



What's Happening in the Ash Free Zone?

The Emerald Ash Borer (*Agrilus planipennis*) (EAB)

is considered by many specialists to be one of the most destructive pests to ever arrive in North America, spreading quickly and killing its host tree, the ash. Its entry point in Canada is the Carolinian life zone. Canada has declared EAB to be an emergency, calling for aggressive, science-based action. As a result, an Ash Free Zone is currently being cut in 10 km wide swath across Chatham-Kent, considered to be one of the least forested areas in eastern North America outside of the Arctic. Cutting of 80,000 ash trees began in late January 2004 and completed by April, prior to the emergence of adult beetles.



Alien Invasion

EAB is an invasive alien beetle first confirmed in North America in summer of 2002. Like many other invasive alien

pests from eastern Asia, it arrived here pre-adapted to the climate and its host, the ash tree. It was probably brought from eastern Asia in wooden packing materials to southeastern Michigan - possibly as early as 1996. Since that time, the beetle rapidly built its populations to destructive levels, invading Ontario, Michigan, Ohio, Maryland and Virginia. EAB is under aggressive eradication in USA by national and state authorities.

Knowing the enemy

EAB spends much of its life cycle as a larva inside the ash tree, the adult is elusive and cryptic, and it does not appear to use pheromones or other attractants so it is difficult to detect until the death of the tree. Ash trees act as food sources and breeding sites for EAB. To this point, there is no known predator which acts as a biological control. It flies well but has also spread through transportation of infested forest products, firewood and nursery stock

Death and Destruction

EAB is capable of killing a healthy ash tree within a year of initial infestation, especially where population levels are high. An estimated 7 million ash trees have been killed by EAB with millions more expected to die this year. Over a billion ash trees in Ontario are at risk of infestation and death if nothing is done to stop or slow the spread of EAB in Canada.

All species of ash are subject to lethal attack; although, the red or green ash (*Fraxinus pennsylvanica*) appears to be particularly susceptible. In Ontario, there are five native ash including white and black. The pumpkin and the blue ash are Carolinian species and the blue ash is a species of Special Concern, nationally. In Asia, EAB also attacks species of elm (*Ulmus*), walnut (*Juglans*), and *Pterocarya*, however, there is no evidence yet of attacks on these groups in North America. Host-shifting is seen as a distinct possibility here in the future, making the control of this pest paramount in the view of Canadian authorities.

Fighting Back

Shortly after confirmation of EAB invasion in North America, Canada and the US established advisory committees to develop science-based strategies to combat this serious pest. USA and Canada have designated it as a pest of quarantine significance and have implemented regulations and control actions to stop or slow its spread.

There is no silver bullet on the immediate horizon. The most effective known means of control is to destroy infested trees through chipping or burning. While research into pesticides and biological control agents continues to be a high priority in both countries, none has been found effective enough to aggressively check the ever expanding population and the environmental impact of using large amounts of pesticides is of major concern to many scientists.

To 'quarantine' or slow the spread of the insect, advisory experts recommended that a buffer zone, minimum 10 km

wide and 35 km, long be quickly established just beyond the known leading edge of the infestation. In November 2003, the Canadian Food Inspection Agency (CFIA), the lead agency in Canada in preventing the spread of invasive alien pests such as EAB, received permission to immediately proceed with the establishment of an Ash Free Zone.



Within the Zone all ash trees are being at ground level where possible and chipped or otherwise destroyed. Stumps will be removed or treated to prevent sprouting and CFIA plans to work with property owners over the next few years to ensure that ash does not naturally re-generate in the zone. Associated actions include aggressive control in an Active Suppression Zone on the infested side of the buffer to reduce the populations of emerging beetles which could ultimately breach the zone.

Public cooperation is requested in not moving potentially infested materials such as firewood, logs and nursery stock across the Ash Free Zone. On-going surveillance will be critical to detect and destroy any sparks which may breach the Zone.

