

Habitat Creation with Native Plants

Planting indigenous trees, shrubs, grasses and wildflowers creates or restores habitat effectively and with little maintenance. This fact sheet provides a first step, for a garden or a larger site. It guides you to further information, advice and materials.

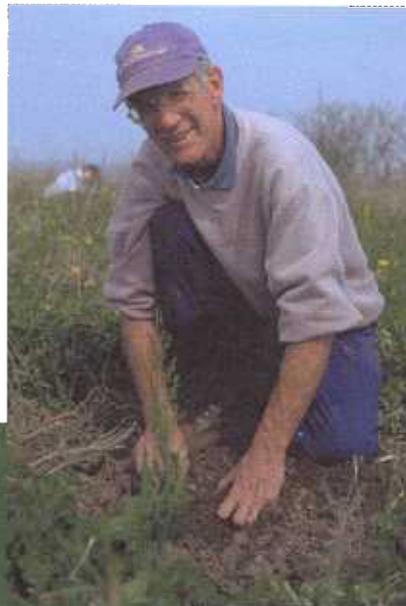


Advantages of Native Plants

Planting trees, shrubs, grasses and flowers of any type has numerous benefits:

- can reconnect fragmented natural areas
- restores a vital link in the water cycle
- reduces wind and water erosion
- improves air quality
- rebuilds soils
- reduces temperature extremes
- creates refuges for wildlife and urbanized humans

When native plants are used, you will not only gain these benefits but you will also be using hardier, lower-maintenance plants, as well as helping restore our natural heritage.



Habitat loss in Ontario, especially in the south, has resulted in a decrease of the diversity of species and a loss of ecological functions. Filling in and draining have removed over 70 per cent of southern Ontario's original wetlands, resulting in more floods and poorer water quality. With the loss of once-extensive savannahs we have also lost species such as the Karner blue butterfly and we are losing the Henslow's sparrow. Restoring or creating habitats, from small backyard efforts to whole marshes and woods, helps our ecosystems. The best way to restore an area is to put back the pieces that make up healthy natural systems. Re-vegetation with native plants brings back often-rare plant communities and creates wildlife habitat.

Using the right plants for a particular site will also greatly increase your planting success. Native plants evolved to suit the local climate and soils. They tolerate disease and, once re-established, often require

little or no maintenance. You will also be helping the environment and your wallet, since native plants will require little watering and mowing and no fertilizer or pesticides.

photo top right: brown-eyed Susans
above: volunteer planting
right: chestnut-sided warbler

Production of this fact sheet made possible by Environment Canada's EcoAction 2000 Program

What to plant and who

The goal is to create a living community complete with insects, birds and other wildlife, not a collection of individual plant species.

You may want plantings that:

- attract birds
- attract butterflies
- have lots of colour
- establish a marsh
- do not require watering

Nature's Intentions

Ask neighbours what natural communities used to exist in your area. Get to know your remaining local natural areas and try to imitate them — there is no better model than nature itself. For larger projects, look up the original survey

records to see what grew in your area before European settlement. Learn what's growing in your local natural areas to help you plan your own site as well as to serve as seed sources. Members of local naturalist clubs have a wealth of knowledge about native species and are often very willing to share such information.

Current Conditions

Assess conditions such as soil type and moisture, local climate and exposure. Conditions may have changed over the years and the site is now more suitable for a meadow or prairie rather than the maple woods that once grew there. Determine what natural features still exist and think about how you might preserve them. Note the limitations on and near the site, such as overhead wires, buried cables and nearby farming operations. Sketch a map of your site, or several maps to show the seasonal changes.

As you proceed with habitat creation and restoration with Ontario's native species, you will need help, whether it's advice or further reading. At the end of this fact sheet are listed some information sources that will help you understand the hundreds of types of woods, wetlands and grasslands in Ontario.

