

## Secrets of the Brokenhead Wetland and Orchid Conservation

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Grass-pink (*Calopogon tuberosus*)

Environmental protection is a hot topic these days. People line up for or against it and the process is highly politicized. The issues are complex and it's easy to get burnout and give up trying to understand. The initiative to save the Brokenhead Wetlands, sometimes called the Gull Lake Wetlands or the Scanterbury Bog, is this kind of misunderstood project. People have expressed much interest in this unusual area and this article should help to clarify some of these issues.

This wetland is located just northeast of the Brokenhead Ojibway Nation Reserve in Scantbury, Manitoba. The southern portion of the wetland is bisected by Highway #59; the remaining wetlands and fen are just west of Highway#59, north of the junction with secondary highway#304 to Stead. For many years this area has been known to contain rare native plant species, and First Nation communities have been gathering medicinal herbs there for thousands of years. In 1998 and 1999, members of Native Orchid Conservation Inc. (NOCI) conducted a botanical survey of the area to support their recommendation that it be declared an Ecological Reserve. At present, 820 hectares of it is under consideration for ecological reserve status, the highest level of protection for a rare and unique natural area.

Many people are interested in this area for various reasons; aboriginal communities for traditional uses, industry for resource harvesting (forestry, mining and gravel) and others for recreational and educational use. This area is especially important to the Brokenhead Ojibway community as well as to other people in the Southeast Tribal Unit. The Brokenhead Wetland is an area where they have hunted and fished and gathered their medicinal plants for thousands of years. Aboriginal people have been the traditional stewards of this land and continue to carry out this role today. When NOCI was doing the botanical survey we worked closely with members of the Brokenhead Ojibway community especially with Elder Lawrence Smith and his family. He was so helpful to us, advising us where we might find interesting plant specimens and patiently explaining some of the traditional uses for these plants in medicine and in other cultural practices. It was a whole new world to me. It is wonderful to know there are people alive today who still have this knowledge and are willing to share it with us.

This area is unique in that it contains a rich, calcareous (or mineral-rich) fen and a White Cedar forest community, both considered rare in North America. A fen is a type of peatland characterized by a high water table with slow internal drainage by seepage down very gradual slopes. The slow moving groundwater is enriched by upslope materials and thus fens are usually more mineral-rich and less acid than bogs. The pH in this fen is approximately 7.0 to 7.5. This kind of soil pH makes it easier for plants to take up nutrients and thus often becomes a home to rare plant species. While conducting the botanical survey, members of NOCI found 28 of Manitoba's 36 native orchid species there, including the rare Ram's-head Lady's-Slipper (*Cypripedium arietinum*), as well as eight species of carnivorous plants. In total, 23 rare plant species are found there, including the Greenland Primrose (*Primula groenlandicum*).

Protecting this area would ensure that future generations of Manitobans could enjoy these plants but the benefits will be more far reaching than that. Wetlands clean the air by fixing carbon, they filter and replenish ground water, they moderate climate, prevent flooding and drought and provide a home for many plants and animals. It is primarily for these reasons that everyone should be interested in preserving wetlands.

NOCI was formed in 1998 by people who were interested in locating and protecting rare native plant species and their habitat. We are a non-profit group and have approximately 150 members to date. We carry out botanical surveys to locate rare plants. We also conduct field trips in the summer months for the general public, including to the Brokenhead Wetland area, and we monitor the orchid growth there on an ongoing basis. Because we know that native plant species are threatened all over North America and this problem cannot be solved by working alone, we cooperate with other like-minded groups as much as possible.

Among the 23 provincially and nationally rare vascular plants found in the Brokenhead Wetland are three rare, little, pink ones; the shining pink Dragon's-mouth Orchid (*Arethusa bulbosa*), the delicate Grass-pink (*Calopogon tuberosus*) and the Rose pogonia (*Pogonia ophioglossoides*) which looks like a miniature Cattleya orchid. These three all grow in the fen area. Ram's-head (*Cypripedium arietinum*), with a slipper the size of a dime, is our smallest lady's-slipper. It grows in the Cedar Bog area of the wetland. The cedar forest is like a fairyland. The very large old trees lean sideways, their enormous trunks often providing a comfortable seat, while their bright green tops shade the forest floor with a magnificent canopy. Sprinkled on the mossy floor, little orchids gleam in the hollows. The familiar and much-loved Showy Lady's-slipper (*Cypripedium reginae*) grows in abundance on the edges between the bog and the fen. The full botanical report including a complete list of the plant species found there can be seen on our website at [www.nativeorchid.org](http://www.nativeorchid.org).

