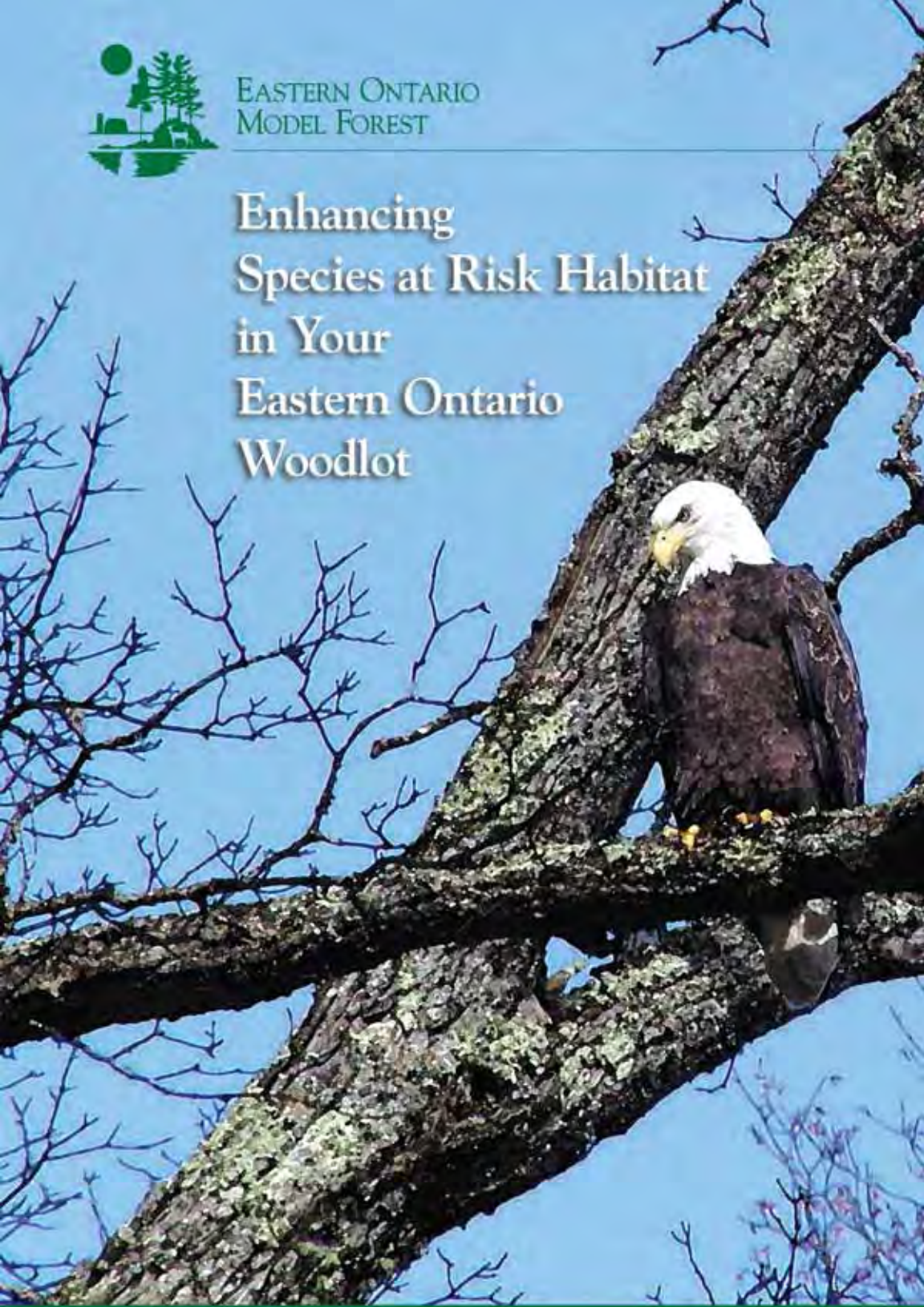
Eastern Ontario Model Forest

Enhancing Species at Risk Habitat in Your Eastern Ontario Woodlot



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Eastern Ontario Model Forest
Forêt modèle de l'Est de l'Ontario

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ENHANCING SPECIES AT RISK HABITAT IN YOUR EASTERN ONTARIO WOODLOT

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1.0 Introduction

The Eastern Ontario Model Forest (EOMF) works closely with private landowners and local communities to sustain and enhance the forests of eastern Ontario. Species at risk stewardship represents one of our many program areas, which span ecological, economic, social, and cultural concerns related to the forest.

Species at risk stewardship represents one of our many program areas.

