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**INTERESTED IN SITTING ON THE BOARD?
LET US KNOW!**

The NRC's next Board Meeting is at 6:30 p.m. November 8th at 250 Thorold Rd, Welland. Come and learn more about us and get involved!

Did you know? Only 7% of Canada's water resources are considered renewable

NIAGARA RESTORATION COUNCIL

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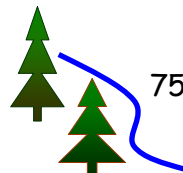
www.niagararestoration.org

Our Mandate:

"To protect, maintain and actively restore the ecosystems of Niagara"

The NRC gratefully acknowledges the financial support of:

Ontario Trillium Foundation
Great Lakes Sustainability Fund
Niagara Peninsula Conservation Authority
Niagara Community Foundation
Ontario Great Lakes Renewal Foundation
Ontario Ministry of Natural Resources
Department of Fisheries and Oceans
Ontario Power Generation
EcoAction
Shell Environmental Fund
Wetland Habitat Fund
Toronto Dominion Friends of the Environment
& everyone else that has supported the NRC



75% of water in our streams, rivers and lakes comes from the forest



RESTORATION NEWS



Fall 2005

NIAGARA RESTORATION COUNCIL

YEAR 6, ISSUE

**You are invited to the
Niagara's Restoration Council's
Annual General Meeting**

With Special Guest Speaker

John Ambrose

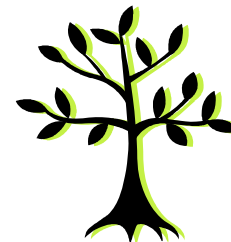
Botanist and co-writer of the Carolinian Woodland Recovery Strategy

To discuss Carolinian Natural Heritage Protection

When: November 29th, 2005

Refreshments at 6:45; guest speaker at 7:30

Where: Niagara College, Glendale Campus, Room W214



Did you know???

The Carolinian life zone makes up only 1% of Canada's landmass, while boasting the highest diversity of flora and fauna in all of the country

Laying Low in the Niagara Seeps. A New Salamander Species to Ontario Discovered!



By Kara L. Vlasman

Staff at the Niagara Area office of the Ministry of Natural Resources discovered a new species of salamander to Ontario in the coldwater seeps of the steep slopes of the Niagara Gorge last summer – the Allegheny Mountain Dusky Salamander (*Desmognathus ochrophaeus*). The new species was discovered while climbing the precarious habitat looking for its close relative, the provincially endangered Northern Dusky Salamander (*Desmognathus fuscus*). As it turns out, both salamander species call the escarpment of the Niagara Gorge 'home'.

The Allegheny Mountain Dusky Salamander was nationally listed as threatened by COSEWIC (Committee on the Status of Endangered Wildlife in Canada) in 2001. It was formerly documented only from Quebec where it is effectively known to occur at just two localities at the northernmost edge of the Adirondack Mountains. Due to this recent finding, Ontario has been added to its known range of distribution.

The global range of the Mountain Dusky extends along the physiographic Appalachian Valley and Ridge Province, which includes several mountains of southwestern Virginia, the Cumberland Mountains and Plateau of southeastern Kentucky, and the Allegheny Mountains and Plateau of West Virginia, Maryland, Pennsylvania, Ohio and New York through the Adirondack Mountains to southern Quebec. Populations in the Cumberland Plateau of Tennessee have not been genetically confirmed. Genetic analyses indicate the Niagara Mountain Dusky population is more closely related to those in Western New York than to those in Quebec.

More is being learned about the habitat needs of this species by the Niagara Area team. Because it occupies seepages, protection of surface and underground source water quality and quantity will be important to the conservation of the site. Recreational climbing and use of unsanctioned trails through the sensitive habitat it occupies may be detrimental to the species. A recovery team has been initiated to devise a recovery plan for both salamander species, and in so doing will try to ensure that this new discovery is not fleeting. ♦
Kara Vlasman is the Guelph District Species at Risk Biologist with the Ministry of Natural Resources and Co-Chair of the 'Allegheny Mountain Dusky and Northern Dusky Salamander Recovery Team'.

Trees for Niagara

Wildlife Corridor Enhancement Project

The Niagara Restoration Council is excited to announce the initiation of its Wildlife Corridor Enhancement Project to be implemented within the Fifteen, Sixteen, and Eighteen Mile Creek subwatersheds.

This project aims to address some of the fundamental problems plaguing southern Ontario's forests, including forest habitat loss and forest fragmentation. Forest cover in the Niagara Region has been reduced from its historic 80%, to less than 11% today.

The Carolinian life zone, a unique area encompassing the Niagara Peninsula, is particularly at risk from forest loss, due to its high human population. This zone boasts the highest diversity of species and habitats in Canada, however, 500 rare or threatened species are located here, and are faced with the continuous pressures from



The NRC's Wildlife Corridor project aims to increase natural habitat, through the planting of at least 50,000 native trees. Additionally, this project will:

- Restore habitat through the connection of existing forest fragments,
- Protect existing habitat via various land conservation agreements,
- Educate the public, through field planting days, public events, school participation, and media about the significance of trees and forests, and their intrinsic value.