Location, Location, Location

Experts recommended that the buffer zone be located in deforested areas and take advantage of natural features, such as lakes, to maximize its effectiveness. By these criteria, Canada's Ash Free Zone in the west end of the Municipality of Chatham-Kent is ideally situated in an area with only 0.8% forest cover, bounded by two large lakes and shown by extensive surveys to be the leading edge of the infestation. This Zone will help to protect areas to the east with greater forest cover. As it happens, the Zone has been located in the heart of the Carolinian Life Zone which is home to some of the rarest flora and fauna in Canada.

CFIA view

CFIA views the Zone as the only hope for Canada to save billions of ash trees in eastern Canada and the floral and faunal communities in which ash plays a major role. While there is no guarantee that the Zone will stop the invasion, the consensus of advisory committee specialists is that the Zone will have a major impact on slowing the spread of EAB, allowing time for development of native or introduced bio-control agents or other solutions. Locally, the cutting damage to woodlots and native plant and animal communities is offset by the alternative: EAB invaded woodlands transformed to tangled, dangerous masses of dead ash trees, seen in the forests in southeast Michigan and western Essex county.

Alternative views

Some ecologists are not convinced that the Ash Free Zone is an appropriate response to the EAB threat. Cutting, spraying

and machinery damage to other trees, soil and ground layer species within the Zone may be much greater than EAB damage to woodlands. This action is particularly devastating in Chatham-Kent where the few remaining woodlands host many rare species. Also, parasitic wasps, fungi and other potential EAB predators may be eliminated by spraying and sterilization of debris. Little is known about the ecology of the species in Ontario and therefore it is difficult to predict the pattern of its invasion and how effective the Zone may be. Despite regular alien invasions into Canada, including chestnut blight, Dutch elm disease, gypsy moth and butternut canker, there is still little control of critical pathways into our country such as green timber imports.

Landowner view

The establishment of the zone has been quite contentious with landowners who are losing ash trees. While the ash component of most woodlots in the area averages from 10-25%, some properties contain as high as 90%. Furthermore, access through fields and yards is creating crop damage, soil compaction and rutting. While the CFIA has made efforts to hire competent professional forestry companies with good track records, a number of non-ash trees were cut in error early in the campaign, further straining relations with some landowners. Contracted companies are responsible to compensate landowners for any damage to their properties, soils or crops. This is small comfort to many landowners. As one states: "This was 5 acres of virgin stand, it has been in our family since just after the war of 1812."

The provincial government is investing up to \$1 million to fund a tree planting program in the Ash Free Zone, as well as, Vaughan and north Toronto where cutting is taking place for Asian horned beetle. The Ministry of Natural Resources has been working closely with the Canadian Food Inspection Agency and others on control programs for both pests.

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Walsingham Savanna & Woodlands Saved

Erica Thompson

The Nature Conservancy of Canada, in partnership with Ontario Parks and the Long Point Basin Land Trust, recently secured the Walsingham Savanna & Woodlands. This 400-acre property in Norfolk County is located adjacent to, and builds upon, the Norfolk Forest complex, Carolinian Canada's largest continuous protected area and one of the country's biodiversity hot spots.

An important area for migratory and breeding birds, endangered wildlife and rare vegetation communities, the Walsingham Savanna natural area features forested rolling dunes formed by dry sandy ridges deposited long ago by glacial lakes. The property supports globally rare Black Oak savanna as well as plant species at risk such as Butternut, Broad Beech Fern and American Chestnut.

Many imperiled wildlife species inhabit the savanna and surrounding woodlands, including the Hooded Warbler, Acadian Flycatcher, Cerulean Warbler, Spotted Turtle, Jefferson Salamander, Southern Flying Squirrel and American Badger.

"This project offers the partnership an exciting opportunity to really make a difference in restoring habitat for everything from American Badgers to Little White Tiger Beetles," said Mary Gartshore of the Long Point Basin Land Trust.

Fields on the property will be ambitiously restored over the coming years, contributing greatly to conservation initiatives underway in Norfolk County.

"The restored Walsingham Savanna and Woodlands will enhance other natural areas in the region, creating a hot spot for rare species," says Graham Buck, NCC's Southern Ontario stewardship officer.

