

# The Freshwater Connection

Publication of the Central Algoma Freshwater Coalition - Winter 2023

## Winter 2023 Biodiversity



### Biological Diversity

The “totality of genes, species and ecosystems of a region”.



CAFC is currently working on a “Biodiversity Booklet” and in the process we looked at some older notes from the 1990s - the “*Ontario - Extension Notes*” from the LandOwner Resource Centre supported by the then Ministry of Natural Resources and have decided to include a few summaries of them along with others in this newsletter. Similar publications are now also available online at the Ontario Ministry of Agriculture, Food and Rural Affairs - Best Management Practices Series.

Copies of these “Extension Notes” are available from CAFC and include topics such as:

- Preserving Water Quality
- Preserving And Restoring Natural Shorelines
- Improving Fish Habitat
- Protecting Fish Habitat
- Restoring Shorelines With Willows
- The Benefits Of Windbreaks
- Naturalizing Your Local Park Or Backyard
- Maintaining Healthy Urban Trees
- Cavity Trees Are Refuges For Wildlife
- The Old Growth Forests Of Southern Ontario
- Conserving The Forest Interior: A Threatened Wildlife Habitat
- Choosing A Silvicultural System
- Designing And Caring For Windbreaks
- Management Options For Abandoned Farm Fields
- Managing Regeneration In Conifer Plantations To Restore A Mixed, Hardwood Forest
- Protecting Trees From Vole Damage
- Eastern Hemlock
- Planting And Caring For Nut Trees
- Red Oak
- Eastern White Pine
- White Spruce
- Sugar Maple
- Managing Young Hardwood Stands For Sawlog Production
- Managing Red Pine Plantations
- Backyard Maple Syrup Production
- Clearing The Way: Preparing The Site For Tree Planting
- Careful Handling And Planting Of Nursery Stock
- Using A Backpack Herbicide Sprayer To Control Weeds
- Planning For Tree Planting
- Planning A School Tree Plant
- Cover Crops Help Tree Seedlings Beat Weed Competition
- Tree Shelters Help Hardwood Trees Grow Faster
- Do You Have A Healthy Woodlot
- Options For Controlling Beavers On Private Land
- Caring For Ice-Damaged Trees
- Caring For Ice-Damaged Woodlots and Plantations





**The Benefits of Windbreaks** – windbreaks are a row of trees or shrubs that reduce the force of the wind. They can reduce soil erosion, protect crops and livestock from heat and cold. They can be used to protect roads and buildings from drifting snow. They beautify the landscape and provide travel routes and habitat for wildlife. There is a trend toward larger fields that has increased soil erosion. Windbreaks increase crop quality and yield by providing cooler day time temperatures and warmer temperatures in the night, increasing relative humidity, and helping to retain soil moisture and reducing physical damage caused by high winds. As an additional benefit windbreaks provide shelter and food for wildlife, as well as safe travel corridors between woodlots. They can provide nectar and pollen for bees. Windbreaks can act as sound barriers. They filter dust from the air and improve the appearance of the rural landscape.

**Buffer Strips** – intense rain events can subject even the healthiest of soils to runoff. Unimpeded runoff from cropland and pasture can enter surface water and contaminate it. Buffer strips can provide a last line of defence to protect water quality from runoff. Planted in the transitional (riparian) area between upland soils and bodies of water. Healthy soils in areas along rivers, streams, wetlands, and lakes perform vital functions in providing habitat for fish and wildlife. Buffer strips protect watercourses including drainage channels. These strips provide bank stabilization, flood protection, filtration of cropland runoff, water storage carbon sequestration in addition to providing fish and wildlife habitat. Grassed buffers provide forage and cover, planted trees provide habitat for mammals, beneficial birds and insects. Buffers make ideal wildlife corridors. Shade and woody debris are important to fish habitat. Buffers plantings can also provide habitat for pollinators. Keep in mind most bees can only fly about 350 m – larger bees up to 750m – but they need habitat for survival.

SOURCE – Best Practices Buffer Strips – Ontario Federation of Agriculture





**Protecting Fish Habitat** - a well vegetated and shady shoreline is ideal fish habitat- unfortunately many landowners choose to build cottages, boathouses and docks, dredge, and pour sand and gravel on shorelines – all of which will damage fish habitat and reduce fish populations. When working around water avoid harming fish habitat. Before starting any water-based projects ensure you have the proper approvals and permits. There are best practices for dredging (silt curtains to retain sediment), aquatic-plant control (activity timing), building docks and boathouses (docks without cribs), beach

construction (consider a swim platform instead), building erosion control structures(don't build solid shore walls and groynes), boat launches( avoid steep slope erosion) building materials (choose untreated wood) and agricultural practices ( fence livestock from shorelines)

Source - <https://theconversation.com/smaller-farmers-fields-can-reduce-biodiversity-loss-and-increase-wild-plants-birds-beetles-and-bats-139015>

**Small Fields and Fencerows** -We don't know yet why biodiversity is higher in landscapes with smaller crop fields. One possibility is that when crop fields are smaller, the natural habitats are closer together. This would increase the ability of wildlife to easily access natural habitats from crop fields. Crop fields may provide temporary food sources for wildlife, such as when a crop is in flower or when there is a pest outbreak.

Natural areas are also needed for breeding and overwintering sites and for escape from farming operations such as plowing. When wildlife can easily move back and forth between crops and natural spaces, perhaps they have access to the best of both worlds.

#### **The farmer's dilemma**

Altogether, our research suggests a “many small” approach to support biodiversity in agricultural landscapes. But can farmers readily reduce the sizes of fields? In many parts of the world, just the opposite has been happening over the past 50 years. Fields are being consolidated by removing the tracks, fences, stone walls, and hedgerows that once separated them. Farmers do this to increase the efficiency of their operations. But in doing so, they reduce the populations of wildlife that help support agriculture. The net cost or benefit to farmers of reducing field sizes while maintaining the same area in production has not yet been studied. But the benefits to biodiversity are now clear.





