

Preserve

Endangered Songbirds

Acadian Flycatchers and Hooded Warblers

Acadian Flycatchers and Hooded Warblers are migratory birds that share essential breeding habitat in the forests of Ontario's Carolinian Zone. Like many songbirds that nest in Canada, these species winter in Central and South America, and migrate each year to eastern North America for the warm months. In Canada, the birds nest only in Ontario, in the moderate climate found in the southwestern portion of the province. Natural areas in this region are under intense pressure from agricultural and urban expansion.

Acadian Flycatchers and Hooded Warblers prefer large, mature woodlands for nesting. In Ontario's Carolinian Zone, the preferred habitat of these birds has diminished by as much as 90 per cent since European settlement. Acadian Flycatchers are listed as an endangered species in Canada, with only 35 to 50 nesting pairs occurring annually. Hooded Warblers are a nationally threatened species, with just 150 to 210 nesting pairs found each year.

Acadian Flycatchers and Hooded Warblers are fairly abundant in highly forested regions of the eastern and southeastern United States. However, they have both been identified as "Species of Concern" in Indiana, Ohio, Michigan, Illinois and Wisconsin, owing to significant loss and fragmentation of forest habitat.

In Canada, Acadian Flycatchers and Hooded Warblers are known to have nested in fewer than 100 individual forests. Preserving these populations in Canada is contingent on conserving the remaining Carolinian forests in Ontario.

To protect and enhance the habitat of these songbirds, co-operative efforts are required from landowners, forest managers, foresters, wildlife biologists, planners, municipalities, habitat restoration groups, and community conservation groups.



1. Acadian Flycatcher / Bill Rayner & Ron Kingswood
2. Hooded Warbler / M.K. Peck

A Closer Look at Acadian Flycatchers and Hooded Warblers



1: Acadian Flycatcher / Judie Shore
2: Hooded Warbler / Judie Shore

Acadian Flycatchers are olive-coloured birds that make their homes under tall, closed tree canopies in the middle levels of mature forests, often along steep-sided ravines. The small birds have an explosive song that sounds like “peet-sah,” which resounds from shady spots along creeks and swamps. Their nests are generally built at low heights (two to four metres) over bare, open areas like streams and pools of water. Nests are typically suspended from the horizontal branches of American beech, eastern hemlock and flowering dogwood trees. They can be distinguished by long, hanging strands of grass or other materials.

Hooded Warblers are easily identified by their yellow masks and underbodies. The males have full black hoods, whereas the females may have nearly complete hoods or no hoods at all. Their loud song suggests the phrase “weeta-weeta-wee-tee-o.” The nest – a bulky mass of dry leaves – is placed in the low, shrubby understory that occurs in small gaps in mature, dry forests. Hooded Warblers prefer to nest close to the ground, often in wild raspberry thickets.

The Species Ranges and the Carolinian Zone



North American Distribution Map

The small songbirds reach the northern limits of their breeding ranges in the Carolinian forests of southwestern Ontario.

1: Acadian Flycatcher
2: Hooded Warbler

The majority of forest songbirds in Canada are neotropical migrants, which means that they breed in North America in the summer months and winter in Central and South America, or the Caribbean. Acadian Flycatchers and Hooded Warblers are two of Canada's rarest neotropical migrants.

Both species reach the northern limits of their breeding ranges in the Carolinian forests of southwestern Ontario. Wildlife found at the edges of their breeding range can provide important benefits to the whole species. These populations often evolve unique genetic and behavioural variations that can contribute to species survival in the event of rapid changes to the environment or climate, which may affect the larger group adversely.

ONTARIO'S CAROLINIAN ZONE

The Carolinian Zone lies south of an imaginary line between Grand Bend on Lake Huron and Toronto on Lake Ontario. This region enjoys warmer year-round temperatures than any other part of Ontario. The accommodating climate supports ecosystems found nowhere else in Canada, along with levels of biological diversity unsurpassed elsewhere in the province and possibly the nation.

"Carolinian" is a name coined by early botanists, who observed that hardwood forests in southwestern Ontario share many characteristics with forests as far south as the Carolinas. Forests in Ontario's Carolinian Zone are enriched by trees having a strong southern affinity, such as tulip, sassafras, Kentucky coffee, cucumber magnolia, black gum, and papaw.