This booklet is intended as a tool to assist landowners in enhancing species at risk habitat. It begins with a discussion of what constitutes a species at risk, why species are 'at risk', and how you, as a landowner, can play a central role in ensuring the survival of species at risk. Woodland habitats used by species at risk are then reviewed in some detail. The lion's share of the booklet is devoted to a discussion of the practical ways in which you can enhance species at risk habitat in your woodlot. Legislative considerations are reviewed in brief.

1.1 What is a species at risk?

- Any plant or animal threatened by or vulnerable to extinction, as designated by the Committee on the Status of Species at Risk in Ontario (COSSARO) and the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).
- Ontario currently has 185 species that are at risk of disappearing, 47 of which are found within the Eastern Ontario Model Forest (EOMF) area.

1.2 Why are species becoming at risk?

Human-causes, natural factors and loss of habitat are the reasons for species becoming extinct.

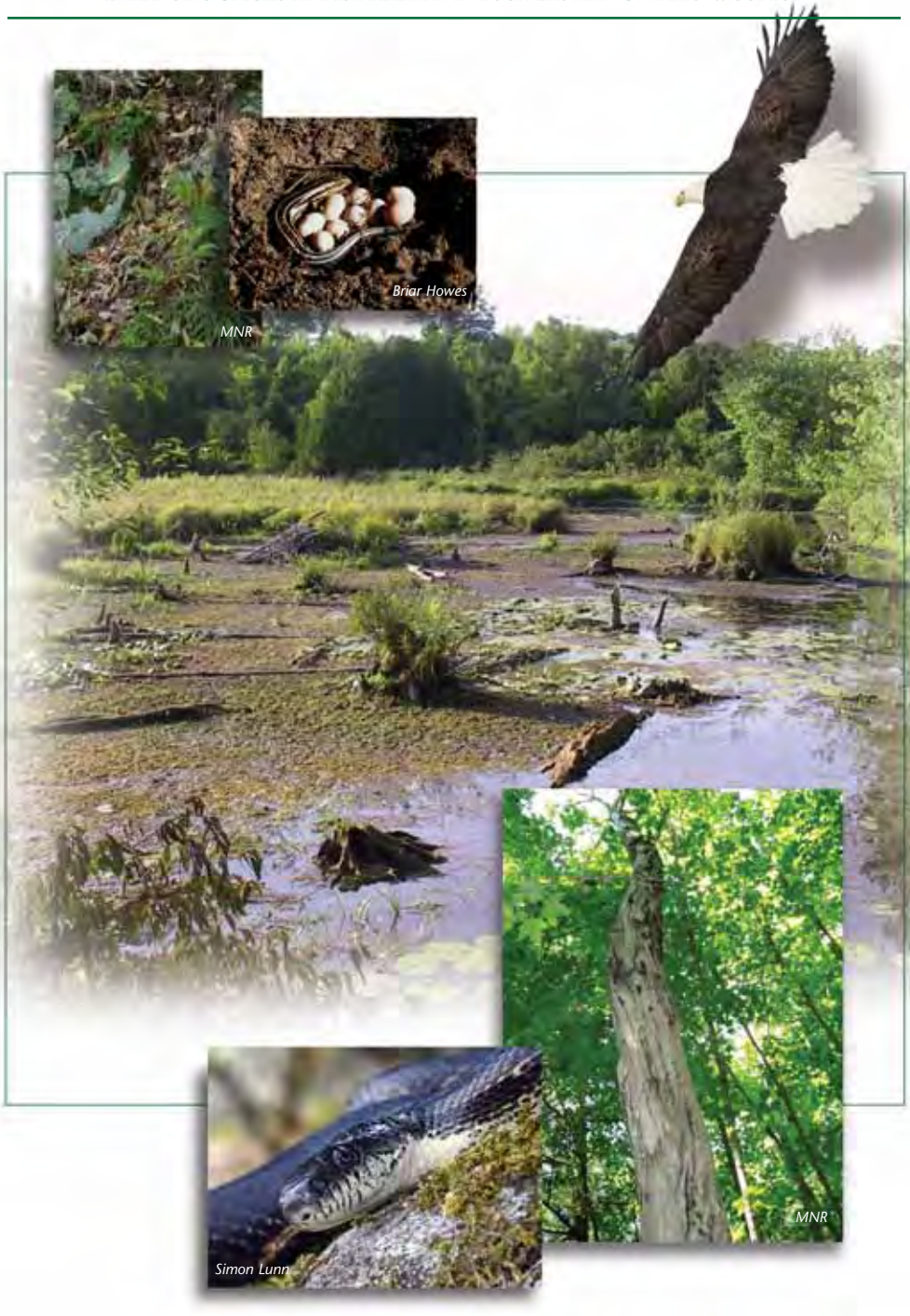
- Many species are at risk due to **human-causes** (habitat degradation, collection for the pet trade, over-harvesting, changing land use / landscape, persecution, pollution) and/or **natural factors** (specialized life history, disease, small geographic range, large territory size, rarity of habitat).
- The most common factor in a species becoming at risk is loss of habitat. It is therefore important to conserve or enhance habitat for species that are most at risk of becoming extinct.

