

localnews

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LIVING

Beauty in the oddest places

Intricate markings of a mussel shell or fungus also celebrate diversity

When I think of biodiversity in Peterborough County, I think of a May dawn at Petroglyphs Provincial Park, listening to the voices of 30 or more bird species, many of which are singing at once . . . least flycatcher, red-eyed vireo, yellow-rumped warbler, ovenbird, northern waterthrush, pine warbler, ruby-crowned kinglet, hermit thrush, veery, purple finch, evening grosbeak, etc. Then, in the back of mind, I compare this to the relative scarcity of song to be found in most urban environments where maybe a cardinal, mourning dove, robin, house sparrow and European starling are advertising their presence. It's easy to see where the greater aesthetic experience is to be found.



DREW MONKMAN photo



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U.S. GEOLOGICAL SURVEY photo



KARIN LAINE photo

Turkey tail (centre), a common bracket fungus surrounded by (clockwise from top left) a Christmas fern, yellow lady's-slipper orchid, a zebra mussel and he showy lady's slipper.



Drew Monkman

OUR CHANGING SEASONS

Although we may not readily appreciate it, biodiversity – the variations in species, their lives and their habitats – provides us with most of what sustains our lives. Our physical and spiritual quality of life depends upon it. Where would we be without bees to pollinate plants, bacteria to break down toxic substances, earthworms to improve soil fertility, plants as a source of medicinal resources or hummingbirds to simply marvel at?

Plants and animals are also a huge part of our traditions and culture. Nationally, the loon, beaver, and maple leaf are iconic Canadian symbols, proudly emblazoned on everything from our money to our flag. On a more local scale, what would the Kawarthas be without the sugar maple, the white pine, the osprey, the ruby-throated hummingbird, the white-tailed deer, the spring peeper, the painted turtle, the muskellunge, or the monarch butterfly? People come from far and wide to admire the natural features of the Kawarthas' countryside – features that are themselves produced by biodiversity. It is a treasure that enhances all our lives.

Today, I will conclude my overview of biodiversity in the flora and fauna of the Kawarthas by looking at mussels, crayfish, plants, and fungi.

MUSSELS

Freshwater mussels are bivalve molluscs that are soft-bodied, non-segmented invertebrates with a pair of hinged shells. Their beauty and intricate markings come as a surprise to many people. There are nearly 1,000 species of freshwater mussels worldwide, of which 55 species are found in Canada, 41 in Ontario, and 10 in Peterborough County. The most common species of shallow shoreline areas of ponds and lakes are the eastern elliptio and fatmucket. The elktoe and creek heelsplitter mussels are fairly common species of creeks and rivers.

A disturbing two-thirds of Ontario's freshwater mussels are of provincial conservation concern. In fact, eight species have been designated as endangered. Locally, the rainbow mussel is a threatened species. The introduction of the zebra mussel has had a dramatic impact on native freshwater mussels, resulting in a decline in the numbers and diversity of native species in infested lakes and rivers, including the Kawartha Lakes.

CRAYFISH

Freshwater crayfish are well-known crustaceans. There are more than 540 species of crayfish in the world, of which 11 are found in Canada, nine species in Ontario, and seven in Peterborough County. There are currently no crayfish species designated as species at risk. However, because of the inadvertent introduction of the rusty crayfish, an invasive exotic species native to the Ohio River Basin, many native crayfish have been displaced and are now greatly reduced in abundance. The vast majority of crayfish in our local streams, rivers, and lakes are rusty crayfish. This represents a significant loss in terms of Peterborough County's crustacean biodiversity.

PLANTS

Vascular plants comprise the majority of the familiar plant groups and include flowering plants, trees, shrubs, herbs (plants lacking a permanent, woody stem) and ferns. There are more than 260,000 species of vascular plants globally, of which 5,074 species are found in Canada. There are about 3,055 species of vascular plants in Ontario.

According to the *General Status of Species in Canada* (2005), there are 22 species in Ontario that have become extirpated and therefore no longer exist in the province; 55 species at risk (e.g.

butternut, American ginseng); and 184 species that are characterized as sensitive and therefore may become at risk. Approximately 1,017 vascular plant species are considered exotic. Exotics are species that have been moved beyond their natural range as a result of human activity and have spread outside of cultivation into the wild.