Carolinian forest is one of Canada's most threatened habitats. More than 40 per cent of the national list of endangered and threatened species occur in the Carolinian zone – more than in any other Canadian life zone. Throughout the Carolinian Zone, agricultural and residential pressures have caused extensive wildlife habitat destruction. In parts of southwestern Ontario, over 90 per cent of the original forests are gone. Most of the remaining forests are too small and isolated to accommodate Acadian Flycatchers, Hooded Warblers and other species that depend on the specialized habitats found in large forests.

Recovery actions are needed to ensure the conservation of the remaining Carolinian forests in Ontario. Preservation and enhancement of the habitat favoured by Acadian Flycatchers and Hooded Warblers will benefit other forest birds, including three species of special concern: Red-shouldered Hawks, Cerulean Warblers and Louisiana Waterthrushes. More common forest bird species, such as Wood Thrushes, Ovenbirds and Pileated Woodpeckers, will also gain from the conservation and wise management of mature forest habitat.

Canada's Recovery Plan

In 1994, Acadian Flycatchers and Hooded Warblers received their current, respective designations, "Endangered" and "Threatened." The Committee on the Status of Endangered Wildlife in Canada, known as COSEWIC, is the national assessment body that makes recommendations on the status of species believed to be at risk of extinction. COSEWIC consists of distinguished scientists and wildlife managers representing 20 member agencies and organizations from across Canada, plus the chairs of its eight Species Specialist Groups. In 1996, the Canadian Wildlife Service, through the committee for Recovery of Nationally Endangered Wildlife, or RENEW, established the first multi-species recovery team in Canada, the Acadian Flycatcher and Hooded Warbler Recovery Team. This group developed a National Recovery Strategy and Recovery Action Plan to preserve the two species.

The National Recovery Strategy aims to substantially increase the current populations of the birds in Ontario. Successful recovery will raise the populations to 250 nesting pairs of Acadian Flycatchers and 500 nesting pairs of Hooded Warblers. The recovery team is realizing these goals by:

- encouraging private landowners and public managers of Carolinian forests in Canada to protect and enhance these rare ecosystems;
- providing management guideline options to concerned landowners, managers and foresters that are designed to maintain and enhance Carolinian forest habitat; and
- assisting landowner stewardship and the creation of broad partnerships between landowners, government, and interest groups around six Core Woodland Complexes identified in the Recovery Action Plan.

Building Better Forest Habitat

Acadian Flycatchers and Hooded Warblers prefer extensive forest cover for nesting. In Canada, the largest amount of forest cover within the Carolinian Zone is found in Norfolk and Elgin counties, which are 25 and 16 per cent forested, respectively. Consequently, these two regions support the greatest concentrations of Acadian Flycatchers and Hooded Warblers in Canada.

Under the national Recovery Action Plan for the two species, six key woodland complexes in southwestern Ontario have been identified as having national importance for the maintenance of one or both species. These large forest complexes have been designated for special conservation effort:

1. Lambton County Heritage Forest (Lambton County);
2. Bothwell Forest / Skunk's Misery and County Line Woods (Middlesex County and the Municipality of Chatham-Kent);
3. Clear Creek Forest (Municipality of Chatham Kent);
4. Backus Woods, St. Williams Forest, South Walsingham Forest and Deer Creek Valley (Norfolk County);
5. Dundas Valley (Regional Municipality of Hamilton-Wentworth); and
6. the Niagara Escarpment Plan area encompassing Short Hills Provincial Park and the Fonthill area (Niagara Regional Municipality).

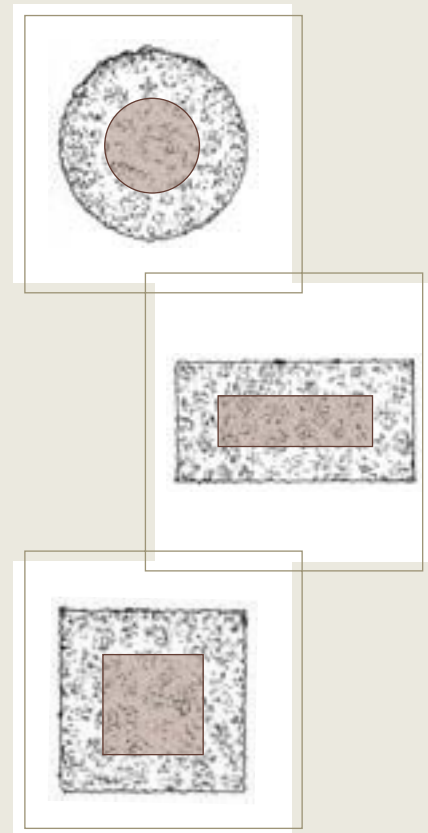


Clear Creek Forest, Cochrane Woods / James Duncan, Nature Conservancy of Canada

FOREST INTERIOR HABITAT REQUIRED

Acadian Flycatchers and Hooded Warblers are considered "area-sensitive" species because of their preference for nesting in large woodlands. The birds occasionally inhabit forests as small as 20 hectares (about 50 acres), but are much more common in forests of at least 100 hectares (about 250 acres). Small woodlots can, and do, attract these species if they are in close proximity to larger forest cover within the region.

