

Welcome to Shaw Woods

by Grant Dobson

Old-growth forests are a rarity in eastern Canada, particularly near big cities, but there's one just an hour's drive west of Canada's capital, Ottawa, virtually untouched since European explorers first ventured up the Ottawa River. Known as Shaw Woods, this

Education Center Inc. is to foster an ethic of responsible environmental stewardship and sustainable forestry management through experiential education aimed at school children and the public at large.

As in any old-growth forest, there are many dead trees, some standing, others fallen over beside the trails.

mixed forests. John Shaw, a Scottish miller, and his wife Barbara Thompson arrived with their two-year-old son by canoe from Bytown (the former name of Ottawa) in 1847. Mammoth grist stones remain near the site of the original dam they built on the Snake River. The three-storey grist mill served early settlers who would often leave home at dawn, walk up to 20 kilometres (12 miles) with a 30-kilogram (66-pound) bag of grain on their back and return by nightfall with the ground flour.

For thousands of years before that, the river linked Algonquin people living along the shores of Lake Doré with the rest of the Ottawa River watershed. These wetlands represented a rich food source, both for animals that could be hunted and plants that could be gathered. The American elder (*Sambucus canadensis*) growing in abundance along the river banks served as both food and medicine. Further out into the marsh native peoples would gather broad-leaved arrowhead (*Sagittaria latifolia*) from muskrat lodges or wade barefoot into the mud for the plant's tasty potato-shaped tubers.

Seldom travelled today, the Snake, as the river is affectionately known, offers a great day trip. Go during high-water season or be prepared to pull out for beaver dams and fallen trees. If you launch from Lake Doré there is a free parking lot, a nice beach on shallow water and plenty of great spots for picnics. Doré's claim to fame: it's the world's largest inland freshwater lake without an island!

From the parking lot, paddle north to the outlet of Snake River and then on through Shaws Pond (the old maps skip the apostrophe) and downriver as far as you wish to explore. Several short portages are necessary. You can expect many opportunities to view waterfowl and aquatic mammals such as otters, minks and beavers.

Flowering plants are well represented along the shoreline and



PHOTOGRAPH BY GRANT DOBSON

Old-growth eastern hemlock (*Tsuga canadensis*)

magnificent forest is near Lake Doré. Walking into it is a journey back in time, a glimpse of wilderness in the 17th century Ottawa Valley.

A first-time visitor will be amazed simply by the height of the trees. The lowest branches of many of these sugar maples (*Acer saccharum*), American beeches (*Fagus grandifolia*) and eastern hemlocks (*Tsuga canadensis*) are as high as the canopy of many woodlots around Southern Ontario. Some of these trees are over two centuries old. Some have diameters up to one metre (three feet) across.

The woods first opened to the public in the 1970s. More recently, a not-for-profit, charitable organization of local volunteers has expanded the trail network, built boardwalks over sensitive areas and developed a self-guided interpretive program. The mandate of the Shaw Woods Outdoor

This in no way suggests that the forest is unhealthy. Very much the opposite is true. Down woody debris is the term used to describe all the woody material that accumulates on the forest floor. The resulting "messy" arrangement functions at a much higher level than the park-like forests we sometimes try to create. Many forest animals from snails to salamanders to shrews utilize the rich habitat to find food and shelter. Bark and fine twigs are also an important source of elements such as calcium. They are recycled through decomposition by countless invertebrates and then move back up the food chain.

These woods are named for the Shaw family that has lived here for many years and still allows public access to the 50 hectares (124 acres) of old-growth forest and an adjacent 160 hectares (395 acres) of wetlands and

Continued on page 6

Continued from page 5

include large swathes of cardinal flower (*Lobelia cardinalis*), spotted Joe Pye weed (*Eupatorium maculatum*), blue vervain (*Verbena hastata*) and swamp milkweed (*Asclepias incarnata*).

The secretive Canada lynx is a rare northern mammal that makes its home in the surrounding woodlands. In spring, the chorus of wood warblers against a backdrop of wildflowers, ferns and fungi attracts many enthusiastic birdwatchers and naturalists from around the region.

Welcome additions to this beautiful wilderness are the new trailhead information kiosks. These were designed to blend into the natural landscape. The Shaw Woods have a great many rock outcroppings and glacial erratics topped with ferns and dwarf creeping shrubs which inspired the creation of green roofs both to shelter the kiosks and to accommodate similar plant communities.

The structures were built using a sturdy post and beam design of local white cedar (*Thuja occidentalis*). A waterproof membrane was then installed on the roof and 50-millimetre x 50-millimetre (two-inch by two-inch) cedar strips attached

every 460 millimetres (18 inches) down the slope to keep plants and soil in place. The bottom strip had 19-millimetre (3/4-inch) triangular notches cut out every 200 millimetres (eight inches) to allow for drainage. We next put down a 25-millimetre (one-inch) substrate layer (1/2 sandy loam, 1/4 peat, 1/4 compost) to contain the plants.