1.3 Landowners are crucial to species at risk survival

- Almost 90 per cent of the land in eastern Ontario is privately owned.
- About 30 per cent of the land in eastern Ontario is forested.
- Reporting species at risk to your Ministry of Natural Resources district office can help protect these species from future land development.

1.4 Which woodland habitats are used by species at risk?

There are a number of rare woodland species that could be living in your woodlot. You may not have noticed them because some species are difficult to identify, are small in size, are elusive, or their populations are simply not using the habitat yet. More than 15 species at risk in eastern Ontario call woodlands their home and each species prefers certain characteristics of a forest. Depending on the type of woodlot that you have, you can maintain it in order to provide habitat for some of these species and help to ensure their survival. You can create more habitat to encourage recovery and provide future habitat for species. This booklet outlines the importance of eastern Ontario's woodland types as habitat for species at risk. It also explains how to identify and enhance species at risk habitat.


Briar Howes
MNR
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Simon Lunn

2.0 Species at risk categorized by woodland type

2.1 Tolerant Hardwoods Forest Type

The **Tolerant Hardwoods** forest cover type is dominated primarily by sugar maple. Sugar maple occasionally trades or shares dominance with American beech, white ash, bitternut hickory, red oak and black maple.

The Tolerant Hardwoods include the following five cover types: sugar maple; sugar maple-ironwood; sugar maple-white ash-basswood; sugar maple-American beech; and red oak-sugar maple.

The Tolerant Hardwoods are often found on shallow sands and loams over bedrock to wet clays. The sugar maple-ironwood cover type is commonly found on shallow sands and loams while sugar maple-white ash-basswood type is commonly associated with wet clays.

For more information on your woodland type and woodlot management, refer to *Agroforestry Best Management Practices Volume 1: Woodlot Management*.

You can order it online from the following website:
www.omafra.gov.on.ca/english/products/best.html

Certain species at risk in eastern Ontario prefer or could use Tolerant Hardwood; such species include:

- Butternut
- American ginseng
- Cerulean warbler
- Gray fox
- Eastern wolf
- Louisiana waterthrush

Each of these species prefers certain characteristics of a hardwood forest type. See the species descriptions that follow in section 4.0 to find out how to maintain their habitat and attract them to your woodlot.

2.2 Swamp Hardwoods Forest Type

In addition to being forested habitats, **Swamp Hardwoods** are forests which are wet or have standing water for all or a portion of the year. Consequently, Swamp Hardwoods attract many wetland species not found in the drier hardwood forest cover types.

Swamp Hardwoods are typically dominated by soft maples (such as red maple and silver maple), red ash or black ash. The following forest cover types make up Swamp Hardwoods: soft maple-ash; hemlock-red maple; Manitoba maple; and lowland mixed hardwoods. The Swamp Hardwoods also include any other hardwood stands that have recently been permanently flooded due to either a beaver- or human-made dam. These newly created Swamp Hardwoods will later evolve into ponds, as drowned trees die and aquatic vegetation becomes established. Deciduous forests occurring on small islands and along shorelines are considered to fall within the Swamp Hardwoods forest type; so too do moist poplar in wet sand or loams.

Certain species at risk in eastern Ontario prefer or could use Swamp Hardwood forests; such species include:

- Red-headed woodpecker
- Eastern wolf
- Gray fox
- Flooded jellyskin
- Louisiana waterthrush

2.3 Poplar or White Birch Forest Type

The **Poplar** forest type is dominated by trembling aspen, largetooth aspen and balsam poplar. Forest cover types in this group include dry poplar and black willow-Manitoba maple. The dry poplar cover type occurs when trembling aspen and/or large-tooth aspen dominate in pure stand or in association with white birch. The black willow-Manitoba maple type occurs when trembling aspen dominates the canopy in association with black willow and Manitoba maple.

The **White Birch** forest type group includes: white cedar lowlands; white cedar upland; and white cedar shallow sites when white birch is the dominant species. Common species found with white birch in these forest types include: Eastern white cedar; balsam fir; tamarack; and Eastern hemlock.