Location, Location, Location

In an urban garden, you'll likely be creating a refuge in a largely non-natural environment. On larger projects or in the countryside, your site should be considered part of the larger landscape of woods, wetlands, meadows, streams and lakes. Plan where and what you want to plant in a way that will best help fragmented



Non-Native Headaches

Most introduced or horticulturally bred trees, shrubs, flowers and grasses are now a regular part of our landscape and gardens. Introduced plants meet many of our agricultural and horticultural needs. We will never return to conditions that existed before European settlement in Ontario, with no exotic plants. Nor would we likely want to. However, numerous introduced plants, such as purple loosestrife and Norway maple, have few competitors or diseases here and have taken over existing habitats. The takeover happens at the expense of plant communities in which species evolved locally to perform specific ecological roles, delicately balanced in ecosystems that emerged over thousands of years. Aggressive, invasive species can also succeed because native habitats are already stressed by human activities such as pollution and habitat alteration.

Invasive non-native species, as well as unnatural human creations such as lawns, take up the same space as native plant communities but do not fulfil the same ecological roles.

A lawn does not provide much habitat for wildlife, while a natural meadow supports many more creatures. Purple loosestrife or marigolds

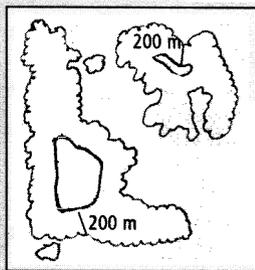
may provide some nectar for a monarch butterfly but will never provide a home for its larvae, a home in the milkweed that the non-native species replaced. Instead of making an ecosystem richer and more diverse, non-natives often simplify it, erasing complex rhythms and interactions.

So enjoy your tulips but consider planting native sunflower, New York aster, or bluestem to enrich your landscape and help put back some of the ecological pieces.

top: butterflyweed

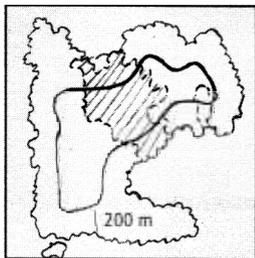
bottom: hickory hairstreak





top: before restoration
below: plantings create a natural corridor for wildlife.

- woodland
- interior forest
- former woodland edge
- restored area



center: restoration site.
This future savannah will include black-eyed susan, black oak, big bluestem grass, lupine, staghorn sumac, and dropseed.

left: wild lupine

and degraded landscapes. Learning about the basics of conservation goes a long way. A useful reference that helps explain the southern Ontario landscape and its conservation is *The Natural Heritage of Southern Ontario's Settled Landscapes* (Riley and Mohr, 1994).

To obtain a copy contact the Ministry of Natural Resources at (416) 314-2000.

Look for areas that need help and for opportunities to restore them. For example, if your site is a gap between two woods, you can plant trees and shrubs to create a corridor for forest species.

Getting Started

Sketch out a plan. You'll need to experiment since no two projects are the same. Set a spending limit and determine how much time you have. Match your plans with available labour and resources—trying to restore a 10 hectare (25 acre) site with only three people on weekends is a recipe for disappointment.

Obtaining Plants

The commonest lament is difficulty locating sources of native plants, seed or trees.

- Look for a reputable nursery that uses native seed gathered only from local sources. A list is published by the Society for Ecological Restoration (see **information sources on back**)
- Never dig up plants from nature unless they are about to be destroyed because an area is being actively developed. You must have the landowner's permission.
- You can easily collect your own seed to ensure that you are using local plants. Often a native plant nursery will "contract grow" your collected seed on consignment.

Remember to conserve—Don't collect more than 10 percent of the seed from a plant colony.

Beware of most wildflower mixes from larger nurseries—they often contain non-native species and are rarely local to your area.

Community nursery programs can also be valuable; check with local growers and naturalist clubs. You may need help with plant identification, seed collection, seed storage, propagation and planting. Collaborate with friends and others in the community to find out who the local experts are. You will soon develop your own area of expertise to share.