Large woodlands are more likely to contain the variety of microhabitats these songbirds require for nesting, foraging and cover. In addition, large woodlands offer extensive interior habitat, the inner part of the forest more than 100 metres from the edges. Because there are generally more predators in small forests and along forest edges, nesting success is often greater in the interior portion than near the edges or in small woodlots.



Building on Forest Interiors

Circular or square woodlands have proportionally more interior habitat than long, narrow woodlands of the same area. Strategic reforestation of edges and openings will increase the amount of forest interior habitat.

TROUBLE AROUND THE EDGES

Birds nesting in small woodlands are more vulnerable to an array of predators that thrive along forest edges, such as jays, crows, grackles, squirrels, raccoons, foxes and skunks. These predators are far more abundant in fragmented landscapes, with their higher proportion of edge habitat, than in forest-dominated landscapes. Fragmented habitat is dominated by fields, pastures, orchards and residential areas.

Large forests also reduce pressure from Brown-headed Cowbirds. As “brood parasites,” cowbirds do not build their own nests. Instead, they lay their eggs in the nests of other birds, which incubate the cowbird eggs and raise the cowbird hatchlings as their own. As a result, the host parents may raise few or none of their own young. Cowbirds, which flourish in fragmented landscapes, target the nests of many species of songbirds, including Acadian Flycatchers and Hooded Warblers.

The amount of edge habitat can be minimized by protecting large woodlands, increasing the size of individual forests through re-forestation projects, and avoiding further fragmentation of existing forests.

BENEFITS OF OLD-GROWTH FORESTS

Older woodlands, which are disappearing rapidly in southern Ontario, have special ecological significance. They often support a greater mix of tree and plant species, and habitats at different stages of succession, than younger woodlands. They also offer the diversity of habitats required by Acadian Flycatchers, Hooded Warblers and a suite of area-sensitive forest birds.

Mature forests also bring significant economic returns to landowners. Delaying the harvest of 50- to 80-year-old sugar maple trees for another 15 years will increase economic return by up to 400 per cent, because older trees grow in size and accrue superior quality and economic value.

In addition, by leaving older seed trees of a variety of species in place, landowners will maintain overall forest stand diversity and health over the long term.

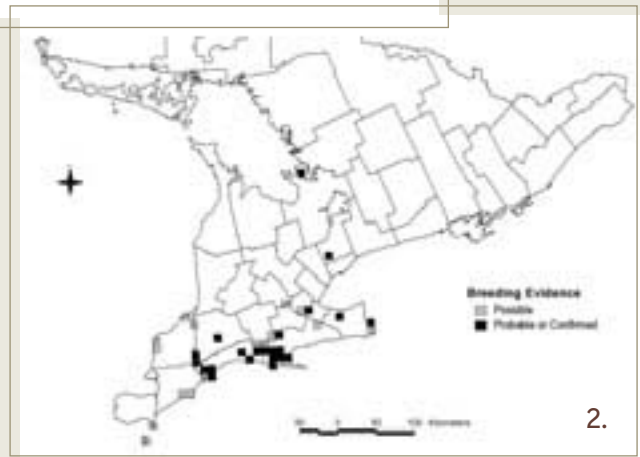
The Acadian Flycatcher and Hooded Warbler Recovery Team encourages public agencies who own or manage Carolinian Canada’s remaining woodlands to manage these properties as old-growth stands. A strong commitment from public landowners will greatly enhance the survival of Acadian Flycatchers, Hooded Warblers and other Carolinian species with specialized habitat requirements, and will establish benchmarks for similar stewardship by private landowners.