Simon Lunn

Certain species at risk in eastern Ontario prefer or could use poplar forests; such species include:

- Eastern Black rat snake
- Wood turtle
- Gray fox
- Eastern wolf

2.4 Red Oak Forest Type

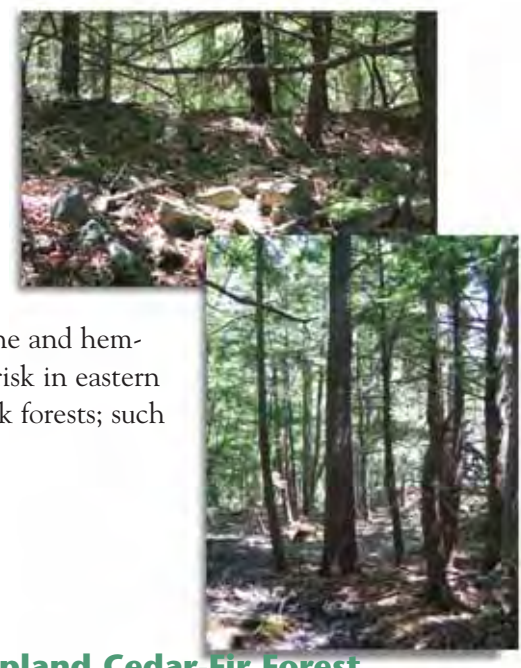
Red Oak accounts for most of the stocking in this group which includes two cover types: red oak and red oak-sugar maple. Other Red Oak forest types that belong to this group are red oak plantation, bur oak, and white oak. Certain species at risk in eastern Ontario prefer or could use oak forests; such species include:

- Deerberry
- Cerulean warbler
- Red-headed woodpecker
- Five-lined skink
- Eastern wolf
- Gray fox

2.5 Pine Forest Type

Eastern White Pine is a dominant species in this group and may form pure stands. Pure and mixed stands of other pines also belong to this group. The Pine group is made up of the following cover types: white pine; hemlock-white pine; jack pine; white pine plantation; and red pine plantation. Certain species at risk in eastern Ontario prefer or could use pine forests; such species include:

- Bald eagle
- Kirtland's warbler
- Wood turtle
- Five-lined skink
- Eastern wolf



2.6 Hemlock Forest Type

The **Hemlock** forest cover type group occurs when Eastern hemlock is dominant in these two cover types: hemlock-white pine and hemlock-red maple. Certain species at risk in eastern Ontario prefer or could use hemlock forests; such species include:

- Bald eagle
- Louisiana waterthrush
- Wood turtle
- Eastern wolf

2.7 Swamp Cedar-Fir or Upland Cedar-Fir Forest Type

In the **Swamp Cedar-Fir** forest type, Eastern white cedar, balsam fir or less often tamarack, black spruce, or other conifers are dominant together or predominate in a mixture of associates. In very wet situations, this group may correspond to "treed muskeg." Swamp Cedar-Fir, as well as being a forested habitat, is also a wetland when its soil surface is seasonally flooded. As a result, the Swamp Cedar-Fir forest group attracts many wildlife species not attracted to the other drier coniferous habitats.

In the **Upland Cedar-Fir** group, Eastern white cedar, balsam fir or less often tamarack, black spruce, white spruce or Eastern red cedar are dominant together or predominate in a mixture of associates.

Certain species at risk in eastern Ontario prefer or could use Cedar-Fir forests; such species include:

- Bald eagle
- Wood turtle
- Eastern wolf
- Gray fox

Table 1: **Species at risk habitat preferences by forest cover type**

	Hardwood	Swamp Hardwood	Poplar/ Birch	Oak	Pine	Hemlock	Cedar-Fir
Butternut	X			X			
Blunt-lobed Woodsia	X			X			
American Ginseng	X						
Deerberry				X			
Bald Eagle					X	X	X
Cerulean Warbler	X			X			
Red-headed Woodpecker		X		X			
Kirtland's Warbler					X		
Louisiana Waterthrush	X	X				X	
Five-lined Skink				X	X		
Wood Turtle		X	X		X	X	X
Black Ratsnake			X				
Eastern Wolf	X	X	X	X	X	X	X
Gray Fox	X	X	X	X			X
Flooded Jellyskin		X					

3.0 Conserving biodiversity in your woodlot

Before you try to experiment and attract rare species to your woodlot, here are a couple of tips to help you enhance the general habitat and increase biodiversity.

- Work with your neighbours to reconnect fragmented habitats. Connect your habitats by creating corridors by planting or leaving some portions of forest to grow back. Avoid fragmenting further with roads or large openings.
- Protect soil and vegetation by avoiding vehicle use during periods of wet weather and on slopes. Avoid using vehicles in heronries and riparian areas during the breeding season.
- Retain mast trees (those bearing fruits or nuts) for their ability to produce food for wildlife. Oak, butternut, black cherry, and basswood are trees that produce edible fruit. Seven to eight mast trees per hectare are recommended.

• Retain snags and cavity trees. They are important for species that need nesting areas. If possible, retain at least five large fallen logs per hectare and six cavity trees or snags per hectare.

• Create reptile and amphibian habitat by stacking wood or by placing boards in suitable areas and allowing them to rot.

• Remove invasive alien plant species.

