HABITAT ACTION MENUS FOR CAROLINIAN CANADA RARITIES

Grow Wild!

A Quick Guide to Greening Your Future for Landowner Leaders



Adopt a Habitat Action

Choose Your habitat

Rivers & Streams
Wetlands, Ponds & Spring Pools
Lakes & Shorelines
Grasslands, Meadows & Old Fields
Tallgrass Prairies & Savannas
Hedgerows, Shelterbelts & Windbreaks
Woodlands & Ravines

Choose Your time

Go! Do It Now.
WAIT! Contact Your Habitat Partner First.
STOP! Don't Do It.

Choose Your action

SAVE existing habitat
STEWARD your whole landscape
SEED new habitat in strategic spots

EXPLORE

Carolinian Canada
www.carolinian.org

Developed by the Carolinian Canada Ecosystem Recovery Program, based on Recovery Strategies and Best Practices of 60+ Species @ Risk in Carolinian Canada. © Carolinian Canada Coalition 2013

Make Your *Grow Wild!* Pledge
Green Your Future Now.

Supported by the many partners of Carolinian Canada's Ecosystem Recovery and Coastal Zone Programs



7 Steps for 7 Generations

Leaving A Legacy for Wild & Human Communities

CONSERVATION OPTIONS *for* BIODIVERSITY & SPECIES AT RISK (SAR)

1. Explore *the unique nature on your doorstep*



Take a walk on the wild side. A 7 year-old shows us what she would like to be able to explore in her lifetime.

ON YOUR PROPERTY	WITH YOUR NEIGHBOURS	IN YOUR COMMUNITY
• Read about your Wild Neighbours • Discover what's on your property • Use Field Guides to find out what's common, rare & alien	• Find out who's doing what in your neighbourhood • Organize a 'Backyard Nature' tour	• Establish an Eco-library – donate books to your local library • Organize a public presentation about local natural features

Explore

2. Share *ideas*



Marie & Brent Ward of Essex picked the brains of local stewardship experts before creating a Legacy Park on their property. Every year, they plan to add a new dimension to their project by consulting with the Conservation Authority and Stewardship Council about the latest research, programs and best practices.

ON YOUR PROPERTY	WITH YOUR NEIGHBOURS	IN YOUR COMMUNITY
• Invite an Ecologist • Attend a Workshop • Call or Click a Habitat Partner to find out about SAR programs	• Talk with neighbours & elders to find out about the 'natural history' of your area	• Link with community groups involved in nature projects • Host a "Caring for Species at Risk" workshop

Share

3. Vision *your Legacy*



This 4 acre prairie in Thames Centre replaced an abandoned pasture, improving wildlife habitat, soil & water quality & the view! Stewardship Rangers help during summer work terms. Now it is a source of pride for the landowner.

ON YOUR PROPERTY	WITH YOUR NEIGHBOURS	IN YOUR COMMUNITY
• Plan a Stewardship Project • Develop a Habitat Plan for your property • Tweak a Management Plan to accommodate rare species • Use Stewardship Guides	• Get together with neighbours and habitat partners to develop a Site Plan that links greenspace across properties	• Work with your municipality and community groups on a Community-based Conservation Action Plan

Vision

4. Save *what we have*



Pt. Pelee in Essex County is home to dozens of rare species and an ecotourism destination for millions. But it is slowly disappearing into the lake thanks to hardening along the entire north Erie shore. Only by working together with community groups, waterfront landowners and all levels of government, will Ontario be able to save this Carolinian treasure.

ON YOUR PROPERTY	WITH YOUR NEIGHBOURS	IN YOUR COMMUNITY
• Create a SAR B & B with Food, Water & Shelter • Leave it alone: Leaf Litter, spring nesting, wet meadows and other wild things • Eco-gifts: Donate land and easements	• Let it Get Old • Create a sanctuary: old growth forest, grassland, shrubland or wetland	• Protect a wild park / nature reserve • Leave it Alone: stop the persecution of snakes and the collecting of turtles and rare wildflowers.

Save

5. Steward *whole landscapes*



Badgers are making a come-back on some Carolinian properties, with the help of many landowners. Bonus! Badgers help control agricultural pests.

ON YOUR PROPERTY	WITH YOUR NEIGHBOURS	IN YOUR COMMUNITY
• Learn what the best management practices (BMP's) are for your woodlot, wetland or farm. • Make sure the BMP's you use are appropriate for the ecology of your property.	• Discuss your BMPs with neighbours • Connect habitat for rare species so they can move safely through the landscape	Support : • Policies for Healthy Landscapes • Ecoregional planning • Eco-friendly infrastructure

Steward

6. Seed *new habitat*



This rare twayblade seeded itself into an old farm field in Chatham-Kent. Only 8 years ago, the field was planted with a mix of common native trees and shrubs by the Boy Scouts, the Nature Conservancy of Canada and a local farmer who prepared the ground by digging 'pits and mounds' to mimic old growth forest floor conditions.