Securing the property is a significant contribution to conservation in the Carolinian Life Zone. Once restored, it will link the South Walsingham Sand Ridges to the Venison Creek Valley. It adds one more critical piece to the protected lands of Norfolk Forests, which include South Walsingham Sand Ridges, St. William's Crown Forest, Backus Woods and Turkey Point, which together create a stronghold for Carolinian biodiversity.

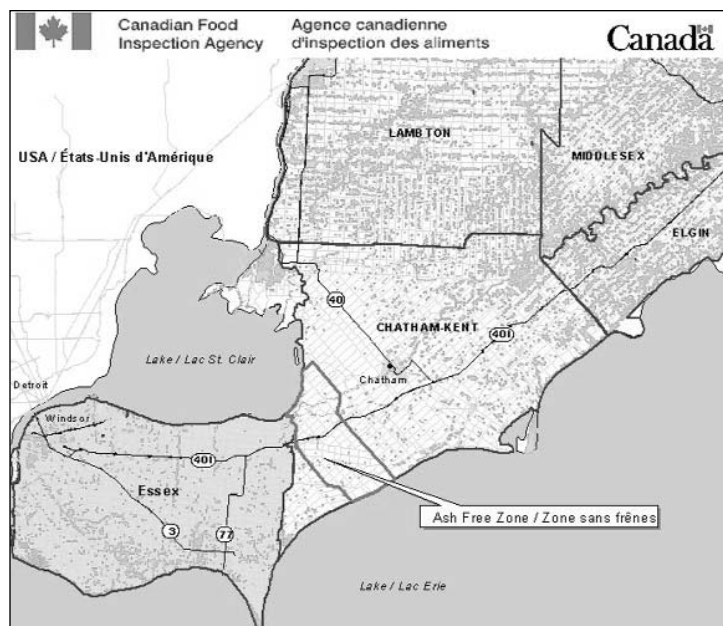
See pages 6 & 7 for more on NCC and its projects.



Thriving savanna restoration on the Stead property in the Norfolk Forest Complex. Photo by Mary Gartshore



Louisiana Waterthrush, an imperiled species in the Norfolk Forest Complex. Photo by Mary Gartshore



Taking it Across the Zone...



The Carolinian Canada Big Picture Roadshow is coming to your community at these events. Check for updates and new events on www.carolinian.org.

Taking Root: The Naturalized Landscape Conference presented by the Backyard Habitat Program of Essex County & Windsor on Saturday, April 3 in Windsor includes a Carolinian Canada presentation and others on wildflowers, backyard ponds, habitat projects, alternative energy, community action, and outdoor photography. Call (519) 259-2407 to register.

Walpole Island's Earth Week celebration will include a Carolinian Canada Plaque Dedication and an Earth Week Celebration Fair to be held at the Walpole Island Elementary School. Activities are planned for the students to raise their awareness of our natural environment and our role in caring for the Earth. For more information, call the Walpole Island Heritage Centre at (519) 627-1475.

Carolinian Canada Earth Day, April 22: Join the Roadshow! Take Carolinian Canada to your local earth week event. Contact Carolinian Canada for factsheets, posters, newsletters, handbooks and more.

Getting Fired Up About Earth, Wind and Water, the 3rd annual conference of the Southwestern Ontario Community Development Network on Friday, May 14 in London will focus on the connections between environmental and social justice issues. Carolinian Canada will participate in the Eco-expo. Call (519) 432-1801 to register.

Significant Woodlands Workshop series hosted by the Federation of Ontario Naturalists is for planners interested in incorporating Big Picture concepts and FON's significant woodland guidelines into local strategies. April 7 in Cambridge, April 23 in Chatham and April 29 in Hamilton. Call (416) 444-8419 to register.

Environmental Symposium by Stratford Central Environmental Club will provide a forum to share ideas on preserving and restoring our environment, locally and globally on May 29. Contact carestratford@cyg.net for more details.

Carolinian Canada Marking Project will dedicate heritage plaques at Rouge Valley, Ojibway Prairie, Middle Island, Skunk's Misery and Walpole Island and others this year. Details will be posted at www.carolinian.org.