• Retain super-canopy trees for use by raptors and bears (at least one per four hectares).

• Leave 10 per cent of your woodlot for old growth – with trees measuring 50 centimetres or more in diameter at breast height (dbh).

4.0 Species at risk in your eastern Ontario woodlot

4.1 Butternut
(Juglans cinerea)

Butternut, a common though not abundant tree in eastern Ontario, is now threatened with extinction due to a fungal disease called butternut canker. The fungus kills by infecting the inner bark or cambial layer, creating cankers that eventually coalesce and kill twigs, branches and then the whole tree. Both healthy and injured trees of any age can become infected. The disease usually starts in the lower crown and spreads to the main stem and root flares.

Some of the common symptoms associated with butternut canker include:

- Dying branches in the upper, sunlit part of the crown (dead shaded branches are normal).
- A thin black fluid running from cracks in the bark in the spring. During summer, fall and winter, the black fluid dries to become a sooty area on the outside of the bark at the canker site.
- Cankers – long, narrow, dark areas of killed inner bark under sooty or loose bark on twigs, branches, stems and root flares.

Butternut is a unique part of our eastern forest diversity which is so important to the overall health of our landscape. It is the most northern edible nut-producing species. Its sweet oily nuts are a high quality food

for many animal species, and have been enjoyed by humans for years.

Butternut is usually found in riparian areas but is also found on rich well-drained loams and well-drained gravels, especially those of limestone origins. It is commonly associated with basswood, black cherry, beech, elm, hemlock, hickory, oak, red maple, sugar maple, white ash and yellow birch. Butternut is very intolerant of shade, therefore removing any vegetation that is shading the crown of any butternut will help it to survive and thrive. Consult with experts for the best areas to plant this tree. Make sure you plant seed from locally adapted, vigorous, non-canker-ridden trees. And note that a diseased threatened tree needs more care and tending than others.

The Forest Gene Conservation Association (FGCA) is encouraging landowners to conserve and report their butternut trees. Several local recovery partners, including the Rideau Valley Conservation Authority in eastern Ontario, have programs to assess trees and collect seed. Ultimately they want to find the most vigorous butternut to clone through grafting and grow in butternut archives such as the new Eastern Ontario Butternut Archive at the Ferguson Forest Centre's nursery forest in Kemptville. These trees can eventually be screened for genetic resistance or tolerance to butternut canker and will be the foundation of a breeding and reintroduction program. To assist in the cause, landowners who have butternut on their property can fill out and return a survey to the FGCA. For more information visit the FGCA website at www.fgca.net.

Ontario's new Endangered Species Act protects natural butternut that are vigorously surviving the disease (planted trees are not affected by

the Act). Contact your local Ministry of Natural Resources office to ask for details before you consider cutting a butternut tree. Contact the Rideau Valley Conservation Authority to ask about having your butternut trees assessed.

4.2 Blunt-lobed Woodsia
(Woodsia obtusa)

This rare fern occurs infrequently across the landscape of eastern Ontario. It prefers rocky outcrops of calcareous rock such as limestone, marble, and dolomite. The soil is usually quite shallow and well-drained. The average depth of the soil for this species is only 3.5 cm. It is generally found on slopes averaging 43 degrees. It uses areas where small trees (10 to 20 cm dbh) occur. Blunt-lobed woodsia usually grows in open forests of small, scattered tree species. It usually grows in tolerant hardwood forests amongst red oak or maple trees.

This species may be linked to certain microclimates and is difficult to encourage since the right conditions are seemingly rarely available. The factors limiting its occurrence are not fully understood, therefore protecting its habitat and maintaining current conditions where it does grow are the best management practices for this species.

4.3 American Ginseng
(Panax quinquefolius)

This perennial herb has been harvested for hundreds of years in North America given its medicinal uses. The roots are used to treat a variety of conditions including, for example, Type 2 diabetes. It has now been designated an endangered species, mainly due to over-harvesting. You can recognize this plant in the fall season by the bright red berries it produces.


Deb Jacobs

Often, ginseng can be associated with butternut habitat (described previously). You can search your woodlot for this plant in the fall months. Ginseng loves moist but well-drained soils and a thick litter layer; however, the shrub understory should be sparse. You should therefore make sure that your litter layer is not being removed from your forest floor if you're interested in improving habitat for ginseng in your woodlot. The species prefers maple-dominated deciduous woods in areas with neutral soils characterized by limestone, marble or other calcium-rich minerals. The bottom of a south-facing slope is ideal. Ginseng loves shaded areas and is mostly likely to grow in mature forests. Many other plant species prefer this type of habitat as well; by maintaining mature forests, you will encourage many other plant species to take root!