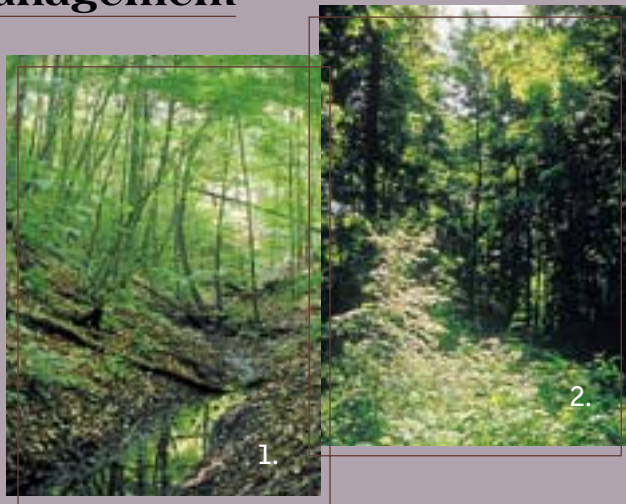
Breeding Evidence in the Carolinian Zone

Current known breeding distribution of Acadian Flycatchers and Hooded Warblers in Ontario.

- 1: Acadian Flycatcher
- 2: Hooded Warbler



A Guide to Habitat-Friendly Forest Management



Typical Nesting Habitat in Ontario

1. *Acadian Flycatchers* nest in steep-sided, wooded creek valleys, maple swamps, and moist maple-beech forests. / Bill Rayner & Ron Kingswood
2. *Hooded Warblers* nest in forest gaps within large, mature woodlands dominated by white oak, red maple, white pine and/or American beech. / Bill Rayner & Ron Kingswood

Good forestry practices can maintain and improve the economic quality of a forest over a long period without harming the ecological processes that sustain and develop wildlife habitat. Viable options are available that can benefit both landowners and area-sensitive species, such as Acadian Flycatchers and Hooded Warblers. Many species will thrive in a carefully managed forest, while the woodlot continues to provide long-term income for the landowner. Harvesting woodlands wisely builds a significant legacy for the preservation of our natural heritage, and protects long-term economic interests for future generations.

IMPORTANCE OF PLANNING

Careful planning at all stages of forest management can help to determine feasible economic objectives, minimize environmental damage, and protect sensitive species and features of the site. The Acadian Flycatcher and Hooded Warbler Recovery Team is available to advise property owners prior to logging operations. Information on woodland management in southern Ontario can also be obtained from the Ontario Ministry of Natural Resources (see Contacts).

GET IT IN WRITING

If you hire a contractor to cut your woodlot, be sure to work from a written contract specifying the management plan you want to use.

SINGLE-TREE SELECTION OPTION

Single-tree selection is the least intrusive cutting system and likely comes closest to imitating a natural pattern of small-scale forest disturbance. For this option, a prescribed selection of mature or preferred trees are removed at short intervals of 10 or 20 years, leaving a scattered pattern of small gaps, while also leaving all the major tree components in place to rejuvenate themselves in a natural pattern. The life expectancy of the gaps is relatively short because they tend to regenerate quickly, but continued single-tree selection will ensure that new gaps are created. Meanwhile, retention of many older growth trees ensures that essential ecological cycles (including re-seeding) are maintained.

Retaining many large-diameter trees in the forest maintains a permanent canopy cover, the habitat most beneficial for Acadian Flycatchers. At the same time, the interspersed small gaps created through single-tree selection will provide alternative habitat that is ideal for Hooded Warblers. Gaps as small as five metres wide can provide nesting habitat for these birds.

GROUP-TREE SELECTION OPTION

Group-tree selection creates scattered canopy openings that measure about twice the height of the tallest trees in the forest. Small groups of mature or preferred trees are removed at short intervals of 10 or 20 years. This method is similar to single-tree selection, but it results in the creation of larger gaps.

Provided that the operations retain some tracts of mature and uncut deciduous forest, well-planned group-tree selection treatments can maintain the closed canopy conditions favoured by Acadian Flycatchers. In turn, within a few years of their creation, the forest gaps begin to regenerate and can attract Hooded Warblers. Two to three gaps per hectare provide shrub cover and foraging habitat for nesting Hooded Warblers. The warblers may return annually until the saplings reach more than five metres in height and begin shading out the thick undergrowth, a process that may take 12 years or more.



Cross-section of a Well-managed Forest

Old-growth or mature forests that are managed wisely contain diverse wildlife habitats. This cross-section shows a canopy gap created by single-tree selection cutting and a ravine.

DIAMETER-LIMIT CUTS MAY LIMIT FUTURE OPTIONS

A diameter-limit cut involves harvesting every tree larger than a specified diameter. This system severely diminishes the ecological health of the woodland and reduces opportunities for long-term, sustainable income from future cuts. Landowners are often left with a low-quality, genetically impaired forest. As well, diameter-limit cuts remove all of the oldest trees and eliminate breeding habitat for Acadian Flycatchers, Hooded Warblers and other forest birds that need mature forest habitat.