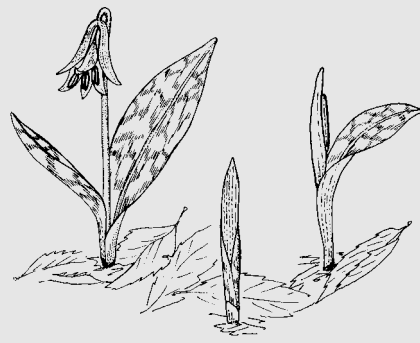
If you are interested in hosting Carolinian Canada Roadshow presentation, display or materials contact 519-433-7077 or info@carolinian.org

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Trout Lily
Sketch by
Jane Bowles

Award Nominations by April 30th

Carolinian Canada makes annual awards for conservation and education efforts related to the special natural heritage of the Carolinian zone by recognizing outstanding contributions by individuals, non-profit organizations, government organizations, businesses, industry organizations and media.

Carolinian Canada is pleased to invite nominations for its 2003-04 Conservation Awards. This program is designed to promote efforts in conserving the special natural heritage of the Carolinian Canada zone by recognizing outstanding contributions by individuals, non-profit organizations, government organizations, businesses, industry organizations and media.

Nominations must be submitted by April 30, 2004. Individuals, non-profit organizations, government organizations, businesses, industry organizations and media may be nominated for significant activities, innovation or accomplishments that have contributed to increased public awareness of the natural diversity of Ontario's Carolinian zone, or have contributed directly to conservation of natural habitats of Carolinian Canada. These include:

- ◆ publications
- ◆ events
- ◆ educational products or programs
- ◆ conservation journalism
- ◆ acquisition or donation of conservation land or easement
- ◆ contribution towards purchase of conservation land or easement
- ◆ restoration projects
- ◆ private land stewardship
- ◆ natural heritage policy, plan or program
- ◆ advocacy for natural heritage protection

Nomination forms available on the Carolinian Canada website at:
www.carolinian.org/Awards.htm

Carolinian Canada presents its spring symposium...

Natural Heritage Planning: Restoration Ecology for The Big Picture

Tuesday, May 11, 2004 9:00 a.m. - 4:15 p.m.
King's College, London, ON

Join municipal planners, conservation authority planners, ecological consultants, landowners and students for a day of learning and sharing. Rehabilitation, reclamation and re-creation are the three R's of restoration ecology. This symposium will explore how the three R's of restoration ecology can be used as tools in natural heritage planning. Experts in conservation will present case studies in workshops to provide participants with the specifics of the "how to" and the "can do". Workshop sessions will give examples of each of the three R's using case studies for woodlands, wetlands, and aquatic habitats in agricultural and urban landscapes. This is the fourth in a series of Carolinian Canada natural heritage planning symposia that brings together a group of experts to provide tools and information that are useful, insightful and practical for planning practitioners in both private and public sectors. The registration fee is \$85 and includes lunch, refreshments and the conference proceedings. The conference proceedings will gather together the tools and information and will provide a guidebook to advance your continuing work in natural heritage planning. Subsidies are available for students or representatives of non-governmental organizations.

Registration is limited. Please register online by Friday, May 7 at www.carolinian.org and mail the registration fee to Carolinian Canada

Symposium Workshops

Rehabilitation

- ◆ Managing from headwaters to Great Lake shorelines
- ◆ Coastal Wetland Rehabilitation for Ecosystem Health
- ◆ Corridors and Buffers
- ◆ Woodland Management for Ecological Values Reclamation
- ◆ Prairie Restoration
- ◆ Multiple Use Objectives and Storm Water Management
- ◆ Best Management Practices and Buffer Strips
- ◆ Wetland Habitat and Agricultural Landscapes Re-creation
- ◆ Prairie Remnant and Restoration in Urban Parks
- ◆ Seed Sources and Afforestation
- ◆ Wetland Restoration and Creation for Wildlife and Water Quality
- ◆ Insights from Wet Forests on the Clay Plain for Urban Hydrology



Thinking Big

1984-2004-2024

This fall, join Carolinian Canada on the shores of Lake Huron for our 20th Anniversary, co-hosted by Lambton Wildlife Inc. at the Carolinian Canada site, Port Franks Wetlands and Forested Dunes. It will include a Conference, Banquet, Celebrities, Awards, Community forum, Field trips, annual general meeting and more.