According to the 1998 *Peterborough County Natural History Summary*, compiled by Peter Burke, Colin Jones, Jennifer Line, Michael Oldham, and Peter Sorrell, approximately 1,150 species of vascular plants can be found locally. Of these 895 are considered to be native to the county and 271 (23%) are considered non-native. In other words, nearly one local plant in four is an exotic. This is especially the case in disturbed habitats. Approximately 159 species of local native plants are considered to be rare. However, the status of many local species is still poorly known, and it is likely that, with more information, the number of rare species here will increase. Threats to vascular plants include habitat loss and habitat degradation. Over-harvesting is another threat for some species, particularly those valued for medicinal properties or their beauty.

The impact of exotic species has also become more apparent in recent years with the establishment of plants such as

purple loosestrife, European buckthorn, dog-strangling vine, garlic mustard, common reed (phragmites), and European frog-bit, to name a few. All of these are also known as "invasive species." The term is used to describe introduced species that represent a threat to the environment, the economy or to society, including human health.

Our local checklist of plants is really quite impressive. It includes 107 grasses (Poaceae), 102 sedges (Carex), 43 ferns, five pines, three spruce, 16 pondweeds, six bulrushes (Scirpus), 17 rushes (Juncaceae), four trilliums, 36 orchids, 16 willows, six oaks, six junberries (Amelanchier), six dogwoods, five hawthorns, five cherries, 11 maples, four elms, four birch, eight St. John's-worts, 15 violets, 14 bedstraws (Galium), eight honeysuckles, seven Viburnums, 17 asters, five sunflowers, 14 goldenrods, and 17 knotweeds (Polygonum) . . . to name but less than half of the county's species. Getting to know the local grasses and sedges alone would be a major accomplishment!

Orchids represent a very special part of our botanical biodiversity. In fact, the Kawarthas has long enjoyed a special status among orchid lovers. The first book on Ontario's orchids was researched and written here by a Peterborough resident, Frank Morris, in 1929. Some of the most interesting pas-

sages are his vivid descriptions of orchid-searching trips to the Cavan Swamp and Stony Lake. Unfortunately, one becomes immediately aware of how much more plentiful orchids were back then. As a result of habitat loss, indiscriminate picking and digging up for transplantation, the majority of orchid species have become far less common. In fact, I recall a local naturalist telling me that in the 1950s, people used to sell bouquets of showy lady's-slippers at the Farmers' Market!

Another fascinating part of our botanical heritage is tallgrass prairie. Characterized by grass species reaching over two metres in height, tallgrass prairie used to extend over large areas of southern Ontario. The Peterborough and Rice Lake area was its northeastern extreme. It is now the rarest ecosystem in the entire province. In addition to the typical grass species such as big bluestem, little bluestem, switchgrass and Indian grass, tallgrass prairie is home to a number of beautiful wildflowers. In our region, these include butterfly milkweed, wild bergamot, smooth beardtongue, black-eyed Susan, sky blue aster, prairie buttercup and showy tick-trefoil. Several small remnants of our prairie heritage still remain, mostly in the vicinity of Rice Lake. The Ecology Park, located at Beavermead Park in Peterborough, has a prairie demonstration site that was planted with locally indigenous prairie plants. There is also a larger prairie restoration site at Alderville First Nations, south of Hastings.

Ferns, too, offer a treasure-trove of local plant diversity. Nearly all of Ontario's fern species can be found in the county. They are most abundant in older forests with large trees and extensive canopies. They also thrive along streams, waterfalls, and in ravines. Some of the best places to see ferns locally include Silent Lake Provincial Park (Bonnie's Pond Trail), Petroglyphs Provincial Park (High Falls Trail), Mark S. Burnham Provincial Park, Peter's Woods Provincial Nature Reserve, and the Warsaw Caves Conservation Area. Warsaw Caves is home to the walking fern, a rare species whose arching leaf tips customarily sprout new plants, in this way "walking" and spreading. Note that all of the areas mentioned above are very rich in botanical diversity in general.

FUNGI

It is estimated that there are over a million species of fungi in the world. Of these, many thousands can be found in Canada. However, the numbers involved are only estimates at this point. The same goes for Ontario and Peterborough County. Suffice it to say that at least 600 species have been recorded in the province and probably most of these are present in the county. They include slime moulds, sac fungi, puffballs, bracket fungi, jelly fungi, coral fungi, tooth fungi, boletes, and gill fungi. If you are interested in exploring this fascinating but challenging kingdom of organisms, I suggest purchasing *Mushrooms of Ontario and Eastern Canada* by George Barron.

For more information on Ontario's biodiversity, go to: www.mnr.gov.on.ca/ and click on "biodiversity" in the Special Initiatives box.

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