

Preserve our Beautiful Bogs

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Our peat bogs and fens are vast areas of untouched wilderness that developed since the last period of glaciation over 10,000 years ago. They are most commonly found in circumpolar, northern latitudes where the glaciers left moist patches of depressed land with poor drainage. This poor drainage resulted in lower oxygen levels which slowed decay. The result was the formation of peat, a precursor of coal. The bog's surface composed of sphagnum moss, can support many plants and animals such as yellowlegs, predatory birds, heron, beaver, muskrat, native orchids, pitcher plants, Labrador tea, bog laurel, bog cranberries, sedges, grasses and sometimes trees and shrubs. The bog ecosystem is complex and there is much still to be learned about it. The hydrology of fens (those rare wetlands that are fed by underground streams) is especially complex. The composition of the moss itself, such as its antibiotic and medicinal properties has yet to be fully researched.

Unlike other wetlands, peat bogs are nourished almost entirely by precipitation. The absorbent properties of the moss and their clay bottoms make bogs a vast reservoir for preserving water. During heavy rains and run-off in the spring, they help to prevent flooding by holding onto the water. In the summer, when drought conditions prevail, this water can be used by plants and animals and so prevent mass die-offs. In an area with such an extreme and variable climate such as ours in Manitoba, their ability to modulate water flow and prevent flooding is especially important. The water they hold makes our climate warmer and wetter. The plants in the bog also clean our air by removing carbon and releasing oxygen.

The bogs and fens have the ability to support rare species of plants and animals; species found nowhere else. Rare and beautiful orchids such as dragon's-mouth (*Arethusa bulbosa*), and carnivorous plants such as the sundew are found here and nowhere else. The sandhill cranes and even the odd pair of whooping cranes can find refuge there and a safe place to raise their young. Exotic insects and amphibians are at home there and available to scientists and dedicated amateurs for research and enjoyment. The Hadashville and East Braintree area is a marvellous place to study insects and amphibians. The rich fen surrounding the Gull Lake Wetlands is one of the most species rich and important natural areas in Manitoba and perhaps North America.

Other interesting things can be found inside the deeper bogs. Very well preserved logs, good enough to be sawed into lumber, as well as fossil pollen grains, can help us to identify the kinds of trees that grew there during the various stages when the bog was being formed. The bog

also contains a record of climate change and air pollution over the years. Well-preserved animals and very old human bodies have been found in the U.S.A. and Europe. Their remarkable state of preservation is due to the high acidity, absence of oxygen, and low temperatures in some bogs as well as the antibiotic properties of the moss. The DNA preserved in these bodies and the artifacts found with them, help us to understand more about very early animals and early human societies. Unfortunately these things have often been found after the moss harvesting machines have destroyed most of them.

In Manitoba 38% of the boreal forest is made up of wetlands. Peat moss has been mined since 1941 starting with the Julius Bog, and has been slowly growing with 3 to 4 other bogs being developed over the past 50 years. However the number of leased holdings has doubled since 1995. This is primarily because of the discovery of commercially profitable bogs in the Interlake area. Quarry leases now number more than 100. Presently moss is being harvested primarily for horticultural purposes, with Premier and SunGro being the two main producers. Most of the moss is shipped to the United States for sale. The rationale behind proposed increased harvesting is that since peat bogs are so extensive, moss could be profitably sold as a substitute for fossil fuels, which are running out in many parts of the world.

In reality, our bogs are not that extensive because they are not really renewable in the foreseeable future. Peat bogs are very slow growing (most bogs are many thousands of years old) and great care has to be taken that not too much is harvested. After the moss has been harvested, the land has traditionally been left a muddy wasteland or converted to agriculture or planted with a monoculture of plantation conifers. None of these options is a replacement for the wonderfully complex bog ecosystem. In recent years, the Canadian Sphagnum Peat Moss Association is to be congratulated for setting some areas of virgin bog aside in their licence areas. They have also cooperated with government regulatory agencies in restoring the harvested bogs to sphagnum-ready condition before decommissioning. There is much more that could be done to promote the restoration and conservation of our bogs and fens and we should all take an interest in this. Many countries in Scandinavia and Europe have exhausted their supplies of peat moss.

Our elected officials have a duty to assume a leadership role in protecting our natural resources. They must consult with scientists and people with field experience before they make ill-considered decisions affecting our natural resources. Every thinking person understands that not all development should be market driven. The health of the environment should be the first consideration, not the last. Mistakes made now will not be reversible in the future. Sustainable development was the catchword of the '90's. Let's live up to that ideal in the new millennium.