The conference will highlight changes in the Carolinian Life Zone since 1984 and look forward to 2024 in key areas such as

- ◆ Landscape Ecology: From Islands of Green to the Big Picture & Beyond
- ◆ Risk & Recovery: From Species to Ecosystems to Landscapes
- ◆ Programs & Policy: From the Planning Act to Tax Incentives
- ◆ Private Lands: From Woodlot Management to Stewardship to Conservation Easements
- ◆ Community Participation: From Tree Planting to Local Politics to Land Trusts

This event will bring together a wide range of conservation professionals and amateurs, landowners and members of the public to discuss: What has been accomplished? Are things better? What are the continuing and emerging issues? What challenges remain? What policy and program innovations can result in significant change?

"Our 20th anniversary conference Thinking Big will celebrate significant accomplishments in Carolinian natural heritage protection over the past two decades," according to Michelle Kanter, Executive Director for Carolinian Canada, "and we will emphasize innovative programs that can lead to greater advances in the next 20 years." Everyone interested in healthy landscapes is invited to learn, share updates across the Zone, brainstorm core ideas and make connections.

Mark your calendar for Oct 1 - 2, 2004 at Port Franks. Stay in touch through the Carolinian Canada website, email updates and newsletter.

To participate with a display, as a speaker or volunteer, contact Carolinian Canada. Agenda and registration forms will be available in June.



Great Strides in Saving Threatened Habitat



Glen Campbell, chair of the Ontario region board of NCC accepts the Carolinian Canada Conservation Award from John Ambrose, vice-chair of Carolinian Canada.
Photo by Anna Shephard

Stopping the bulldozer and the chainsaw in the country's most threatened ecological region is the daily mission of Nature Conservancy of Canada (NCC) - and they do it with the voluntary support of landowners.

Carolinian Canada presented a Conservation Award to NCC recognizing its immense achievements in protecting key natural areas across the Carolinian zone in Toronto on November 10, 2003.

"NCC has made astounding progress in the last few years securing many ecological gems across the Carolinian zone," said John Ambrose, Vice-Chair of Carolinian Canada. "Many of these sites were identified for protection over 20 years ago and their acquisition is a significant step for the natural health of Canada's most populated region."

In 1998, NCC identified the Carolinian zone as a priority area for action in securing habitat, using a landscape approach and building on its 40 year history in the area. NCC uses creative deal-making to purchase land and strike cooperative agreements with landowners - for results you can walk on.

"The Nature Conservancy relies on effective partnerships for its conservation success," said John Grant, NCC's Ontario Director, "and Carolinian Canada is a great example of a collaborative effort protecting some of our country's very best habitat. NCC is honoured to be the recipient of Carolinian Canada's Conservation Award for our achievements in this special area."

Among the sites NCC has protected are several of the 38 critical unprotected natural areas identified by Carolinian Canada in 1984, as well as, Core Natural Areas identified in the Big Picture, a vision for natural heritage in the Carolinian zone.

- ◆ Middle Island, Essex County: NCC made a successful \$1.3 M bid at auction to protect Canada's southernmost land mass from American resort development in 1999. Middle Island is now managed as part of Point Pelee National Park.
- ◆ Clear Creek Forest, Municipality of Chatham-Kent: Over 800 acres of old growth Carolinian forest, savanna, pristine shoreline bluffs, endangered species habitat and some of the largest trees in Southern Ontario were threatened by logging until purchased by NCC in 2000. An adjacent 111-acre farm entered into a conservation easement with NCC - a first for the municipality - demonstrating NCC's and Carolinian Canada's goal of balancing conservation with surrounding land uses.
- ◆ Bickford Oak Woods, Lambton County: Last year, NCC acquired the largest remaining private woodlot in a county with a mere 8% forest cover. The 762-acre purchase, just south of Sarnia, yielded a ground-breaking discovery: Swamp Cottonwood, a new tree species for Canada.
- ◆ NCC has secured globally and nationally rare habitats at critical sites such as Stone Road Alvar on Pelee Island and Oxley Poison Sumac Swamp in Essex County.