ON YOUR PROPERTY	WITH YOUR NEIGHBOURS	IN YOUR COMMUNITY
• Grow Local:Add native plants to your backyard • Grow Habitats: Restore and create spaces for wildlife • Go Wild: Let nature take its course where appropriate	• Link "Back 40's", hedgerows, buffers, backyard habitat • Add space for trails that don't impact sensitive habitat	• Buffer & connect natural heritage systems by restoring natural linkages

Seed

7. Spread *your ideas, impact, actions*



Every year 30+ teenagers work as Ontario Stewardship Rangers over the summer in Carolinian Canada, learning how to care for the unique nature around them, helping landowners and meeting local experts. The "Youth Helping Species at Risk" Camp gives them a chance share their experiences – their creative presentations, skits and songs are an annual highlight.

ON YOUR PROPERTY	WITH YOUR NEIGHBOURS	IN YOUR COMMUNITY
• Show off your habitat projects • Join a backyard monitoring program for plants and animals on your property	• Set up a Habitat Demonstration site • Organize a Habitat Project Tour • Invite the local school to visit	• Support people who make a difference • Get your group, school, church thinking about the unique nature on their doorstep

Spread

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Rivers & Streams

Buff it up	Go! Do It Now.	WAIT! Contact Your Habitat Partner First.	STOP! Don't Do It.
 Photo Credit: Michelle Fletcher	**LEAVE IT ALONE** **Leave buffers alone, especially wild plants along shores, banks & ravines. Let trees, shrubs, flowers & grasses protect your shorelines.** Good for birds as well as rare species such as Kidneyshell, Louisiana Waterthrush, American Water-willow Rare species often live & breed along natural shorelines. A 30 metre natural buffer is a common recommendation for shoreline stability & filtering run-off before it enters lakes, rivers & streams.	**CALL BEFORE YOU DIG** **Plant native trees, shrubs, grasses & flowers – such as dogwoods, willows, alders, milkweed & asters – along shorelines to mimic natural habitat. Use certified local seed sources.** Good for cold and cool water game fish as well as rare species such as Eastern Ribbonsnake, Redside Dace, Laura's Clubtail How does it work? Vegetated shorelines offer shelter, maintain cooler water temperatures & provide food sources for terrestrial and aquatic wildlife.	**LAWN ATTACK** **Stop mowing to the water's edge and allow riparian vegetation to grow freely.** Good for amphibians as well as rare species such as Butler's Gartersnake, Northern Dusky Salamander, Blackstripe Topminnow Mowing lawns adjacent to watercourses attracts unwanted visitors such as Canada Geese, promotes run-off, and leads to increased streambank erosion.
Strengthen Your Banks	**COWS CAN HELP** **Help your cows do the right thing. Fence them out of watercourses & provide alternate drinking water sources.** Good for turtle nests and rare species such as Northern Madtom, Northern Map Turtle, Northern Riffleshell Fencing cows out of watercourses protects native wildlife and their habitats from trampling and leads to improved water quality. Improved water quality benefits cattle as well as local wildlife.	**BIO-BANK** **Use bio-engineering such as brush mats, live fascines & cribwalls to stabilize eroding streambanks and re-naturalize impacted watercourses.** Good for aquatic insects and rare species such as Round Pigtoe, Pugnose Minnow, River Bluet A naturalized watercourse is a healthy watercourse. The benefits you will see from this range from better fishing to cleaner water.	**KIDS CAN HELP** **Stop driving through watercourses. Use designated 'dry' crossings instead for ATV's, biking, horseback riding, etc.** Good for native crayfish and rare species such as Queensnake, Mudpuppy Mussel, Eastern Sand Darter Driving through watercourses can crush aquatic species, destroy their habitat and send clouds of sediment downstream. To protect your aquatic species use bridges and other 'dry' crossings.
 Photo Credit: Upper Thames River CA			
Maintain Healthy Flows	**GO WITH THE FLOW** **Over time the path of a natural watercourse will change. Allow these changes to happen and don't try to force a watercourse to follow a particular path by channelizing or hardening shorelines.** Good for fish and rare species such as Musk Turtle, Channel Darter, Rainbow Mussel Naturalized watercourses support a wide diversity of plant and animal species	**RIPPLE EFFECT** **Create riffles, pools, basking sites and shoreline nesting areas using rocks, gravel, sand or wood in appropriate places.** Good for aquatic plants as well as rare species such as Silver Shiner, Wavy-Rayed Lampmussel, Snapping Turtle Artificial management of waterflow through structures such as dams can often result in the elimination of downstream habitat. In some cases we can help by providing what should be there.	**DON'T CLOG YOUR WATERWAYS** **Avoid un-needed water diversions such as dams, ditches & channels.** Good for freshwater mussels as well as rare species such as Black Redhorse, Spiny Softshell Turtle, Snuffbox Dams, ditches & channels artificially alter water levels and flows. This can result in blocking migration routes, changing water temperatures, and drying up or flooding the habitat of some species.
 Photo Credit: Scott Gillingwater			