CUT ROTATION IS ESSENTIAL

Best practices for habitat conservation indicate that only a portion of the forest should be cut at any one time. Rotating cuts ensures that essential forest bird habitat is maintained, with areas of the forest providing closed canopy and older habitat for Acadian Flycatchers and other areas providing small canopy gaps for Hooded Warblers. At the same time, periodic rotation cuts ensure a sustained income for the landowner.

MINIMIZE IMPACTS OF LOGGING

To minimize the impacts of logging on breeding birds, operations must be scheduled outside the nesting season. The best time to log is from October to March, when the ground is either frozen or dry enough to minimize or avoid damage to the forest floor. Plan carefully to keep the size and number of trails and landings low, which will reduce the number of canopy breaks and help to avoid the spread of invasive native and non-native plants.

MAINTAIN THE EDGE

Avoid cutting trees within 20 to 30 metres of the forest edges. A dense stand of trees around the forest edges, particularly on the southwest-facing side, buffers the forest interior from the damaging effects of wind and sun.

Open edges expose the forest to greater risk of windthrow, drought, disease, pesticides, and invasive plants.

KEEP AN UNDISTURBED FOREST CORE

Consider leaving a permanent, unlogged core area in the centre of the forest as an old-growth reserve. Older-growth or mature forest habitat supports many plant and animal species that are absent or uncommon in young forests. Older-growth stands can satisfy the habitat requirements of both Acadian Flycatchers and Hooded Warblers because they provide extensive closed canopy areas, along with a mosaic of gaps created by natural tree falls.

Enlarge and reconnect existing woodlands

The amount of forest interior habitat can be increased, sometimes significantly, by reforesting fields and other large openings within woodlands, restoring marginal farmland around woodland edges, and reconnecting isolated woodlands. Strategic reforestation can have important, lasting ecological benefits for area-sensitive and forest-interior species.

Protect valley-lands and swamps

Woodlands bordering streams and ravines provide important habitat for Acadian Flycatchers and other forest birds, particularly in regions where little other forest cover exists. Protect ravine woodlands from erosion and disruption by leaving at least a 10 metre buffer of trees on the tableland along the top of the ravine slope. Degraded slopes and valleys can be restored by natural or planned regeneration.

It is best to avoid harvesting timber from ravines and stream banks because subsequent erosion may diminish stream water quality.

Swamps provide important habitat for endangered species such as Acadian Flycatchers and Prothonotary Warblers, and more common species such as Wood Ducks and Northern Waterthrushes. Swamps and other wetlands also protect the quality and quantity of water supplies. Preserving wetlands provides environmental benefits for humans, birds and other wildlife.

Tax Incentives for Sustainably Managed Forests

The Conservation Land Tax Incentive Program (CLTIP) and Managed Forest Tax Incentive Program (MFTIP) are provincial government property tax incentives. Landowners can receive property tax incentives for owning certain environmentally sensitive lands and/or managing those lands for conservation. Landowners interested in these programs should contact the Ontario Ministry of Natural Resources for more information (see Contacts).

ALTERNATIVES FOR LONG-TERM PRESERVATION

There are a variety of conservation options available to preserve high-quality forest habitat for Acadian Flycatchers and Hooded Warblers. Conservation easements, for example, can enshrine preservation policies on the title of the property. Some conservation groups will lease significant habitat. Also, the federal Ecological Gifts Program allows landowners to donate ecologically sensitive land to qualified recipients, and receive significant tax benefits (see Contacts).

Thanks to the landowners

Many landowners throughout Ontario's Carolinian Zone protect significant woodland habitat. Without their past and continuing stewardship, the region would experience greater depletion of species such as Acadian Flycatchers and Hooded Warblers that are dependent on mature forest habitat. Numerous landowners also allow access to their lands for wildlife and forest research. Their generous co-operation and contributions to conservation are deeply appreciated.

Recommended Reading

Ontario Ministry of Natural Resources. 2000.

A silvicultural guide to managing southern Ontario forests. Queen's Printer for Ontario. Toronto, Ontario.

(Available from Ontario Ministry of Natural Resources
Tel: 1-800-667-1940)

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www.cosewic.gc.ca/cosewic
• RENEW Website:
www.speciesatrisk.gc.ca/sar/efforts

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- Conservation Land Tax Incentive Program (CLTIP):
www.mnr.gov.on.ca/mnr/cltip/index.html
- Managed Forest Tax Incentive Program (MFTIP):
www.mnr.gov.on.ca/MNR/forests/mftip/home.htm

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