The plants we selected needed to be native to Shaw Woods and both drought- and cold- tolerant. As the centre is open year-round, winter interest was also a consideration. Our final plant list narrowed to four species: common polypody (*Polypodium virginianum*), bearberry (*Arctostaphylos uva-ursi*), partridgeberry (*Mitchella repens*) and pale corydalis (*Corydalis sempervirens*). Common polypody, also known as resurrection fern (so named for its ability to quickly restore its shriveled leathery fronds after



PHOTOGRAPH BY GRANT DOBSON

Pale corydalis - one of the standouts on the green roofs

extended drought), is a common species draped over glacial erratics and the rock outcroppings of the escarpment. Its creeping rhizome is well-suited to the very shallow, subacid soil of the rooftops. Bearberry's dark green, waxy leaves on long, trailing, reddish-brown branchlets are extremely drought-tolerant. The leaves, known as kinnikinnick, were historically used in a tobacco mixture. After many years of frustration with inconsistent success in rooting cuttings of this plant in our nursery, we now use ground layering for propagation. Partridgeberry is a small trailing vine forming part of the ground cover layer of this old-growth forest. Partridgeberry vines are easily smothered by accumulating layers of deciduous leaves; consequently, they do best on banks or, in our case, roofs, where most leaves tumble off them. The white to purple-fringed, fragrant flowers appear in late June; the scarlet fruit persists all winter – if not consumed by ruffed grouse or wild turkeys. Since it needs a little more soil moisture than the polypody or bearberry, we planted it towards the bottom slope of the roofs. Pale corydalis is a pretty flowering native that looks much better when grown on lean soil. Our plants stayed under 15 centimetres (six inches) and bloomed in May and again in late September.

Most green roofs have some transient heat coming from a building. In this case, they were fully exposed to -30C (-22F) weather. My fellow Shaw



PHOTOGRAPH BY GRANT DOBSON

Shaws Pond lookout

Woods board members were a little sceptical about the plantings but gave me, as the one primarily responsible for site interpretation and trail development, the benefit of the doubt. I was greatly relieved when the plants thrived.

You can best absorb the essence of Shaw Woods during a quiet walk along one of the six trails, a 7.5-kilometre (4.7-mile) network meandering through wetlands and forest, along the Snake River and Doré Scarp to a scenic lookout. The observation platform is a great place to stop for a lunch break and watch the comings and goings of a pair of bald eagles. Their enormous stick nest is visible high up in a white pine (*Pinus strobus*) across Shaws Pond. This man-made pond was created in the 18th century to provide water power for the grist mill and sawmill.

The origins of the escarpment you will be standing on go back considerably further than that. About 450 - 500 million years ago, during the Paleozoic era, at a time when life on earth was beginning to diversify rapidly, major catastrophic events



PHOTOGRAPH BY GRANT DOBSON

Common polypody with partridgeberry on the west trailhead green roof

shaped the backbone of the landscape around you. This happened when the earth's crust moved downwards about a kilometre (six-tenths of a mile) between the Mattawa and Petawawa faults. The dropped-down block of bedrock, several tens of kilometres wide, formed a rift valley known as the Ottawa Bonnechere Graben. There are three minor breaks in it; the one visible here is known as the Doré Scarp.

Jump ahead to 11,000 years ago and the Wisconsin Glacier's massive weight of two-kilometre-deep (1.2 miles) ice has sheared off, transporting and depositing the glacial erratics you will see across the pond along the Old-Growth Trail. For a period of time, the glacier blocked the current outlet of Lake Doré and carved out the Great Gulley just to your west over the ridge. During that time, the landscape here would have looked remarkably different, similar to the shrub tundra of today's Hudson Bay coastline. Over the following 1,000 years or so, an open forest of jack pine (*Pinus banksiana*), black spruce (*Picea mariana*), balsam fir (*Abies balsamea*) and poplar (*Populus* spp.) gradually developed.

Jump ahead once again to 5,000 years ago and most of the individual organisms present today had arrived from residual populations to the south of the glacier's reach. The northern temperate forest, as we know it here, is a relatively recent incarnation. This forest type is characterized (and this makes it unique among all the world's forests) by three distinct groups of organisms, all of which evolved together under its protective canopy: wood warblers, spring ephemerals and salamanders.

Two interpretive map-guides illuminate the numerous connections between the biological, geological and human histories of the land. Many of these are easily seen at numbered stops along the trail system.

Whether you stop in for an hour's walk or a whole day, admission and parking are both free. For trail maps, visitor guides and other information go to www.shawwoods.ca. Check the Shaw Woods Facebook page for numerous photos and descriptions of flora, fauna and other items of interest.

Grant Dobson is a volunteer director of the Shaw Woods Outdoor Education Center Inc. In his spare time he is developing a botanic garden of Ottawa Valley indigenous plants. He also operates a nursery and market garden with his wife Dorothy (www.connaughtnursery.com).



PHOTOGRAPH BY DOROTHY DOBSON

Grant Dobson installing plants on one of the experimental green roofs at Shaw Woods