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Wetlands, Ponds & Spring Pools

Give the Gift of Life	Go! Do It Now.	WAIT! Contact Your Habitat Partner First.	STOP! Don't Do It.
 Photo Credit: Scott Gillingwater	**DROUGHT-PROOF** **Save your wetlands. They will repay you a hundred-fold by storing and cleansing your water supply, especially when you need it most -- during hot, dry summers.** Good for aquatic plants and rare species such as Least Bittern, Northern Ribbonsnake & False Hop Sedge, Find out about tax incentive programs to support wetlands & species at risk. Wetlands include marshes, swamps, fens, bogs, wet meadows, spring pools & sloughs. They are often associated with fresh water springs, drinking water sources and headwaters.	**KNOW THE FLOW** **Explore wet areas on your property: discover when & where they flow & who lives there. Look for amphibians egg-laying in vernal pools in spring. Invite a naturalist or source water expert to visit.** Good for amphibians and fishes including rare species such as Fowler's Toad, Pugnose Shiner & Grass Pickerel A complex habitat structure supports more wildlife. Each tree, shrub, vine & grass provides a place for perching, shelter or food.	**SWEET WATER** **Stop filling wet spots with soil, trash or organic waste. Prevent contamination from run-off. Avoid working on wetlands during spring & summer, the critical breeding period for birds, reptiles & amphibians.** Good for insects and rare species such as King Rail, Spotted Turtle & Eastern Prairie Fringed Orchid Water quality is becoming a critical issue for our communities as the human population grows & filtering by natural vegetation diminishes.
Humanity for Habitat	**TURTLE TIME** **Help turtles hatch by leaving safe access to natural sandy spots for nesting mothers. Watch for them in the spring – they often go long distances to nest. Protect nests from predators like raccoons.** Good for turtles including rare species such as Blanding's Turtle, Northern Map Turtle & Snapping Turtle Did you know? Only 5-10% of turtle eggs hatch & only 1% survive their first year. Watch for turtles when you drive near wetlands from May to October.	**IF I HAD A HAMMER** **Build shelter, basking & nesting structures for wetland bird species, especially if your wetland lacks cavity trees. Get advice to avoid helping pest or rival species by mistake.** Good for birds such as Wood Duck and Hooded Merganser, & rare species such as Prothonotary Warbler You can get advice about installing turtle nest sites, basking logs & rock piles for salamanders. Common species like Wood Ducks can also benefit from boxes & platforms.	**RESPECT THE MESS** **Stop removing dead & fallen trees unless they are a hazard.** Good for amphibians, reptiles and birds including rare species such as Jefferson Salamander, Gray Ratsnake & Red-headed Woodpecker, Have you noticed? Yellow-spotted, Blue-spotted & Red-backed salamanders & Eastern Newts live hidden among us. At different life stages, they can be found under logs, in leaf litter, in spring pools or ponds, and are vulnerable to small changes in water quality & quantity.
 Photo Credit: Allen Woodliffe			
Maintain Healthy Flows	**STOP THE FLOOD** **Let buffers work for you. They absorb floods, prevent algal blooms, promote natural pest control & deter trespassers with thick, tangled vegetation in an organic buffer zone around your wet areas. The wider the buffer, the better it works.** Good for snakes and turtles including rare species such as Eastern Foxsnake, Wood Turtle & Eastern Ribbonsnake Snakes help landowners by controlling rodents, yet 9 of the 15 snake species in the Carolinian Life Zone are now at risk.	**BACK TO THE FUTURE** **Plant a climate change garden – get advice about seeds & plants to mimic local wetlands & let nature do the rest.** Good for buffering rare plants such as Swamp Rose Mallow, Tuberous Indian-plantain, Horsetail Spike Rush Protect your water sources in the face of climate change by expanding & linking your natural systems with native vegetation from local seed. Shade trees, including the rare Kentucky Coffee-tree, planted along edges can help keep wetlands cool & help retain water in hot summers.	**GROW LOCAL** **Avoid planting Reed Grass (Phragmites), Purple Loosestrife, & day lilies or other aliens that spread easily into natural areas.** Good for rare species such as Butler's Gartersnake, American Water-willow & Hill's Pondweed Grow a beautiful & unique garden with native plants from local seed. They are most likely to thrive best on your property. Avoid planting rare species unless you are working with a recovery ecologist. Focus instead on leaving a legacy of good habitat & watch it grow naturally more diverse over time.
 Photo Credit: Sarah Hodgkiss			

