

Orchid Conservation - What Can We Do To Help?

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Loss of native orchid species and their habitat is a significant environmental problem in Manitoba as it is all over the world. Habitat loss is the primary threat to native orchid species. Most of our orchid species grow in or adjacent to wetlands and Manitoba has lost 70% of its wetlands since 1900. Another critical orchid habitat, for our three endangered species, is the Tall Grass Prairie. We have less than 1% of our Tall Grass Prairie remaining. Agriculture and housing development, resource extraction such as logging and mining, and wetland drainage are all major causes of habitat loss. Failure to thrive, including an inability to reproduce sexually due to pollinator loss, disease and environmental stress, are all related to habitat loss and/or modification.

When you add to that the relentless digging up of attractive species like lady's-slippers for transplanting to home gardens, or what is worse, for sale, you began to appreciate just how threatened these plants are. It's a big problem but there are things we can do.

The amateur naturalists who belong to our group, Native Orchid Conservation Inc., try to address these problems in several different ways. We believe that public education is the only thing that will ultimately save these orchids and so we work this into all of our conservation activities. The only way that we will get effective protection for native orchid species and their habitat is to get the general public on side and this requires a change in attitude. Subsequently we put on displays about the need for wetland conservation and protection in shopping malls and at the annual Manitoba Orchid Society show. We talk to people as well about the need to protect orchids by not picking or digging them up. We show them a list of places where they can buy lab-propagated orchids from nurseries that we know to be reputable.

Further to this end, we conduct six or more field trips for our members each summer. We take them out to see these plants in their natural habitat. It is especially gratifying to see their attitude towards wetlands change. At first they think of wetlands as unpleasant, mosquito-ridden and scary wastelands. But once you have shown them a beautiful orchid like Dragon's-mouth (*Arethusa bulbosa*) or the delicate, pink Rose pogonia (*Pogonia ophioglossoides*) growing in the bogs and swamps, they quickly change their minds. As for the Tall Grass Prairie, no one fails to be impressed by the sight of thousands of brilliant, white Western Prairie Fringed-orchids (*Platanthera praeclara*) shining in the sun.



Photo 1: Rose Pogonia - in Fen Habitat



Photo 2: Rose Pogonia - close-up



Photo 3: Western Prairie Fringed-orchid - in Prairie Habitat



Photo 4: Western Prairie Fringed-orchid - close-up

Many people feel helpless when they hear about environmental destruction, global warming, etc. They feel the problems are so large that nothing can be done and they stop trying. People tend to think they should leave everything to the "experts". Joining our organization empowers people because it gives them a chance to help us with our projects and other activities. With this commitment comes the chance to do something positive for the environment and to experience the good feelings that result from these actions. In other words, small conservation organizations such as ours tend to scale the huge problem down into manageable chunks people feel they can handle.

We also do research by conducting botanical surveys for rare plant species and their habitat. There has not been an official botanical survey done for all of Manitoba since Scoggan did one in 1950. Many things have changed since that time. For the past three years, we have worked on a particular project where we surveyed timber sale areas, in the southeastern part of the province, for native orchids and other species of special concern. These timber sales covered an area of more than 500sq.miles. We do these surveys by going out in winter on the frozen logging roads to the cutting areas. We look for native orchids and their habitat. Yes, we do it in the winter! We can tell by the tree species, density of the forest, and companion plants when we are in likely orchid habitat. We scrape back the snow and look for remains of plants or their seedpods. If we find a likely area, we mark it off with flagging tape to alert the cutters and take a GPS reading. In the summer, we come back into the bog or swamp with our amphibious all terrain vehicle and find the place. This time we look for large numbers of plants in bloom and we often find them. If we do we mark off the area plus a buffer zone with flagging tape and fill out special plant forms for the Manitoba Conservation Data Centre. We then notify the forestry so they can use this information when making their harvesting plans and leave it out of the cut if possible. The information we provide to the data centre on locations of rare plants helps them to keep track of populations and make recommendations for their conservation. We have the same arrangement with the peat moss companies. We have received much cooperation and some funding from the provincial government, federal government, timber companies such as Tembec and moss companies such as Premier Horticulture and Sungro Horticulture. We have managed to have hundreds of hectares of orchid habitat protected from these activities as a result. As well we have identified more than 60 new locations for plant species at risk, among them many native orchid species. At present we are conducting similar surveys in the northwestern part of the province.