This project will benefit wildlife species that require interior forest area, such as several of the rarer species in the Carolinian zone, including scarlet tanagers, oven birds, and hooded warblers. Geomatic computer modeling will identify high priority sites for restoration based on their proximity to existing forest, potential for long-term habitat conservation, and ability to perform other important ecological functions (such as erosion control).



The NRC is currently in the stage of selecting and inventorying sites for tree planting, and negotiating with landowners in the region. The NRC would like to thank the Ontario Trillium Foundation, the Niagara Community Foundation the Shell Environmental Fund, the Niagara Peninsula Conservation Authority and Land Care Niagara for their support.

Did you know??

An average tree absorbs 10 pounds of pollutants from the air each year!!

Buffer Project Update

This has been a very productive season for the 'Building Stream Buffers for Niagara's Rivers' Project. This project involves the planting of riparian buffer strips alongside waterways within the Niagara River watershed, for the improvement of water quality and wildlife habitat. Three buffer sites were planted this year, in the spring of 2005. Two of these sites, the Maple Park planting, and the Pelham Hills Golf and Country Club buffer strip were project extensions of plantings commenced the previous year. Both of these sites, in fact, were so successful that the City of Welland, and the owner of the golf course jumped on board for the continuation of the project!

A third buffer planting project occurred at the Welland Soccer club this spring. All three of the buffer strips planted this season prospered (despite the dry summer and fall floods!). The projects overall have been very successful both ecologically and socially. Dozens of volunteers assisted with the planting days, and the project has received excellent media attention.

Three new buffer planting sites are being selected for the spring of 2006, including Harold S. Bradshaw Memorial Park, and two other locations. We will keep you informed of our planting days, where anyone is welcome to attend!

Fish Barrier Project Update

This has been a wonderful year for the Niagara River Area of Concern (AOC) Fish Barrier Project. This project addresses the problems imposed by fish migration barriers with the Niagara River Watershed. Barriers (both manmade and natural) can pose a threat the migration and transportation of fish, sediments and water flow.

This year, the NRC was able to coordinate with many different landowners towards the removal of fish barriers. In 2004-05, the NRC removed six barriers.

One of the barriers removed was a partial private dam that was considered one of the worst three barriers in the Niagara River Area of Concern. The remediation of this barrier opened up 65,500 m of fish habitat that had been unavailable to migratory fish since 1978. The NRC also began the creation of a wetland area which provides wildlife habitat, as well as an irrigation source for the owner's golf course. This location acts as an excellent model for golf course naturalization.

So far to date, 134 of the 208 inventoried barriers have been removed. The removal of barriers through this project has resulted in the "unlocking" of 404 (of 864) km of fish habitat which was previously unavailable!! Six barrier removal projects are additionally planned for 2005-06, including four culvert remediations, and the second half of a partial dam removal.

Harvesting the Sun's Power

Deanna Lindblad, Niagara Peninsula Conservation Authority

At a time when the burning of fossil fuels is a hot topic and more expensive option than ever before, many folks are looking to the power of the sun as an alternative. The farming community is no exception. The Restoration Team at the Niagara Peninsula Conservation Authority is fielding more requests than ever for solar powered equipment. This past summer the Team installed its first alternate watering system that relies on a solar panel to convert the sun's energy to run a pump for watering livestock.

Through the NPCA's Water Quality Improvement Program, landowners including farmers may access funds to upgrade their operations to be more ecologically sound. This first solar powered system was implemented in conjunction with a livestock fencing project. The farm owners agreed to put up electric fencing (also solar powered) to keep the cows out of the creek and on-site pond and therefore required an alternative way of getting water to the herd. An electric bilge pump powered by the panel and a deep cell battery now delivers the water to a trough located outside of the restricted area. The system designed in association with Sun Energy Systems of Port Colborne is the first of many the Team will likely install. It is a relatively low cost, low maintenance way to make large ecological improvements. A system like the one installed in Twelve Mile Creek costs about \$2,000 and is expected to last a minimum of 10 years.

So, what are the problems associated with livestock accessing a creek? Well, there is the obvious nutrient issue with manure entering the water. But, of equally great concern is the erosion of the stream banks by trampling. When chunks of the bank cave in, sediment enters the creek and silts over the nest sites of fish like that of the threatened native Brook Trout. In addition to the stresses they already face from warmer, lower quality water, if fish are not able to find adequate spawning sites, they simply will not reproduce.

It is through partnerships with local landowners and innovative use of technology like the solar powered alternatives that we will make a difference in these sensitive systems.



For more information on the NPCA's Water Quality Improvement Program or the use of solar powered alternatives contact the Restoration Team at (905) 788-3135 x 237.

Did you know?

It can cost ten times more to *treat* water contaminated by nutrient loading, than to *protect* that water source initially.