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Lakes & Shorelines

Keep it Natural	Go! Do It Now.	WAIT! Contact Your Habitat Partner First.	STOP! Don't Do It.
 Photo Credit: Sarah Hodgkiss	**SHARE THE BEACH** **Leave a buffer of natural vegetation along your shoreline. It will protect against erosion and provide habitat for shoreline species.** *Good for native plants as well as rare species such as Fowler's Toad, Piping Plover and Lake Chubsucker* Many animals use shoreline habitat to find food and shelter. Set aside a section of your beach with natural vegetation to provide a safe place for them to live.	**IF YOU PLANT IT** **Plant beach grasses, wildflowers and other appropriate native plant species.** *Good for insects and rare species such as American Beachgrass, Monarch and Rusty-patched Bumble Bee* Beach grasses and other vegetation provide food, shelter and stabilize sensitive dune ecosystems.	**SOFTEN UP** **Don't remove aquatic plants and underwater woody debris or harden your lakefront shoreline.** *Good for game fish as well as rare species including Bald Eagle, Grass Pickerel & Spotted Gar* Many fish require natural shorelines for shelter, spawning areas, and food sources. Landowners often want to remove all plants and submerged wood along their shorelines and replace with sand or armour stone walls. What they may not know is they are removing fish habitat which is protected under the federal Fisheries Act.
On the Move	**IF A TREE FALLS** **Leave driftwood and fallen trees on the beach or along the shoreline.** *Good for reptiles including rare species such as Common Five-lined Skink, Eastern Foxsnake & Lake Erie Watersnake* Many of our snakes and the Five-lined Skink are restricted in where they can live based on very particular habitat such as nesting cavities in rotting logs along the shoreline. In addition to nesting habitat fallen trees and driftwood provide shelter for many smaller animals and insects making them a great hunting ground.	**FIX THAT LEAK** **Update your household septic system and farm manure storage systems to prevent leaks from reaching lake water.** *Good for freshwater mussels including rare species such as Eastern Pondmussel, Rainbow Mussel & Round Pigtoe* Excess nutrients from leaky septic and manure storage systems can result in cyanobacteria/algal blooms. These blooms can be deadly for fish and toxic for pets, cattle and humans as well.	**TAKE A HIKE** **Don't drive vehicles on the beach. The weight compacts sand dunes and the wheels disturb the sand surface.** *Good for native plants and rare species such as Piping Plover, Northern Map Turtle & Beach Dune Tiger Beetle* Vehicles can damage plants, crush invertebrates living in the sand, destroy nests and eggs, and disturb shoreline animals.
 Photo Credit: Scott Gillingwater			
Take it or Leave it	**TAKE ONLY PHOTOGRAPHS** **Leave native wildlife undisturbed.** *Good for all wildlife including rare species such as Common Five-lined Skink, Spiny Softshell Turtle & Hog-nosed Snake.* It is often tempting to chase after wildlife on the beach in order to get a hold of it for a closer look or maybe even to take it home for a pet. Chasing wildlife may cause undue stress at a time when their body may already be exhausted (e.g. after laying eggs). And removing even one healthy individual from our declining populations makes a significant blow to that population's survival.	**STOP THE SPREAD** **Learn to identify invasive plant species that are destroying native habitats. Find out how best to remove or prevent the spread of these invasive species.** *Good for birds as well as rare species such as Great Lakes Wheatgrass, Swamp Rose Mallow & Common Hop-tree* Invasive species take habitat from native species, alter food webs and disturb ecosystem processes. Some species can be removed easily while others require professional help. Learn more about invasive species and make sure you don't plant them!	**PACK IT OUT** **Don't leave garbage or anything edible on beaches, in parks, or around your property. When in public parks use the appropriate wildlife proof receptacles for your trash.** *Good for turtle eggs including those of rare species such as Spiny Softshell Turtle, Snapping Turtle & Northern Map Turtle* Populations of turtle egg predators, such as raccoons and skunks, increase in size when they have access to food sources from human garbage. Larger predator populations mean fewer turtle eggs surviving.
 Photo Credit: Scott Gillingwater			

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Grasslands, Meadows & old Fields

Stay open


Photo Credit: Sarah Hodgkiss

LEAVE IT FREE

Save old fields, meadow margins and grassy ditches. Grassland birds are disappearing at an alarming rate and meadows are essential to healthy landscapes.

Good for birds including declining species such as Barn Swallow, Eastern Meadowlark and Henslow's Sparrow.

Wild meadows are kept 'open' by flooding or drought. You can recreate these natural processes by occasional mowing—but best to wait until late summer when baby grassland birds have left the nest.

Flower Power


Photo Credit: Sarah Hodgkiss

MILK IT FOR WHAT IT'S WORTH

Save Milkweed for the butterflies and bees. While many insects benefit from our native milkweeds the survival of the Monarch depends on it as it is the only food their larvae can eat.

