

November 26, 1992



Bob Griffiths
District Manager
Parry Sound

SUBJECT: O'Donnell Pointe Nature Reserve - Moose-Deer

Enclosed is a copy of Bill Crins report on the impact of deleting a portion of the park area for use by the Moose-Deer First Nation.

If you have any questions let me or Bill know.

George M. Moroz
Natural Heritage Advisor
Central Region
Huntsville

Attachment

GMM/km

O'Donnell Point Provincial Nature Reserve
-(portion east of hydro-line)

Site visit: 1 September 1992
Present: Bill Crins, Paul de Courcy, George Moroz, -----
[band representative]-----

The purpose of the site visit was to determine the natural heritage values of the portion of the O'Donnell Point Nature Reserve east of the hydro-line. A request has been made by the Moose-Deer band to obtain lands that would allow for the consolidation of the the three segments of their reserve. Thus, a brief survey of the relevant lands was conducted to obtain an impression of the biophysical (vegetation/landform) values of this portion of the Nature Reserve, within the context of the life science representation targets in Site District 5E-7.

A qualitative assessment of the biophysical values of this portion of the Nature Reserve was made by visual inspection, by walking along the Twelve-mile Bay Road along the north side of the area, then following the hydro-line southward, with occasional traverses of adjacent lands, and finally by following a gneissic ridge and snowmobile trail northeastward to the King Bay - Twelve-mile Bay Roads junction. In this way, a substantial proportion of the land was rapidly covered. The on-site inspection lasted for approximately three hours.

Ecological Characterization

The landscape in the portion of the Nature Reserve visited on 1 Sept. 1992 is characterized by ridge and trough topography. Ridges are generally warmer than normal, dry to very dry, with thin sandy soils or no soil development at all. Vegetation on the tops of the ridges is dominated by scattered Eastern White Pine (*Pinus strobus*) and Red Oak (*Quercus rubra*), with clumps of Common Juniper (*Juniperus communis*), and patches of grasses, especially *Danthonia spicata*. Occasional White Oak (*Quercus alba*) trees and seedlings are also interspersed among the white pines and red oaks on these ridge tops, and along the slopes. Evidence of regeneration of the major dominants was also noted.

The slopes of the ridges generally support somewhat deeper and richer soils. The vegetation reflects the somewhat richer soils, being composed primarily of mixtures of Sugar Maple (*Acer saccharum*), Red Maple (*Acer rubrum*), American Basswood (*Tilia americana*), and White Birch (*Betula papyrifera*), with Red Oak, American Beech (*Fagus grandifolia*), and Eastern White Pine in lesser amounts. The understories also contain Balsam Fir (*Abies balsamea*) and Striped Maple (*Acer pensylvanicum*), in addition to the saplings of the overstory components (Sugar Maple, American

oakswood, Red Oak, etc.). The ground cover in these forests is dominated by Large-leaved Aster (*Aster macrophyllus*) and Wild Sarsaparilla (*Aralia nudicaulis*). These forests are normal in temperature regime, with sandy loam soils, and mesic moisture regime.

In the southeastern-most portion of the study area, some of the depressions and troughs are less prominent, and soils are deeper and better developed. Mixed forests of Eastern Hemlock (*Tsuga canadensis*), Red Maple, White Pine, and Sugar Maple have developed on normal and cooler than normal, mesic, sandy loam sites. Sandier sites support a greater pine component, with Red Pine (*Pinus resinosa*), Red Maple, Eastern White Pine, poplars (*Populus* spp.), and lesser amounts of Eastern Hemlock comprising the forests. Such forests were found along the snowmobile trail along the southern and eastern fringes of the study area.

The troughs between ridges support various kinds of wetlands and wet forest types. In some cases, where mineral (sandy loam) soils have filled the depressions, wet mesic deciduous forests of normal temperature regime have developed. These forests are similar to those found on the slopes of the ridges, except that they contain a higher proportion of Red Maple, and some also contain seedlings of White Cedar (*Thuja occidentalis*). The wettest depressions in these woodlands contain species characteristic of deciduous swamps and swales, including Bluehead Lily (*Clintonia borealis*), Sensitive Fern (*Onoclea sensibilis*), Royal Fern (*Osmunda regalis*), and Striped Maple.

However, most of the depressions between the gneissic ridges contain organic soils, and support moss (*Sphagnum* spp.) mats with a variety of wetland species. Some of the narrower depressions contain dense swards of Virginia Chain-fern (*Woodwardia virginica*), with few other species on the moss mat. One larger depression at the edge (west side of hydro-line) of the study area contains an open pool surrounded by a quaking *Sphagnum* mat, ringed by Black Spruce (*Picea mariana*), Tamarack (*Larix laricina*), Virginia Chain-fern, and various shrubs. This particular wetland also supports a population of the provincially rare White-fringed Orchid (*Platanthera blephariglottis*).

