjacent to a hunt camp located in the southeast corner. The density of aquatic vegetation in the shallow lake limits the use of motorized boats and other recreational activities.

Sensitivity

The sensitivity of this site is related to the shoreline features and wetland function. The natural, fluctuating water levels are critical to the maintenance of the shoreline A.C.P.F. communities. The floating shrub mats and sandy-peaty shores are sensitive to erosional disturbances brought about by heavy equipment or large numbers of people. Disturbances to one part of the wetland could have adverse effects upon other portions. Policies related to protection and management of A.C.P.F. sites and the provincial wetland policy should be followed.

Major Sources of Information

Bajc, 1992; Brunton, 1991b; Keddy, and Sharp, 1989; Keddy, 1981, 1982, 1983; OMNR, 1977; Reid, et al., 1991.