Good for insects including rare species such as Monarch Butterfly and Rusty-patched Bumble Bee

Monarchs use milkweed to raise their young. When Monarchs mistake the alien Dog-Strangling Vine (Black Swallow-wort) for milkweed, their larvae are poisoned.

Rock on!


Photo Credit: Scott Gillingwater

STICKS AND STONES!

Wondering what to do with the brush you've created when opening up your meadow? Build brush, grass and rock piles for meadow wildlife.

Good for predators including rare species such as Barn Owl, Bald Eagle and Grey Fox

Brush piles provide shelter for small mammals so they are excellent hunting grounds for many of our native species.

GO! Do It Now.

WHO LET THE COWS OUT?

Grazing livestock can help keep a meadow from succeeding into woodland. Find out how rotational/ light grazing can work for you.

Good for rare species such as American Badger, Whip-poor-will, and Bobolink.

Goats are famous for clearing meadows of invasive and woody plants. But keep them away from streams & habitat sensitive to trampling.

GROW WILD

Create a wildflower meadow, prairie or savanna with common native flowers and grasses that mimic local wild habitats. Play "detective" by researching historic wild places and plants in your area.

Good for insect eating birds and rare species such as Yellow-breasted Chat, Loggerhead Shrike and Red-headed Woodpecker

Blue Vervain, Black-eyed Susan and Bergamot are good choices for a 'starter meadow'. Meadow sedges or Virginia Wild Rye might also be suitable.

HIBER-WHAT??

A "hibernaculum" is a place where – you guessed it – snakes hibernate.

Good for snakes including rare species such as Eastern Foxsnake, Gray Ratsnake & Milksnake

Winter habitat for snakes is becoming scarce. If an expert assesses your property as suitable you can create a winter refuge for snakes following construction plans provided by the Toronto Zoo.

WAIT! Contact Your Habitat Partner First.

AVOID "PANCAKE" HABITAT

Stop tampering with naturally undulating landscapes by leveling mounds, dips and hollows.

Good for moisture-loving plants and rare species such as Dense Blazing-star, Eastern Ribbonsnake and Western Chorus Frog.

Small changes in elevation known as micro-topography are very important for some meadow inhabitants who depend on this access to water.

CAN THE CAN

If it's too good to be true, it probably is. Steer clear of cans or packets of so-called "wildflower" mix that can wreak havoc on your meadow ecosystem.

Good for native wildflowers and rare species such as Crooked-stem Aster, Riddell's Goldenrod and Colicroot.

Some commercial mixes even contain noxious weeds that spread quickly! Stick to seed from local sources that specialize in native plants. You'll save yourself lots of weeding work and wildlife will thank you for it!

SNAKES ALIVE

Stop snake discrimination. Those "puff adders" and "whompers" are actually harmless and on the verge of local extinction.

Good for misunderstood snakes including rare species such as Eastern Hog-nosed Snake, Milksnake and Eastern Foxsnake

Get to know your wild neighbours. Snakes do an enormous job of pest-control around the farm and cottage.

STOP! Don't Do It.

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Tallgrass Prairies & Savannas

Put it Back


Photo Credit: Bronwen Buck

Prairie Alive!


Photo Credit: Bronwen Buck

Go the Extra Mile


Photo Credit: Upper Thames River Conservation Authority (UTRCA)

Go!
Do It Now.

THINK SMALL
Under 3% of Ontario's original Tallgrass habitat (Prairie & Savanna) remain. Think about replacing a corner of pasture, lawn or grassed buffer with native prairie grasses & wildflowers. Every little bit helps!

Good for rare insects like Monarch Butterfly & pollinating insects & bees.

Play detective to determine where best to grow Tallgrass habitat. Make sure you are not replacing other important habitat! Impacted sites that have not yet seeded in are ideal. Strategically connect, buffer & enlarge smaller Tallgrass remnants.

LAYER IT ON
Native prairies aren't just tall grasses and wildflowers -- they usually have shrub clusters & scattered shade trees, which are important to a great diversity of wildlife.

Good for disappearing birds like Bobolink, Henslow's Sparrow & Northern Bobwhite quail

Northern Bobwhite overwinter in shrub thickets & nest in grasslands. The Karner Blue butterfly, now gone from Ontario, needed both sunny & shady spots.

THINK BIG
Maximize ecosystem health! Link Tallgrass with habitats like stream, forest & meadow to form natural corridors & contiguous habitat patches. Deep prairie roots & connected ecosystems are an important climate change survival kit for your property.

Good for species on the move like the rare Yellow-breasted Chat, the harmless Hog-nosed Snake (which puffs up, then plays dead, when frightened) & the Gray Ratsnake (which dines on rodents)

Habitat connectivity is a ground-breaking conservation principle widely adopted in the 1990's & a fundamental component of the Carolinian Canada's "Big Picture" vision.