4.4 Deerberry
(Vaccinium stamineum)

Deerberry is designated as threatened, both provincially and nationally. This deciduous shrub is closely related to the wild edible blueberries found in Ontario; however, deerberry fruits are pale purple or green and have a sour taste unless they are cooked.


St-Lawrence Isl. National Park

Deerberry is normally found in dry areas. It likes acidic soils with granite and little or some organic material. Deerberry grows well in upland hardwood and early successional habitats. It prefers well-drained sites over gneissic granite or sandstone. The area should be on a south facing slope and fairly open or semi-shaded. Most deerberry plants occur in openings where there is less than 40 per

cent canopy closure. Deerberry is often associated with burned sites where wild blueberries and pitch pine grow. Occasional burning may be needed to maintain habitat for this species.

4.5 Bald Eagle
(Haliaeetus leucocephalus)

Who would have thought that the icon of the United States of America is endangered? In southern Ontario, this magnificent raptor has nearly disappeared because of habitat loss and past use of the pesticide DDT. You can create nesting sites and habitat for raptors and help them recover.

The bald eagle prefers large super-canopy trees for nesting, including white pine and trembling aspen; in southern Ontario, however, it is likely to use any type of super-canopy tree. Keep at least four to six over-mature white pine or trembling aspen for every 130 hectares if possible to encourage nesting and perching sites. These trees should be taller than the surrounding trees or should be at the edge of the forest to allow clear flight paths. Forests that have between 30 and 50 per cent canopy cover are typically used. The bald eagle primarily feeds on fish therefore these forests must also be situated near a lake or a large river. Keeping tall, dead standing trees on your woodlot is essential for bald eagles and other wildlife species. These trees create important habitat (e.g., cavities) used for nesting, cover and overwintering by many wildlife species. For bald eagles, these trees offer great perching sites.

Limiting access to bald eagle habitat may be the best option to prevent disturbance during nesting. Some bald eagles are tolerant of human activity but others may abandon their nests if disturbed.

Bald eagles are natural predators and require substantial resources including food, water, cover and territory. A bald eagle requires approximately 260 hectares of quality habitat to successfully produce offspring. Consider how your woodlot fits into the larger landscape and work with your neighbours to conserve and restore bald eagle habitat.

You can also create nesting platforms for raptors that may be in your woodlot. Landowners have successfully established platforms in many areas of the province and across the country. You may attract other raptor species, such as osprey, but if you're lucky, you could have a bald eagle on your nesting platform sooner than expected!

Install a bald eagle nesting platform on your property. A useful extension note on nesting platforms can be found at:

www.lrconline.com/Extension_Notes_English/pdf/ospry.pdf

You can also contact Martin Streit, Coordinator, Leeds County Stewardship Council, at martin.streit@ontario.ca.

4.6 Cerulean Warbler

(Dendroica cerulea)


Raleigh Robertson

This bright blue songbird is known to be the poster child for the forest interior. This species is declining because of habitat loss and forest fragmentation on its North American breeding grounds. Given its dependence on significant forest interior, the Cerulean warbler is reliant on forest owners to preserve its habitat. Providing habitat for this species can be an exciting and rewarding challenge!

This bird is associated with tall and large deciduous forests that have an open understory and tends to avoid forests that have a thick understory.

Older forests are used by Cerulean warblers. This warbler builds semi-colonial nests amongst other similar songbirds in large contiguous forest tracts in the upper canopy, typically at heights of nine to 12 metres. Due to strong site fidelity, forests currently supporting Cerulean warblers should be maintained. They prefer larger trees with dense overstory canopy above, and also larger trees that are well-spaced; incorporate best management practices that accommodate such conditions. Bitternut hickory and red oak are preferred as they are late to 'leaf out.'

4.7 Red-headed Woodpecker
(Melanerpes erythrocephalus)

It is thought that this bird is in decline because of competition for nesting sites with other invasive or alien bird species. Habitat loss may also explain its decline. This is the only woodpecker that has a completely red head. Both males and females have this flamboyant distinction, making it easy to identify them and enjoy their presence in your woodlot.

A high snag density is ideal for this bird species. The red-headed woodpecker excavates a cavity with a diameter of 5 to 7.5 cm in building its nest. It avoids using nest boxes, so save your carpentry skills for other projects! Keeping dead standing trees is the best way to attract woodpeckers to your woodlot. Preferred habitat for red-headed woodpeckers is described as swamp hardwood, although they have been shown to use a variety of habitats, including agricultural areas. They will only excavate a nest cavity in trees that are 40 cm dbh or larger. Keeping large dead standing trees is essential to this species' survival. Six snags or cavity trees per hectare or more are ideal to attract this species.