We have also been conducting research into the effects of selective cutting on understory plants in the Sandilands Forest Reserve. This is a cedar swamp that is home to 13 species of native orchids. For the past six years we have been monitoring the growth of orchids and other understory plants in test plots we have set up there on a four acre site. It was selectively cut in

1997. We take light readings, measure tree growth, orchid growth, species mix, and flower and seedpod production. Our final report will be done in April of this year.

We also use our group status and research results to promote the setting up of more protected areas in the province. For some time now we have been trying to secure Ecological Reserve status for a wetland about 50 miles north of Winnipeg called the Brokenhead Wetlands. The proposed ecological reserve would be 820 hectares in size. Part of this wetland contains a rare, rich, calcareous fen. This wetland is home to 28 native orchid species as well as many other rare plants. We started by doing a botanical survey so we could write up a proposal for its protection and now we find ourselves part of a committee to secure protected status for this wetland. The committee is led by representatives of the adjacent Brokenhead Ojibway First Nation community and includes people from the provincial government ecological reserves board as well the Manitoba Model Forest, and other first nation communities in the southeast tribal unit. Achieving protected area status for an area in the southeast is a lengthy process because there are many stakeholders to be consulted but we are encouraged by recent progress and hope to see it protected soon. We conduct tours to a small part of this wetland for a limited number of people each summer. We are now working with the committee to get boardwalks installed so to avoid damaging the plants and their special habitat.

Another problem for orchids, especially lady's-slippers, in Manitoba, is their loss due to ditch work and road construction. They haven't been doing much road construction lately but they have been going great guns on ditch work! Any orchids in their way are bound to be destroyed so we have tried to move them on occasion as a last resort. We managed to get a small grant from the Winnipeg Foundation to assist with this salvage work because it involves bringing these plants in from the country to the City of Winnipeg. Then we transplant them into parks or other public areas in the city with suitable habitat. We have had some modest success moving *Cypripediums* even in June, but when they do this ditch work in the winter as they often do nowadays, there is no hope. Showy Lady's-slippers (*C.reginae*) and Yellow Lady's-slippers (*C.parviflorum* spp.) transplant and survive fairly well but we have had no luck with Moccasin Flowers (*C.acaule*). Our climate is harsh and very few people can get them to survive here even in their gardens. Moccasin Flowers and our other orchid species do not transplant well and habitat protection is their only hope. Sometime people may be able to get them to grow in suitable wild habitat by direct seeding or some other technique but I am not aware of this having been done successfully in Manitoba as yet. Our group does not do orchid propagation from seed, habitat restoration or recovery work at present but of course those are all viable options for people with the time and expertise.



Photo 5: Moccasin-flower - in Jack pine habitat



Photo 6: Moccasin-flower - close-up



Photo 7: Showy lady's-slipper - in woodland habitat



Photo 8: Showy lady's-slipper - close-up

This summer for the first time we designed and put up a sign to protect a valuable wetland that is home to hundreds of Ragged Fringed orchids (*Platanthera lacera*). It had no protection so we put up a sign advising the general public of the reasons it needed to be protected and asking for their cooperation. We asked them not to drive all over it with A.T.V.'s when hunting etc. The last I heard it was still up and hadn't been shot full of holes! Ragged Fringed Orchid has no protected status in our province even though it is rare. The only protected species in Manitoba are the three endangered ones: Western Prairie Fringed Orchid (*P. praeclara*), Small White Lady's-slippers (*Cypripedium candidum*), and Great Plains Ladies' Tresses (*Spiranthes magnicamporum*). The other 33 species have to manage on their own.



Photo 9: Ragged Fringed-orchid - in swamp habitat



Photo 10: Ragged fringed-orchid - close-up



Photo 11: Great Plains ladies'-tresses - in Prairie Habitat



Photo 12: Great Plains ladies'-tresses - close-up

We are working on a field guide about the orchid species of Manitoba and hope to have it published late in 2004.

In conclusion, although our organization is not large (approximately 175 members) we believe we have had a positive impact on the environment and native orchid species in particular. You can too.

If you would like more information on our projects or our organization please view our website www.nativeorchid.org or contact me at ~~1-204-231-1160~~. Update: Please call the NOCI cell at 204-223-8209 and leave a message, or email the President at president@nativeorchid.org.