Where to Find Help

This fact sheet is only an introduction. Planting and caring for the new habitat should be challenging but fun. There are lots of people who can help and information sources to turn to. The Federation of Ontario Naturalists can direct you to many helpful sources and can sometimes provide volunteers and expertise for larger projects. Local naturalist clubs can provide invaluable natural history information. Call your local conservation authority too — many are willing to become involved in helping you assess your site and your plan, sourcing materials and helping with planting. Many conservation authorities have active restoration programs, but make sure local native stock is used.

National and provincial groups such as the Canadian Wildflower Society, Evergreen Foundation, Society for Ecological Restoration and Ontario Tallgrass Prairie Association specialize in native plant preservation and restoration. Native plant nurseries are increasing in number and besides selling plants, seeds and materials, they are often eager to steer you in the right direction. Look around your local community: In Toronto, for example, contact organizations include the Toronto Zoo, Waterfront Regeneration Trust, Task Force to Bring Back the Don and parks and recreation departments.

Information Sources

This is not a complete list but should get you started. Contact the organizations below for more references.

General Guides to Restoration and Naturalization (*good starting points)

*Aboud, S. & H. Koch. 1996. *A Life Zone Approach to Schoolyard Naturalization: The Carolinian Life Zone*. The Arboretum, University of Guelph. 86 pp.

Agriculture and Agri-Food Canada/Ontario Ministry of Agriculture, Food and Rural Affairs. 1996. *Fish and Wildlife Habitat Management. Best Management Practices Series*. 91 pp.

*Daigle, Jean-Marc & Donna Havinga. 1996. *Restoring Nature's Place: A Guide to Naturalizing Ontario Parks and Greenspace*. Ecological Outlook Consulting and Ontario Parks Association. 226 pp.

Environment Canada. 1996. *Planting the Seed: A Guide to Establishing Aquatic Plants*. 24 pp. Available Spring 1999: *Planting the Seed: A Practical Guide to Establishing Woodland Communities and Planting the Seed: A Practical Guide to Establishing Prairie and Meadow Communities*. Environmental Conservation Branch.

*Johnson, L. 1995. *The Ontario Naturalized Garden*. Vancouver, Whitecap. 188 pp.

*Lavoie, L. 1996. *Homeowner's Guide to Naturalization*. Thunder Bay, Thunder Bay 2002. 43 pp.

Lompart, C., J.L. Riley & J. Fieldhouse. 1997. *Woodlands for Nature: Managing Your Woodland for Wildlife and Nature Appreciation*. Don Mills, FON. 28 pp.

Koch, H. 1992. *Growing Native Woody Plants from Seed*. University of Guelph, the Arboretum/Institute for Environmental Research Policy and Stewardship.

Mitchell, P., C. Plosz, A. Booth and S. Hilts. 1997. *Greening the Land*. University of Guelph. Available from FON.

Morgan, J.P., D.R. Collicutt & J.D. Thompson. 1995. *Restoring Canada's Native Prairies: A Practical Manual*. Argyle, Prairie Habitats.

*Waterfront Regeneration Trust. 1995. *Restoring Natural Habitats*. Toronto, Waterfront Regeneration Trust. 179 pp. (specializes in greater Toronto)

Society for Ecological Restoration. Resource Directory. Contact SER. for latest edition.

Ontario: Ecology, Natural History and Conservation

Gonzalez, N. 1996. *Citizen's Guide to Protecting Wetlands & Woodlands*. Don Mills, FON. 86 pp.

Riley, J. & P. Mohr. 1994. *The Natural Heritage of Southern Ontario's Settled Landscapes*. Aurora, Ontario Ministry of Natural Resources. 78 pp. OMNR: (416) 314-2000.

Theberge, J. 1989. *Legacy: The Natural History of Ontario*. Toronto, McClelland & Stewart. 397 pp.

