

Strathroy Reservoir Improvements

The St. Clair Region Conservation Authority received a grant from Environment Canada through the EcoAction Community Funding Program. The \$5,050 grant will be used to enhance the shoreline of the Strathroy Reservoir with additional shrub and tree planting along the shore and planting of wetland plants along the edge of the island that is forming at the top of the reservoir.

While some of the work was undertaken in the fall of 2006, the majority of the planting will take place this spring as part of our annual Strathroy Community Clean Up and Planting Day.

The goals of this project are to:

- enhance the water quality in the upper Sydenham River
- discourage Canada geese from congregating in the reservoir, to reduce the number of droppings in the water and on the shorelands
- improve the aquatic habitats in the reservoir and river by shading the banks to reduce evaporation and keep the water cooler; providing more woody debris for insect life which feeds the fish; reducing sediment inputs



JT



JT © Joseph Tomelleri

The grass pickerel, found in the Sydenham River has been listed as a species of special concern. The adult fish ranges from 14 cm - 25 cm and is found in well vegetated waters. Its most distinctive characteristic is a teardrop shaped spot below the eyes.

For more information contact
St. Clair Region Conservation Authority
205 Mill Pond Cr., Strathroy, ON, N7G 3P9
(519) 245-3710
stclair@scrc.a.on.ca
www.scrc.a.on.ca

Feature Website

<http://unionid.missouristate.edu/>

This is an excellent website to learn about the world of mussels. Watch the movie of the Rainbow mussle, *Villosa iris* which mimics a crayfish to attract potential hosts for its young.

Unio Gallery at Missouri State University

These photographs and videos are intended to encourage interest in the freshwater pearly mussels (Unionidae) and promote the conservation of endangered species. Students, teachers and biologists are welcome to use the images for non-commercial educational purposes (see use policy).



Available from the St. Clair Region Conservation Authority

- A Photo Field Guide to the Freshwater Mussels of Ontario - cost \$10
- Freshwater Mussels of Ontario Poster - Free

for more information, e-mail stclair@scrc.a.on.ca or call 519 245-3710

Partners in Conservation

Environment Canada's Habitat Stewardship Program for Species at Risk
Fisheries and Oceans Canada
Middlesex Stewardship Committee
Natural Heritage Information Centre
Ontario Great Lakes Renewal Foundation
Ontario Ministry of Natural Resources
Royal Ontario Museum
Rural Lambton Stewardship Network
St. Clair Region Conservation Authority
Stewardship Kent
University of Guelph
World Wildlife Fund Canada



Canada

Ontario



www.sydenhamriver.on.ca

Aquatic Species at Risk

in the Sydenham River Watershed

March, 2007

The Sydenham River in southwestern Ontario is the only major watershed which lies completely in the Carolinian Life Zone and is relatively undisturbed by industrial development. This has made the river a biological treasure. The Sydenham River supports an incredible variety of aquatic life, or what we call biodiversity. At least 82 species of fish and 34 species of freshwater mussels have been found here, making it one of the most species-rich watersheds in all of Canada. Several species in the Sydenham River are found nowhere else in Canada, and some remain at only a few locations globally. Nineteen of these species have been nationally listed as endangered, threatened or of special concern in the federal Species at Risk Act.

The Black Sheep Pub and Bistro Raises Money for Species at Risk

The Black Sheep Pub and Bistro, which backs onto the Sydenham River in Wallaceburg, held a fund raising night for Species at Risk. Proceeds from a silent art auction with pieces donated by local artists, will go toward a local habitat improvement project.



Helen Cedeno, owner of the Black Sheep Pub and Bistro in Wallaceburg (left) and Kim Gledhill, Outdoor Education Instructor for the St. Clair Region Conservation Authority check out the items on display during a fundraising art auction organized by the Pub and Bistro.

Fish of Sydenham

In partnership with TD Friends of the Environment Foundation, the St. Clair Region Conservation Authority and its Foundation donated \$6,000 toward the Natural Heritage of the Sydenham River exhibit. The exhibit is one of the new features of Museum Strathroy-Caradoc which opened in February, 2007. The exhibit will feature two aquariums highlighting native fish species of the river and will include information on species at risk and a hands-on section dealing with aquatic bugs that inhabit the river bottom of the Sydenham River watershed. Of course, fish that are species at risk are not on display. They have been left in the river.



Did you know?

Spiny Softshell Turtle hibernate under water in deep pools of sand or mud during the winter months. They are easy prey for mink when they are basking or laying their eggs because their shells are soft and leathery.

Blackstripe Topminnows have upturned mouths and stay near the surface of the water in the spring, summer and fall to feed on aquatic and terrestrial insects.

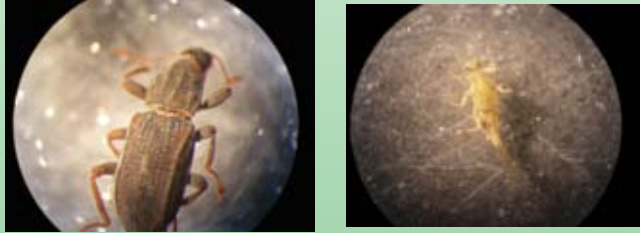
The Eastern Sand Darter only likes to burrow under sandy bars. It will not live anywhere else.