WAIT!
Contact Your Habitat Partner First.

GROW AN OASIS
Re-creating rare native grassland habitat is essential for its recovery & looks beautiful. Success depends on good site preparation. Get advice to map an approach that works for your property, ecologically.

Good for rare plants like Slender Bush Clover, Pink Milkwort, White Prairie Gentian

First, learn which native plants are and which are non-native. Then control the non-natives using appropriate, ecologically-friendly techniques like cover crops or solarizing (with a black cover).

SPARK A BLAZE
A prescribed burn is often essential for prairie health. Work with trained experts to ignite safely – permits are required! Let your neighbours & community know why & when you are burning. Use the opportunity to show off your project & ignite local enthusiasm for rare grassland habitats.

Good for rare Hill's Oak, Birdsfoot Violet, Goat's Rue & many more

Fire's heat helps prairie seeds germinate & controls woody plants. The residual ash contains nutrients that are recycled into the soil.

BIO-WARFARE
Find out about garden plants & animals that are threats to our natural habitats. Introduced Asian ladybugs, Autumn Olive, Common Buckthorn, Asiatic Bittersweet, Dog-strangling Vine & many others can be deadly to your ecosystems and are spreading rapidly. Get advice on alternatives & control options.

Good for the endangered Eastern Prairie Fringed-orchid & many others

When removing aliens from your natural area, focus first on core habitat areas not prone to disturbance. Invasive plant seeds hitch rides on shoes, tires and pet fur – so be very careful about where you put your trails and ride your bike or ATV.

STOP!
Don't Do It.

MAIL-ORDER PRAIRIE
Most 'wildflower' seed packets will spread invasive aliens & harm the ecology of your property. Instead, support local native plant growers.

Good for the rare Monarch butterfly

Plants from local seeds are adapted to your growing conditions, have evolved with resident wildlife & are less likely to disrupt the hereditary make-up of adjacent ecosystems.

SEED GREED
Congratulations! Your prairie seed is ripe for harvesting. Stop taking more than you need & let wildlife enjoy the rest.

Good for rare predators like, Blue Racer, Butler's Garter Snake & more common species that eat rodent pests

Find out about ethical seed collection tips. Experts recommend gathering a maximum of 50% seed from perennials & 10% from annuals. Refrain from collecting seeds of species at risk.

RARE GEMS
Stop growing rare plants without a permit or planting in rare habitats without a recovery plan. Instead, aim for a varied wildflower palette to mimic local, native grasslands & wait for rare wildlife to visit.

Good for rare plants like Dense Blazing Star, Eastern Prickly Pear Cactus & Climbing Prairie Rose

Masses of purple, white & gold are a prairie's summer colours. Grow this palette with common native species like Ironweed, Boneset & Black-Eyed Susan.

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Hedgerows, Shelterbelts & Windbreaks

Don't Leave it Broken	Go! Do It Now.	WAIT! Contact Your Habitat Partner First.	STOP! Don't Do It.
 Photo Credit: Richard Klarki	**CONNECT THE PIECES!** **If possible extend Hedgerows, Windbreaks and shelterbelts to connect with surrounding habitats – e.g. wetlands, forests, streams and rivers.** Good for movement of wildlife to their habitats. American badger use corridors to move to old fields, orchard fields and grasslands. Eastern Foxsnake lives near water bodies and may be found near farms hunting small rodents and birds. Connected habitats make the movement between aquatic and upland habitats easy.	**GREEN SUPER GLUE WORKS BEST!** **Fill the gaps by planting trees, shrubs and grass to maintain continuity to other habitats.** Vegetated corridors provide cover to wildlife as they move between habitats. For example hedgerows help cover Blue Racer against predators such as Red-tailed hawk. Plants from local sources are likely to thrive best in your environment. Include grass margins to provide cover for small mammals.	**LET NATURE TAKE CHARGE!** **Avoid application of herbicides and pesticides at the corridor.** Let natural predators along the corridors take care of pests. For example Eastern Foxsnake helps control small rodents. Take advantage of natural pest control methods - chemicals solve pest and weed problems immediately after application but are costly and pollute the environment.
Add More Ecological Value To It	**HABITAT! HABITAT!** **Create habitat to attract animal species.** Good for Rare species like Black Ratsnake and Eastern Foxsnake that use corridors for movement to their habitats. Learn more about wildlife and their habitats. You will find that there are lots of benefits obtained from creating suitable habitat conditions for wildlife. Opportunity to watch and hear birds sing and pest control are just a few among them.	**PILE IT UP!** **Place rockpiles, logs and sticks to enhance wildlife habitat.** Good for snakes and small mammals such as rodents and rabbits which use the pile for shelter. Species share habitat; creating a habitat for one offers other species food and shelter e.g. predators which help control prey populations.	**DEAD BUT STILL PRECIOUS!** **Leave standing and fallen logs or use them to enhance other habitats. Remove them only if they are a danger to human and other species.** Snakes use hollow logs for shelter to escape from summer heat during the day. A Dead tree can be used as a shelter for wildlife and when it decays, nutrients are recycled back to soil.
 Photo Credit: Cara McCleary			
Feed the Visitors	**DIVERSIFY!** **Diversify by establishing wildlife food plants.** Good for song birds, raptors and pollinating insects. Diversifying later attracts species like Robins and Wrens as corridors get older and thicker.	**FRUIT MIX!** **Plant fruit producing shrubs along with trees. Get advice from a conservation biologist at your local conservation authority about which species are most appropriate.** Good for seed eating birds like Goldfinch. Diverse ecosystems are healthier and support more species.	**INVASIVE BERRY PRODUCING SHRUBS** **Discourage the planting of invasive berry producing species such as European Buckthorn. Manual removal of existing shrubs helps.** Good for native shrub species; lessen competition for habitat. Removing invasive species before they bear fruit helps reduce seed dispersal to other natural areas through bird droppings.
 Photo Credit: Upper Thames River CA			