The water levels of many of the wetlands in the Nature Reserve are at least partially controlled by beavers. One wetland within the study area, and another along the southeastern boundary, are in this category. Dead standing timber killed by flooding is characteristic of these wetlands. Rich aquatic plant growth is found in the flooded areas, and shrubs similar to those found on the floating *Sphagnum* mats colonize the edges of these ponds. Eventually, succession likely will lead to the establishment of vegetation similar to that noted above (quaking moss mats ringed by wetland conifers), provided the sites are not re-flooded by beavers in the interim.

Assessment

The assessment of the portion of the Nature Reserve visited must be based on a comparison of its natural heritage values with those of other protected areas (Nature Reserves, Zone 1 areas within National Parks, protected provincially significant ANSIs, etc.) on the same landform type, within Site District 5E-7. Barnett et al. (1991) indicate that the prevailing geological landform type in the Nature Reserve is Precambrian bedrock, composed of "undifferentiated igneous and metamorphic rock, exposed at surface or covered by a discontinuous, thin layer of drift." Macdonald (1986) subdivided this landform type into two subunits (Coastal Gneissic Rocklands and Interior Barren Gneissic Rocklands). O'Donnell Point Nature Reserve is situated in the former. Other protected areas within the Site District that also are situated on this subunit include:

Georgian Bay Islands National Park (N. part of Beausoleil Island and smaller islands)
Blackstone Harbour (Massasauga Wildlands Provincial Park
Killbear Provincial Park
French River Provincial Park

These areas, as well as the remaining portion of the O'Donnell Point Nature Reserve, form the geographic context in which this assessment must occur.

All of the vegetation/site types found within the study area are represented within the parks noted above, and generally also elsewhere within O'Donnell Point Nature Reserve (Brunton 1979, 1991, Geomatics International 1991a, b, Macdonald 1986, Simpson 1978, Simpson and Simpson 1973). The following table summarizes the vegetation/site types, and the locations of similar features within protected areas, additional to those found in the study area, based on current knowledge:

Warmer than normal, very dry to dry, rocky sites: pine-oak woodlands and open rocklands with scattered pine-oak-juniper

- Georgian Bay Islands National Park
- O'Donnell Point Nature Reserve
- Blackstone Harbour Provincial Park
- Killbear Provincial Park
- French River Provincial Park

Warmer than normal, dry, sandy sites: pine-oak woodlands

- Blackstone Harbour Provincial Park

Normal, wet mesic, sandy sites: mixed maple-pine-hemlock woodlands

- Georgian Bay Islands National Park
- Killbear Provincial Park

Normal to cooler than normal, mesic, sandy (sandy loam) sites: mixed maple-pine-birch woodlands, with scattered additional tree species, including red oak, beech, hemlock

- Georgian Bay Islands National Park
- O'Donnell Point Nature Reserve
- Blackstone Harbour Provincial Park

Normal to cooler than normal, wet to saturated, organic sites: Sphagnum-Woodwardia

- Georgian Bay Islands National Park
- O'Donnell Point Nature Reserve
- Blackstone Harbour Provincial Park
- Killbear Provincial Park
- French River Provincial Park

Conclusion

O'Donnell Point Nature Reserve contributes significantly to the achievement of life science representation targets in Ontario. Although the forests of the eastern portion of the Nature Reserve are generally better developed, on richer sites than those of the western portion, they are similar to forests found in other protected areas on the same landform type in Site District 5E-7. The vegetation communities of the eastern portion of the Nature Reserve provide habitat for threatened species such as the Massasauga (*Sistrurus catenatus*) (Simpson 1978), and they form buffers for wetlands containing the provincially rare White-fringed Orchid, immediately adjacent to the study area. Both of these species are also found in the western part of the Nature Reserve.

Thus, although the study area contributes to the protection of provincially significant species, it is ecologically similar to other protected lands nearby, and elsewhere within the Site District. If this portion of the Nature Reserve is to be released, ideally, the Moose-Deer Point Band should be made aware of the life science values found on this piece of land, and perhaps an arrangement for joint management to the resources could be developed.

Literature Cited

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- Geomatics International. 1991a. Zone 1 and Environmentally Sensitive Site Study, Georgian Bay Islands National Park. Canadian Parks Service, Cornwall.
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