Federation of Ontario Naturalists. 1995. *Natural Invaders: Invasive Plants in Ontario*. Don Mills, FON. (booklet)

Federation of Ontario Naturalists. 1997. *Nature Guide to Ontario*. Toronto, University of Toronto Press. 469 pp.

Hilts, S. and P. Mitchell. *Caring for Your Land: A Stewardship Handbook for Niagara Escarpment Landowners*. Centre for Land and Water Stewardship, University of Guelph. 54 pp. Available from FON.

Brochures, Booklets, Fact Sheets and Articles: Revegetation

Green Teacher Magazine. "Transforming School Grounds" (special issue). April-May, 1996. 95 Robert St., Toronto, ON, M5S 2K5.

Federation of Ontario Naturalists. *Backyard Habitats*. (brochure)
Schoolyard Naturalization. (brochure)

Four case studies on farmland re-vegetation. 1996.

Hodgins, J. "Propagating Wildflowers." *Seasons*, Spring 1987.

Schneider, Dan. "Farming with Nature." *Seasons*, Spring 1996.

Ministry of Natural Resources. *Extension Notes on Wildlife*. Series available from the Landowner Resource Centre, Manotick.

Field Guides

To identify wildflowers, both Newcomb's and Peterson's wildflower guides can be found in most bookstores. *Shrubs of Ontario* is available at some bookstores and from the Royal Ontario Museum. Some local naturalist groups and conservation authorities may have local plant lists.

Organizations

*primarily advocate native plants

Society for Ecological Restoration* (maintains a list of native plant sources) c/o Environment and Resource Studies Program, Trent University, Peterborough, ON, K9J 7B8 (705) 748-1634

The Arboretum, University of Guelph, Guelph, ON, N1G 2W1. (519) 824-4120 ext.2113

Canadian Wildflower Society*

Unit 12A, Box 228, 4981 Hwy 7 E, Markham, ON, L3R 1N1. Publishes *Wildflower* magazine.

Conservation Authorities*

(depends on individual authority) Consult your telephone directory or call the FON.

Ducks Unlimited (wetlands, some native plants), 566 Welham Rd., Barrie, ON, L4M 6E7. (705) 721-4444

Evergreen Foundation, (specializes in schoolyards) 355 Adelaide St. W., Toronto, ON, M5W 1H3. (416) 596-1991

Federation of Ontario Naturalists (FON)* (See address below.) The FON can put you in touch with over 90 local naturalist organizations. Publishes *Seasons* magazine

Landowner Resource Centre (source for materials about a variety of conservation activities) Box 599, 5524 Dickinson St., Manotick, ON, K4M 1A5. 1-800-387-5304 or (613) 692-2380

Ontario Ministry of Natural Resources

Consult your telephone directory.

Additional Help and Funding Sources

(larger projects, beyond backyards)

EcoAction 2000 (community and local action)
Environment Canada, 4905 Dufferin St., Downsview, ON, M3H 5T4

Community Fisheries & Community Wildlife Improvement Program (wetlands and uplands with emphasis on wildlife), Ontario Ministry of Natural Resources. (416) 314-2000.

Environmental Farm Plan (environmental projects on farms) Ontario Soil and Crop Improvement Association, 52 Royal Road, Box 1030, Guelph ON, N1H 6N1. 1-800-265-9751

Friends of the Environment (local projects involving community) Consult your local Canada Trust branch.

Mountain Equipment Co-Op, 1655 West 3rd Avenue, Vancouver, BC, V6J 1K1

Shell Environmental Fund (community)
Box 100, Station M, Calgary, AB, T2P 2H5. (403) 691-2071

Wildlife Habitat Canada (wetland projects)
7 Hinton Ave. North, Ottawa, ON, K1Y 4P1. 1-800-669-7919



Ontario Naturalists
355 Lesmill Road, Don Mills, ON, M3B 2W8
tel: (416) 444-8419, toll free: 800 440-2366
fax: (416) 444-9866
e-mail: info@ontarionature.org
website www.ontarionature.org