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Woodlands & Ravines

Let it Get old


Photo Credit: Jane Bowles

LEAVE A LEGACY

Create an Old Growth Sanctuary by doing nothing. Leave natural debris, tangles of vine, decaying logs, fallen trees, cavities, spring pools, natural pits and mounds (after a tree falls).

Good for salamanders as well as rare species such as Louisiana Waterthrush that nests in exposed roots, mossy logs & banks

Southern Ontario was once covered in old-growth forests, but today almost all are gone. Old growth forests replenish the soil & groundwater, & provide habitat for hundreds of species.

Go!
Do It Now.

WAIT!
Contact Your Habitat Partner First.

TRUST YOUR ELDERS

Consult an ecologist before removing old trees. Living, dying or dead, old trees have lots to offer.

Good for small mammals as well as rare species such a Acadian Flycatcher, American Chestnut, Prothonotary Warbler

Not all old trees are the same. Super-canopy trees diversify forest structure. "Over-mature" mast trees produce prolific seeds. Disease-resistant trees spread valuable genetic material. Snags (standing dead trees) offer shelter & food for cavity-loving wildlife.

STOP!
Don't Do It.

DON'T CLEAN UP

Stop picking up natural debris, mowing or planting in woodlands. Stick to designated trails to avoid trampling plants.

Good for common and rare forest floor plants such the Drooping Trillium, Wood Poppy, Broad Beech Fern

The disappearance of Trilliums in many woodlands is evidence of too much disturbance of forest floors.

Care for the Heart


Photo Credit: Sarah Hodgkiss

SHIELD IT

Keep a closed canopy, an organic buffer from fields and a healthy mantle of wild plants gently sloping to the field around the edge of your woodland.

Good for birds and rare shade-loving plants like Green Dragon, False Rue-anemone, Heart's-tongue Fern

A closed canopy protects wildlife from being easily spotted by aerial predators, like crows. An abrupt edge will let in greater impacts from weather, predators, nest parasites and trespassers.

KEEP IT DEEP

Get advice before disturbing forest interior habitat where many of our most vulnerable species live.

Good for plants as welle as rare species such as Cerulean Warbler, Hooded Warbler, Woodland Vole

Deep Woods Interior forest habitat (100 metres in) is disappearing to the delight of cowbirds that lay their eggs in other nests in forest edges. The unsuspecting host bird will often raise cowbirds instead of their own. But cowbirds won't venture into the heart of the forest!

ORGANIC PEST CONTROL

Stop using pesticides and herbicides in or near natural woodlands.

Good for frogs as well as rare species such as Jefferson Salamander, Blue-spotted Salamander, West Virginia White butterfly

Let natural predators, like Acadian Flycatcher and Hooded Warbler, control your mosquitoes and other forest insects.

Tweak Your Plan


Photo Credit: Ric MacArthur

GROW THE BIG PICTURE

Let natural seeding fill woodland gaps, smooth edges, buffer and connect your woodland to others across the landscape.

Good for plants as well as rare area sensitive songbirds like Hooded Warbler and Acadian Flycatcher

Well-intentioned plantings in woodlands usually do more harm than good. Woodland owners are lucky – you can let Mother Nature do the work. A wonderful resilient and diverse natural 'garden' will grow quickly with little effort if you leave an area alone. Bird perches can speed things up as they are good at spreading seeds around.

WHEN A TREE FALLS...

Get ecological advice before cutting, use low impact methods and mimic natural openings by selective harvest.