4.8 Kirtland's Warbler
(Dendroica Kirtlandii)

This bird rarely nests in Ontario, but can be encouraged given appropriate habitat conditions. The Kirtland's warbler is endangered largely because it requires an extremely specific habitat. Due to fire suppression in the past century, Kirtland's warblers have been unsuccessful in reproducing and have disappeared from many areas where they used to occur, including Michigan, Wisconsin and Minnesota. The warbler usually first appears approximately six years after a fire has gone through an area and where young jack pines are emerging. Fifteen years later, the warbler leaves the area, deeming the habitat unsuitable for its specific needs. It is therefore essential to have jack pines between the ages of eight to 20 years to provide suitable habitat for this bird.


U.S. Fish & Wildlife Service

Kirtland's warblers are ground nesters and prefer jack pine stands over 30 hectares in size, although a pair usually finds two to four hectares adequate for breeding. Stands that are most suitable for breeding are characterized by having dense clumps of trees interspersed with numerous small, grass openings, sedges, ferns and low shrubs. The warbler nests under the branches of young jack pines; however, when the lower branches start dying, the warbler will stop nesting in the area. Jack pines are adapted to grow well in dry conditions (e.g., in sandy outwash plains). Nesting usually occurs in stands where the soil type is Grayling sand, a well-drained sandy soil with low humus and nutrient content.

Jack pine stands may be managed by logging, burning, seeding and replanting on a rotational basis to provide nesting habitat. By carrying these stands to a 50-year rotational age, nesting habitat can be maintained for the warblers with little sacrifice to the commercial harvest of jack pine. These types of stands also provide habitat for other species

such as the upland sandpiper, Eastern bluebird, white-tailed deer, black bear and snowshoe hare.

4.9 Louisiana Waterthrush
(Seiurus motacilla)

The Louisiana waterthrush is at the limit of its range in eastern Ontario. This rare bird nests amongst the roots of fallen trees, along stream-banks and in and under mossy logs. It is designated as a species of special concern provincially and federally because of reduced habitat availability. Nests are well concealed by roots and hanging vegetation, and are rarely far from water (typically only 0.5 to 4 metres above the water surface). This species has a very specialized habitat and shows a very strong preference for nesting along pristine streams and associated wetlands that occur in large tracts of mature forest. Deciduous-mixed forests, especially those that have a strong hemlock component, are preferred. They also prefer habitat that is near a running stream, where the water is clear and cold. This species needs a large tract of unbroken forest cover. According to studies done in Maryland, an area of undisturbed habitat greater than 100 hectares is required to maintain a viable breeding population of Louisiana waterthrush.

In Ontario, most Louisianna waterthrush territories are located in larger blocks of mature forest, although these may be dissected by secondary roads and hiking trails. Connecting habitat with your neighbour's woodlot, especially near streams, is ideal to create habitat for the Louisiana waterthrush; avoiding fragmentation and human disturbance should also be a primary goal. Rotting logs near streams are essential as well – and, in creating such conditions you will inevitably be supplying habitat for all sorts of other wildlife species!


Briar Howes


Briar Howes

4.10 Five-lined Skink
(Eumeces fasciatus)

This is the only lizard species that inhabits Ontario. It is designated as a species of Special Concern within the province not only because of habitat loss due to development pressures, but also because it is in high demand by pet traders. Juveniles and females are known to have beautiful blue tails. Males tend to have a red face during the breeding period.

This species likes the warm microclimate of rocky ridges and rock outcroppings on the Canadian Shield. These small lizards usually hide under medium-sized rocks for protection. Leaving scattered rocks is beneficial to building habitat in your woodlot for this species. The further north within its range, the more the five-lined skink prefers more open habitat (versus an extensive canopy cover). It usually hides under downed wood, in rock piles, and in leaf litter. This lizard hibernates in decaying logs, below the frost line, or under large rocks. Loose rock on exposed bedrock sites is the ideal habitat for a skink living in eastern Ontario.


Briar Howes

In Carolinian forests, skinks are found more frequently to use dead logs as a refuge. Moderately decayed logs that are larger than 17 cm in diameter are preferred over smaller woody debris. The thickness of cover is important; rocks, leaves or logs that are less than 10 cm thick are preferred by individuals because this enables them to reach their optimum temperature.

Avoid disturbing loose rocks, encourage a thick layer of leaf debris and keep dead logs on the forest

floor to provide habitat for Ontario's lone lizard species.


OMNR

4.11 Wood Turtle
(Glyptemys insculpta)

This turtle is at the limit of its range and may not be seen even though available habitat may be quite suitable. If you're interested in creating habitat for wood turtles, you may be surprised to know that this species doesn't necessarily enjoy much of a canopy cover. They usually enjoy basking in the sun therefore most wood turtles are found to use habitats with less than 50 per cent canopy cover. Alder or poplar stands are the preferred terrestrial habitats for wood turtles. They are rarely found more than 300 m from moving water. If you have a stream or a wetland on your woodlot, keep disturbances to a minimum and encourage basking sites for turtles. You can create random open spaces for turtles on the shores of a wet area in your woodlot to encourage basking. Leave floating logs in the nearby pond or riverbank to attract all sorts of turtle species.