SydenhamDiscovery.ca



Benthic Sampling

Benthic macroinvertebrate sampling is the collection of aquatic "bugs" for biological analysis. These organisms live in the substrate of water bodies and are easily netted by disturbing the sediment. The St. Clair Region Conservation Authority has been collecting and analyzing samples from many locations in our region, since 1999. The analysis of the data has shown that only a small percentage of the sites are "Fair" or "Good" quality, which means most of the aquatic habitats are in poor condition. The best way to improve these sites is by Best Management Practices on the land.



Kentucky Coffee-tree

Often found along the shores of the Sydenham, the Kentucky Coffee-tree is also a species at risk. The Kentucky coffee tree gets its name from the seeds, which were used as a substitute for coffee beans by First Nation people and early settlers. The seeds are poisonous until roasted. The tree reproduces by the spread of these seeds as well as from root sprouts. The root sprouts sometimes produce "fairy rings," a circle of trees of similar size around the original tree. The coffee-tree sprouts leaves late in spring, and loses them in early autumn, so it has no leaves for half the year. This explains the genus name for the tree, *Gymnocladus*, which means "naked branch." There are also stories that the Native Americans used the seeds as counters for their games. Of 31 sightings of the tree growing naturally in Ontario, 11 have been in the Sydenham River watershed.



Looking for Turtles

Over a four day period, staff and a volunteer travelled by canoe from Rokeby Line to Oil Springs Line looking for turtles along the Sydenham River. Not just any turtles – they were on the hunt for turtles that are listed as Species at Risk. They observed a total of 50 Eastern Spiny Softshell Turtles and 6 Map Turtles. The turtle sightings, basking and nesting sites were recorded using a GPS unit. Information from this survey is useful to determine if the populations of these species are remaining stable and help to provide valuable insight into the specific habitat needs of these special turtles. This is the fifth year of surveying the river for turtles. Results of survey show that there are pockets of Eastern Spiny Softshell Turtles use sandy banks with flats for basking. The limiting factor for this turtle's population may be the availability of suitable habitat for basking and nesting.

Creating Turtle Habitat

Turtle nesting habitat created - A new nesting area for the Eastern Spiny Softshell Turtle was constructed this spring. A sand and gravel mix was spread over a 15 square metre section near the banks of the Sydenham River. The habitat was created in an area where there has been confirmed sightings of the turtle but a lack of suitable areas for the turtles to nest. Conservation Authority staff and volunteers will be monitoring the site to determine the success of this project.

Blanding's Turtle Sighted

The public is also getting involved. A Blanding's Turtle (a threatened species) was sighted in Strathroy and brought to the attention of Conservation Authority staff. The Blanding's turtle is a medium-sized turtle with a domed shell, a hinged plastron and a bright yellow lower jaw. The females do not mature until they are more than ten years old, and they do not lay eggs every year. An increase in mortality from roadkills, or a decrease in the acreage of available wetlands has a large effect on the population of this turtle.



Habitat Stewardship Program for Species at Risk

Environment Canada provided a \$175,000 grant to the Conservation Authority in 2006 through the Habitat Stewardship Program for Species at Risk. These funds helped to finance the following projects:

In the classroom - Students participated in programs about local species at risk.

Getting the message out - It is important to keep our watershed residents up to date about the efforts that are being undertaken to help species at risk.

- An annual Species at Risk newsletter is distributed to 49,000 homes each year in early April.
- A website, www.sydenhamriver.on.ca provides an on-going link to activities and background information on the Recovery Strategy.
- A number of signs have been erected throughout region describing the Species at Risk in the Sydenham.
- A Public Service Announcement is aired on the A Channel over a two week period each year with funds from the St. Clair Region and Upper Thames River Conservation Authorities promoting the availability of grants for landowners.

On the farm - \$116,300 was provided to farmers to help them implement 21 conservation projects which help improve the quality of the Sydenham River and its tributaries. Projects include such initiatives as tree planting; streambank stabilization; wetland creation and enhancement; and retention ponds. Grants are still available for projects. For more information contact Steve Shaw at the Conservation Authority at 519 245-3710 ext. 13.



Aquatic Species at Risk in the Sydenham River

Mussels

northern riffleshell - **Endangered**
wavy-rayed lampmussel - **Endangered**
rayed bean - **Endangered**
snuffbox - **Endangered**
mudpuppy mussel - **Endangered**
kidneyshell - **Endangered**
round hickorynut - **Endangered**
round pigtoe - **Endangered**
rainbow mussel - **Endangered**
mapleleaf mussel - **Threatened**

Fish

northern madtom - **Endangered**
eastern sand darter - **Threatened**
spotted gar - **Threatened**
blackstripe topminnow - **Special Concern**
pugnose minnow - **Special Concern**
bigmouth buffalo - **Special Concern**
spotted sucker - **Special Concern**
grass pickerel - **Special Concern**

Reptiles

eastern spiny softshell turtle - **Threatened**
Blanding's turtle - **Threatened**
northern map turtle - **Special Concern**

Endangered: A species facing imminent extirpation or extinction.

Threatened: A species that is likely to become endangered if limiting factors are not reversed.

Special Concern: A species is of special concern because of characteristics that make it particularly sensitive to human activities or natural events.

Two More Sydenham Mussels Added to the List of Species at Risk



The rainbow mussel and its relatives use mantle flap lures to attract their host fish, which include basses and other sunfish. They have also evolved the ability to "dance" by anchoring their foot in the substrate and rocking back and forth.



The mapleleaf mussel is a heavy shelled mussel that is shaped like a maple leaf and is found in watersheds dominated by agriculture. Although the mussel has been lost from the Great Lakes and connecting channels due to zebra mussels, the numbers of mature individuals appear established in the Sydenham River.