Good for trees and rare tree cavity nesters such as Southern Flying-squirrel, Prothonotary Warbler, Red-headed Woodpecker

Harvesting is not needed for healthy woodlands. If you do harvest, chose methods that minimize negative effects. Avoid "diameter-limit" cuts that destroy the natural capital of the woodland. Balance the value of timber against the value of clean water, good soil and vibrant wildlife populations.

SAVE A BABY BIRD

Stop harvesting trees during nesting season, especially when soils are soft and wet.

Good for all birds and forest floor plants

Logging from April to August when most forest birds nest will affect survival of young birds. Winter harvesting is the best option. Logging equipment can erode and compact soils, destroy habitat and crush plants before they have seeded. Especially avoid harvesting trees along streams and ravines to prevent bank erosion.

Support provided by Ministry of Natural Resources, Parks Canada & Ontario Trillium Foundation

Explore Carolinian Canada
www.carolinian.org 519.433.7077

CAROLINIAN CANADA COALITION

Collaborating for a Healthy Ecoregion

OUR MISSION: Protect and restore natural heritiage in the Carolinian Life Zone for healthy, sustainable landscapes through stewardship, cooperation and research.

Be Part of the Big Picture

Adopt a Habitat Action for Healthy Ecosystems

Community Leaders: Use Conservation Action Plans for healthy ecosystems

Landowners: Watch out for Caring for Habitat workshop or delve into a Carolinian Habitat Plan

Youth: Attend a Species @ Risk Camp or become a Carolinian Student Intern

Business Leaders: Learn about our Save, Steward, Seed Charter

Coastal Leaders: Showcase your habitat actions along our EcoTrail

Visit Carolinian Canada's Grow Wild! on the web to explore and adopt your own Big Picture Habitat Action. Find out who's doing what on the landscape. Link to a Habitat Partner.


Susie Mah


MNR


Peggy Hurst

Find Habitat Partners & more in:

- Caring for Nature factsheets
- Landowner Leaders Carolinian Habitat Action Plan Guide
- Best Practices for Species at Risk
- Species @ Risk in Carolinian Canada and How You Can Help

Get Connected with Carolinian Canada EcoNews!

OTHER PUBLICATIONS:

- The Natural Treasures of Carolinian Canada
- The Thames River Watershed: A Heritage Landscape Guide
- Big Picture Map
- Carolinian Canada Signature Sites Guide

This project was undertaken with the financial support of Environment Canada, Ministry of Natural Resources, Ontario Trillium Foundation & many others.

Ontario | Friends of the Environment Foundation | Ontario Trillium Foundation | Fondation Trillium de l'Ontario | Environment Canada | Environnement Canada

GREENING THE FUTURE OF CAROLINIAN CANADA

Big Picture Habitat Network

= Healthy Ecosystems

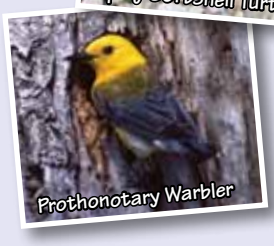
= Healthy Landscapes

= Thriving Landscapes

= Climate Change Survival


American Badger


Spiny Softshell Turtle


Prothonotary Warbler

Carolinian Canada: A National, Natural Treasure

Canada's far south is biodiversity hotspot with high concentrations of unique plants, animals and natural rarities:

- 2000+ native plant species
- 400+ bird species
- 150+ protected Species at Risk
- 500+ additional rare species
- 60+ rare ecosystem types


Dense Blazing Star

Biodiversity Hotspots have the highest levels of species at risk, on land and in water. Carolinian Canada's 15 hotspots offer a way to prioritize and coordinate conservation efforts across the Carolinian Zone.

ACKNOWLEDGEMENTS

The Big Picture Project was a partnership between the Ontario Ministry of Natural Resource's Natural Heritage Information Centre (NHIC) and the Carolinian Canada Coalition (CCC) in 2001.

Cartographic assistance provided by Tim Marchand

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Be part of the Big Picture. Adopt a Habitat Action

Ecosystem Recovery Program

works with 150 priority partners and community leaders to restore a healthy, functioning landscape to southern Ontario. Conservation Action Plans focus on strategic actions to help many rare species and habitats. They link to targeted outreach to 100,000+ homes in Carolinian Canada.

Landowner Leaders

Carolinian Canada Landowner Leaders are saving habitat, stewarding landscapes and seeding great ideas on their land. Find out how you can be part of the Big Picture.

Erie Coastal Stewardship Eco Trail

Explore the hidden treasures of Canada's south coast and enjoy stunning vistas in our backyard 'jungle' along the Erie shore. Get good habitat ideas from Grow Wild demonstration sites and green local leaders. Experience some of the most significant natural wonders in North America.


Five-lined Skink


Barn Owls

Grow Wild!

Explore Carolinian Canada www.carolinian.org 519.433.7077