Mid-June to late July is the best time to see these wetlands because that is the time when the majority of plants are in bloom. Carnivorous plants thrive in the heat of summer. The round-leaved sundew (*Drosera rotundifolia*) can be seen in the fen, its reddish, hairy leaves covered with beads of clear, sticky glue. When an insect crawls onto the leaf, attracted by the droplets, it becomes stuck in the glue and is rapidly digested by the plant's strong digestive juices. The Greenland Primrose blooms in June and the sedges bloom throughout the summer. Although this area is wonderfully attractive, for safety reasons, it is not recommended that you try to visit these wetlands on your own. The wetland is large, covering about seven sections of land in total. It is easy to get lost there. There are large sections of floating bog where it is impossible to walk. There are only very rudimentary trails at present and it is important to stay on them in order not to damage the rare plants and their habitat.

NOCI runs at least one guided field trip every summer, to this area, for its members.

At present NOCI is part of a committee of stakeholders chaired by Carl Smith, Cultural Director on the Brokenhead Ojibway Nation. This committee was set up to plan the protection and management of these important wetlands. By cooperating with the government and other interested parties, we hope to achieve the consensus that will allow us to save this precious piece of Manitoba's natural heritage.

We are working on the publication of a field guide about Manitoba's native orchids, as none exists at present. We recently received a \$7000 grant from the Province of Manitoba Special Conservation Fund, a \$5000 grant from the Shell Environmental Fund and \$2000 from the Winnipeg Foundation, to help fund this project. We expect the book to be ready by November of 2004. It should make it easier for Manitoba orchid enthusiasts to identify our native orchids.

We know that many orchids, especially, are destroyed by picking and being dug up so we try to explain why these are not good practices. Picking flowers usually removes leaves and reduces the plant's ability to photosynthesize, store nutrients and grow. Removal of the flower ensures that no seed will be produced. Digging up the whole plant, even if it survives, removes its genetic traits from the wider gene pool and compromises the entire wild population. When people dig out seedling trees from the ditches they often unintentionally destroy the habitat of small rare orchids such as Rose Pogonia at the same time. This is happening at present off Hwy #15 east of Anola and it is a sad thing to see. Where the ditch used to be pink with orchids in July we now see only ugly holes.

So please do not pick or dig up native orchids. Take pictures instead. Your natural wish to own these lovely plants can be satisfied by purchasing a lab-propagated native orchid that has been grown from seed by a reputable greenhouse. Remember, if you want to grow native orchids, buy a lab propagated plant or join the Manitoba Orchid Society and grow lab-propagated exotic species instead. Many exotic species such as Phalaenopsis are locally readily available, very beautiful, and considerably easier to grow than our native orchids. Please see our website for a list of reputable nurseries that sell them.



Western Prairie fringed-orchid (*Platanthera praecleara*)



Yellow lady's-slipper (*C. parviflorum* var. *makasin*)



Yellow lady's-slipper (*C. parviflorum var. pubescens*)



Dragon's-mouth (*Arethusa bulbosa*)



Ram's-head lady's-slipper (*Cypripedium arietinum*)



Grass-pink (*Calopogon tuberosus*)



Small round-leaved orchid (*Amerorchis rotundifolia*)



Showy lady's-slipper (*Cypripedium reginae*)



Pitcher-plant leaf (*Sarracenia purpurea*)



Round-leaved sundew (*Drosera rotundifolia*)

For further information on rare native plant species, or to join our organization and help us save these plants, please see our website at [www.nativeorchid.org](http://www.nativeorchid.org).



Showy lady's-slipper (*Cypripedium reginae*)