Harnessing the best science and the latest technology, NCC has become a leader in Big Picture landscape protection of Natural Cores and Corridors. NCC's Great Lakes



Tall Bellflower
Photo by Mary Gartshore

Conservation Blueprint will identify a portfolio of sites to protect wildlife and habitats for all time. Recently, NCC has jumped to the forefront of leading-edge habitat restoration with the largest 'Pit and Mound' reforestation project in North America at Clear Creek Forest. NCC is committed to ongoing protection of Canada's unique Carolinian ecosystems with long-term, landscape-level strategies at many key Carolinian sites.

A Home for Carolinian Flora

In December 2003 Dr. Jane M. Bowles was appointed Curator of the University of Western Ontario Herbarium (UWO). The herbarium houses over 40,000 dried specimens of vascular plants in addition to one of the largest collections of the genus *Crataegus* (Hawthorns) in North America. Located in London, the herbarium is located in the heart of the Carolinian Life Zone. Most of the 2,300 or so vascular plant species found in the Carolinian Zone are represented in the collection.

Along with taxonomic research and teaching, one of the most important functions of a herbarium is to document regional plant diversity. Specimens at the UWO Herbarium have made important contributions to regional checklists such as Mike Oldham's *Distribution and Status of the Vascular Plants of Southwestern Ontario* (1993, Ontario Ministry of Natural Resources). Jane's main goal for the UWO Herbarium is to concentrate on building knowledge of the regional flora, centring the effort within the Carolinian Zone. By increasing the regional collections and making the facilities more accessible to botanists and plant ecologists working in southwestern Ontario, the herbarium can become an important regional resource. Teachers, students, consulting ecologists, landowners, naturalist groups, and agency staff will be able to make use of the herbarium to check identifications. Collectors are encouraged to deposit properly annotated voucher specimens at UWO. The herbarium will also join forces this spring with Carolinian Canada to produce some outreach material (posters and pamphlets) of *Species at Risk* in the Carolinian Zone.

To find out more, check the UWO Herbarium website www.uwo.ca/biology/herbarium or contact Jane Bowles at jbowles@uwo.ca.



Herbarium volunteer Sheena Adamson mounting specimens.
Photo by Dr. Jane Bowles

Save a piece of Essex



The Nature Conservancy of Canada (NCC) has until May 2004 to secure Cedar Creek, one of the largest remaining unprotected forests in Essex County. The 160-acre Cedar Creek property features remnants of rare Red Cedar savanna communities. It is also zoned for estate residential development, which could result in the severe degradation, or even loss, of its fragile ecosystems.

Located approximately 25 km southeast of Windsor, Cedar Creek includes some of the most significant biodiversity features remaining in Essex. The property's numerous natural features - creeks, wetlands, savanna, and upland and lowland forest - provide some of the best, and most varied, habitat in Essex County. Species at risk recorded on the property include Green Dragon, Common Green Briar, Spiked Blazing Star, and Willow Aster. There are also eleven other species of provincial concern present; the site is one of only two sites in Canada for Violet Bushclover.

With the purchase of Cedar Creek, NCC will protect this rare forest forever, and enhance its tallgrass and Red Cedar savanna habitats.

NCC has until May 2004 to raise the funding necessary to purchase the property, and to care for it in perpetuity. Please help us to preserve Cedar Creek, as a legacy for Essex County forever.

For more information on Cedar Creek contact NCC Ontario Region at 1.877.343.3532 or Email ontario@natureconservancy.ca

True South Wild and Free

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For 19 years, the Carolinian Canada Coalition has worked successfully to build a strong, action-oriented community in Canada's southernmost Life Zone collaborating for the future of our unique species and ecosystems. Your membership helps guard our remaining wild places and their inhabitants in the far south through leading-edge programs in research, awareness, policy, landowner incentives, multi-sector partnerships and private land stewardship.

Renew your support and be part of the Big Picture.

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