**Forest Edge** - habitat is a growing throughout the province as networks of roads, urban developments, logging operations and other human disturbances carve many larger natural forests into smaller and more isolated pieces. The resulting islands of wilderness are often too small to maintain healthy gene pools or vigorous populations of plants and animals over the long term. The forest edge benefits some animals like racoons, foxes, and white-tailed deer but at the same time make other species vulnerable to predators.

<http://wildlandsleague.org/attachments/Biodiversity%20at%20the%20Crossroads%20FS5.pdf>



**Forest Interior** – landowners are stewards of a great deal of forest habitat – but much of it is broken into small woodlots – that often lack forest interior. Forest interior is a sheltered, secluded environment away from forest edge and open habitats. Forest edge is sunnier, warmer, windier and dryer than the forest interior. Forest interior is more likely to have pools of water vital to aquatic insects, birds, frogs, toads, and salamanders. Each forest bird needs a particular habitat with an arrangement of food, water, shelter, and nesting sites. Forest interior birds depend more on increased moisture, less nest disruption, fewer predators a diversity of microhabitats such as small conifer stands, wet pockets in lowland hardwoods or rare vegetation. Predators such as raccoons, grackles, crows, squirrels, and domestic and feral cats are less common. Birds such as ovenbirds are ground nesters and especially susceptible to predators. Wood frogs and

salamanders breed in seasonal ponds (vernal ponds) where their eggs are not eaten by fish. Barred Owls prefer forest interior. Forest interior begins at approximately 100m from the forest edge. Forests larger than 200 ha provide important habitat – these are common in Central Algoma but rare in other agricultural areas. Cavity trees – dead or dying trees that have holes in the trunk are often excavated by birds – but did you know that in Ontario 50 species of birds and animals depend on cavity trees for nesting, rearing young, roosting, storing food, escaping predators and hibernating. You can help by protecting cavity trees on your property

SOURCE Extension Notes – Ontario -Conserving the Forest Interior: A Threatened Wildlife Habitat, 1998 LandOwner Resource Centre Manitick, ON

SOURCE Extension Notes – Ontario - Cavity Trees are Rufges for Wildlife1995 LandOwner Resource Centre Manitick, ON



**Abandoned Farms Fields** - Tree planting is just one of several options for managing. . abandoned farm fields. If left alone many fields will become forests again through natural processes of succession – from field crops, to herbs, to shrubs, to pioneering trees and ultimately shade tolerant hardwoods. This approach can take a very long time and there are many variables to how it may evolve. Each successional stage has a different group of associated wildlife. There are several possibilities to managing abandoned farm fields – from maintaining an old field with existing herbs, restoring historic vegetation or woodlots, or converting to another use such as tree plantations.

**Maintaining an old field** - Fields that have been abandoned for about 20 years will have adapted to an herb stage and may contain plants such as milkweed – and associated Monarch and other



butterflies. If old open fields are not common in the immediate area, they may be important areas for harriers, grassland birds and a variety of sparrows as well as homes to bees, butterflies, moths, and snakes. These fields may also be used by voles, mice, woodchucks, skunks, foxes, weasels, and deer. To maintain old fields, they may need to be mowed once every few years – avoid mowing during the nesting season for birds - late summer is best – fall

mowing may favour non native invasive species. It is also recommended that not more than 20% of the area be owed in any one year so that species such as bees can still have homes in the 80% of uncut habitat in any given year.

**Restoring original habitats and woodlots** - originally not all habitats were forests – depending upon soil types – ask people who have lived in the area for a long time – they may have many insights. If the area was historically a forest you may want to try and restore the natural forests. Talk with a forester to determine which trees may best grow on the soils and under the moisture conditions you have. Restoration to forest may provide new food sources – especially with mast-producing species. If the old field has been abandoned for many years native tree and shrub species may already established and you may just want natural succession to occur.

**Converting to another use** may include maintaining the field for agriculture, managing for Christmas trees, fuelwood, or sawlogs.

SOURCE Extension Notes – Ontario – Management Options for Abandoned Farm Fields, 1999 LandOwner Resource Centre Manitick, ON

**Rural Communities** - Planting and maintaining existing urban trees are also very important – they add value to your home, improve privacy and provide environmental benefits – such as shading, reducing pollution, take up carbon dioxide. Produce oxygen, provide wildlife habitat, hold water, and reduce soil erosion. Urban trees face more stress and need more attention than trees growing in more natural areas – give newly planted urban trees a good start and maintain them by watering, mulching, fertilizing, and pruning. Sick or damaged trees need to be maintained by calling experts and getting professional help.

SOURCE Extension Notes – Ontario – Maintaining Healthy Urban Trees, 1998 LandOwner Resource Centre Manitick, ON



**Lake Huron North (LHN)**  
**Locavore Fundraising Dinner- January 28, 2023**  
**Stokely Creek Lodge**



## Locavore Dinner FUNDRAISER

Join us at Stokely Creek on Saturday, January 28th for the Locavore Dinner, an afternoon of delicious local food and outdoor fun! We'll have cross-country skiing, snowshoeing, and more. All funds raised from the event will support Lake Huron North's environmental stewardship projects.

<https://LocavoreDinner.eventbrite.ca>

### Become a Member



Your annual membership fee will provide a base budget for work of CAFC and demonstrate the commitment of local partners working towards a common goal. A strong diverse group is an essential component in meeting the goals of the Central Algoma Region. Support us at <https://www.centralalgomafreshwatercoalition.ca/>