4.12 Black Ratsnake
(Elaphe obsoleta)


Simon Lunn

The largest snake in Ontario is threatened as a result of human persecution, habitat fragmentation, and associated road mortality. The ratsnake is semi-arboreal and typically found in a wide variety of woodland habitats across its range. At the home range scale ratsnakes seem to prefer a mosaic of forest and open habitat (fields, bedrock outcrops) with a large proportion of edge. Detailed studies of habitat use on the Frontenac Axis have

established that ratsnakes require a variety of habitat types throughout their life cycle. In winter, they hibernate below ground in communal hibernacula that provide shelter from both freezing temperatures and dehydration. During the active season, individuals seek shelter in standing snags, hollow logs, rock crevices and under rocks to avoid high temperatures and predators. Females nest in decaying matter inside standing snags, stumps, logs and compost piles, where conditions are humid and temperatures are approximately 30°C.

Making piles of leaf cover for nesting in your woodlot may attract ratsnakes. Leaving shelter areas such as hollow logs and standing snags will also provide important habitat for snakes and other wildlife species that would like to call your woodlot home. You may want to consider building your own ratsnake nesting box. Contact the Leeds County Stewardship Council for more information on building your own nest box.

4.13 Eastern Wolf
(Canis lycaon)

This large carnivore species is very elusive and therefore it can be very difficult to detect its presence in your woodlot. Providing habitat for our large carnivores is critical to ensuring their survival.

Wolf habitat is highly dependent on prey availability. Ensuring that deer, moose and beaver visit your woodlot will provide food for predators such as the Eastern wolf. This large carnivore requires a lot of resources and large expanses of habitat to survive. Connecting your woodlot habitat with that of a neighbour's can significantly diminish habitat fragmentation (which threatens many large predator and herbivore species). Wildlife needs access to food, water, shelter, and breeding grounds.

A small parcel of land may not suffice for certain animals, especially large mammals. Again, creating a connection between multiple parcels of land may be essential to their survival. Eastern wolves depend heavily on white-tailed deer as a staple in their diet. Attracting white-tailed deer to your woodlot may eventually attract predator species that feed on it.

4.14 Gray Fox

(Urocyon cinereoargenteus)

Unlike the red fox, the gray fox is a rare species in Ontario. Its presence is probably maintained in the province through periodic immigration. Occurrences of this species in eastern Ontario have been recorded in recent years.

Unfortunately, there are few records of gray fox having produced litters in Ontario. Most Ontario gray fox are thought to have come from the United States. They use forests of all age classes but prefer mature forests. Unlike the red Fox, the gray fox prefers forests and marshes over open habitats. The gray fox most often uses forest cover and usually remains within 100 m of the forest edge. They require large den sites in hollow trees or logs, in cavities under rocks, or in underground burrows dug by other animals. They also use piles of brush, wood or sawdust. Retaining cavity trees provides habitat for gray fox (a nearby water source is desirable as well).

4.15 Flooded Jellyskin

(Leptogium rivulare)

Most people are unfamiliar with this lichen that can be found in eastern Ontario. Lichens only grow a few millimetres per year and can occur in a wide variety of habitats.

The flooded jellyskin relies on ephemeral ponds for its survival. This means that it is restricted to periodically inundated substrate (it shows

no preference for neutral or acidic substrate). Flooded jellyskin usually appears on the bark of trees along the banks of ponds and waterways and in wet lowland forests that flood every spring. Flooded jellyskin occurs almost exclusively on the bark of living deciduous trees and always below the high-water mark. If you have trees that are periodically inundated and have some organism that resembles a lichen or fungus, it may be a good idea to preserve these trees. Common trees upon which you may find flooded jellyskin include red maples, black ash, silver maple, red ash, and American elm. It often grows on old, rough bark. Bare, weathered wood does not normally support the lichen. Therefore, older and healthy trees are essential to the growth of flooded jellyskin. Keeping your old growth trees in inundated sites may be central to attracting this lichen to your property.


Chris Lewis

5.0 Landowners and legislation

You may be affected by legislation that is designed to protect species at risk, for example the Endangered Species Act. Be sure you are informed as to which activities you can and cannot undertake. There are numerous incentives, permits and agreements to help protect species at risk, and which simultaneously accommodate active land management.

Contact your local Ministry of Natural Resources district office for more information about available permits and tax incentives.

Being well informed is the best way of ensuring that you have protected yourself against legal actions.

For more information on species at risk and the Endangered Species Act visit: www.mnr.gov.on.ca/en/Business/Species/

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