

DEER LAKE COMPLEX

UTM Ref. 17TPV183803

Wood Township, Gravenhurst
Muskoka Township, Muskoka Lakes
Status: Recommend Heritage Area

Area: 4540 ha

Site Characteristics

This area is characterized as a broad expanse of low relief, irregular, barren gneissic bedrock ridges, interspersed with numerous linear, shallow water wetlands and peat-filled depressions. Drainage from major lakes, including Echo, Gullwing, Deer, Pigeon and Pine, is primarily to the northwest into Lake Muskoka (along the direction of ridges). Blocked drainage resulting from the activities of beaver has contributed to the formation of numerous sphagnum dominated wetlands. The most recent glaciation deposited a discontinuous blanket of till over parts of the area in the form of ground moraine, which has led to the development of limited shallow, nutrient-poor, sandy till soils.

The upland sections of the complex consist of extensive dry heath, scrub and graminoid dominated bedrock barrens and Red Oak-White Pine-White Ash treed barrens. A large component of White Oak, typically more southern, forms a co-dominant in parts of this latter association. This hot, open rock barren habitat supports significant populations of Five-lined Skink, Eastern Massasauga and Eastern Hognose Snake. Early successional Large-tooth Aspen associations occur on warm, sandy, till soils, while Red Pine-mixed hardwood woodlands occur on the gneissic rock hillsides and steep boulder slopes along the north shores of Echo Lake and Deer Lake. Shallow sandy soils support a mature White Pine-Large-tooth Aspen-Red Maple mixed woodland. Deeper sandy tills in scattered areas of the site support a mature Eastern Hemlock-Sugar Maple-Beech-Yellow Birch woodland.

Wetlands are common and diverse, with dense open water aquatic vegetation, small lakes with dead standing trees, open Tamarack-Black Spruce-Feathermoss rich fens, floating shrub mats dominated by Leatherleaf and Sweet Gale, open herb-rich Virginia Chain Fern poor fen and open graminoid fen. A large fen northwest of Highland Pond is a particularly rich open habitat, supporting many orchid species, Southern Bog Lemming, plus Sedge Wren, Vesper Sparrow, Savanna Sparrow and Bobolink.

Black Spruce-Tamarack-Sphagnum mixed conifer-broadleaf forest swamps, Red Maple-Silver Maple-American Elm broadleaf forest swamps, Alder thicket swamps and Winterberry-Mountain Holly-Northern Wild Raisin thicket swamps have developed extensively in association with these wetlands.

Flora and Fauna

Total numbers of species recorded were:

Vascular Plants	470 native ; 58 introduced
	12 A.C.P.F. with a score of 60 (High)
Birds	94 observed during breeding season
Mammals	19 (4 from small mammal trapping)

Herpetofauna	18
Butterflies	28
Dragonflies	8
Mushrooms	34

Significant Natural Values and Selection Criteria Met

1. **Representative Landform** - (A2) The Deer lake area contains the best representative example of Precambrian Bedrock within the Georgian Bay Fringe physiographic region of Muskoka, Consisting of "low relief, northwest-trending ridges of quartzofeldspathic gneisses separated by linear wetlands and peat-filled hollows" (Bajc, 1992).
2. **Representation** - (B1) A major part of the Deer Lake area has been evaluated as a provincially significant wetland and shore complex with a recommendation for ANSI status (Brunton, 1991a). It shows excellent representation of common and rare bedrock and wetland landform-vegetation complexes in a manner not seen elsewhere in Site District 5E-7.
3. **Diversity** - (B2) In part due to its size, the Deer Lake Complex exhibits a high diversity of landforms, vegetation communities and wildlife. It is particularly rich in birds, herpetofauna and butterflies. Total numbers of mammals recorded was one of the highest of all areas inventoried. The known vascular plant list exceeds 500 species, the second-highest total in Muskoka.
4. **Rare Species** - (B4) The Deer Lake Complex provides habitat for the following rare species:

Wildlife

- Euphyes bimacula* Two Spotted Skipper [PR RR]
- Wallengrenia egeremet* Northern Broken Dash Butterfly [RR]
- Synaptomys cooperi* Southern Bog Lemming [PR]
- Sialia sialis* Eastern Bluebird [NR]
- Coccyzus americanus* Yellow-billed Cuckoo [RR]
- Empidonax flaviventris* Yellow-bellied Flycatcher [RR]
- Accipiter cooperii* Cooper's Hawk [NR PR]
- Buteo lineatus* Red-shouldered Hawk [NR PR]
- Vireo philadelphicus* Philadelphia Vireo [RR]
- Cistothorus platensis* Sedge Wren [RR]

Vascular Plants

- Botrychium lanceolatum ssp angustisegmentum* Triangle Grape Fern [PR RR]*
- Eupatorium rugosum* White Snakeroot [RR]
- Lactuca biennis* Tall Blue Lettuce [RR]
- Listera australis* Southern Twayblade [NR PR]
- Panicum spretum* Eaton's Grass [PR]
- Platanthera blephariglottis* White Fringed Orchis [PR]
- Potamogeton bicupulatus* Two-cupped Pond Weed [NR PR]
- Potentilla tridentata* Three-toothed Cinquefoil [RR]

Rhexia virginica Virginia Meadow Beauty [NR PR]
Rubus setosus Bristly Blackberry [RR]
Triadenum virginicum Marsh St. John's Wort [PR]
Viola adunca Hooked-Spur Violet [RR]
Xyris difformis Slender Yellow-eyed Grass [PR]

In addition, four species of butterfly, four snakes, one salamander, four bird species and 40 species of vascular plants were recorded as regionally uncommon.

5. **Fish and Wildlife Concentrations** - (B5) There are at least two heronries present within the area as well as numerous scattered deer yards.
6. **Size and Linkage** - (B6) The large size of the area and undisturbed nature of much of the interior provides suitable conditions for species which require extensive unfragmented habitats.
7. **Biogeographic Significance** - (B7) Notable concentrations of Atlantic Coastal Plain Flora occur along the shorelines of Echo and Gullwing Lakes with several species having a more widespread occurrence in the study area. There are 12 coastal plain species recorded with a score of 60, which ranks number five of ten total sites with high significance.

The occurrence of Three-toothed Cinquefoil near the southwest end of Highland Pond is a boreal species at the southernmost limit of its Ontario range in Muskoka (Soper & Heimburger, 1982).

Yellow-bellied Flycatcher and Philadelphia Vireo are boreal species of extremely local and sporadic occurrence in Muskoka (Prescott, 1987 b).

8. **Scenic** - (C7) Highway 169, which forms the northeastern boundary of the Deer Lake Complex, was identified as a scenic corridor by respondents to a public questionnaire.

Ownership and Disturbance

Most of the interior of the area is Crown land, with about 25% private land mainly in the vicinities of Gullwing, Echo, Pigeon and the eastern end of Pine Lake. Most of the development is in the form of recreational properties with increasing development pressures occurring. Much of the interior of the study area remains relatively intact. Past disturbances such as logging of the White Pine followed by fire has influenced the present day landscape. Natural fire and periodic insect infestations may play an important role in the maintenance of significant successional vegetation communities such as the dry-mesic mixed woodland occupying the barren rock ridges.

Unnatural disturbance such as borrow pits, refuse dumping, hunting and unregulated camping are common along Muskoka Road 13, particularly in the vicinity of Highland Pond. Here, both vehicle and pedestrian traffic have resulted in extensive soil compaction and trampling of vegetation.

Sensitivity

The sensitivity of this site is related to its extensive unfragmented habitats for a wide range of plant and wildlife species and vegetation associations. Management guidelines and policies should emphasize protection of the unfragmented core area, of rare and significant species and communities, and of shorelines with Atlantic Coastal Plain Flora.

Major Sources of Information

Argus, et al., 1982-87; Bajc, 1992; Berney, & Reid, 1993; Brunton, 1991 a; Brunton, 1980; District Municipality of Muskoka Sensitive Areas Schedules, 1989; Keddy, & Sharp, 1989; Prescott, 1987 b; Reid, et al., 1991; Soper, & Heimbürger, 1982.