

# Sydenham River Watershed

## helping species at risk

April, 2015

*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 and urban 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. Twenty-four species of fish, mussels and reptiles which live in and around the Sydenham River are nationally or provincially Species at Risk.*

## Back to the Wild

On a sunny day in June a call came into the St. Clair Region Conservation Authority (SCRCA) office regarding a turtle who had found her way next to a roadway and was laying her eggs. This was a small turtle with an olive coloured shell that has fine yellow lines similar to contour lines found on a map. It was a northern map turtle. A week later, a second northern map turtle was found close by also laying her eggs along the roadway.

SCRCA staff Kelli Smith and John Jimmo went out to investigate. While out, it was noted there were several nests that had been constructed along this roadway, many of which had been predated, dug up, and the eggs eaten. The culprit was most likely the raccoons that frequent the area but other possible predators include foxes and skunks. Only two nests remained, so Kelli and John decided that since the threat of loss for these nests was so great, it was time to step in and try to do their best to save these nests. Normally nests are not moved, especially if a nest is found in a relatively safe location - it will be left alone to let nature take its course. The process was very nerve wracking as the turtle eggs are very delicate and any disturbance can cause the embryo to detach from the egg and die. After consulting with Salthaven Wildlife Rehabilitation and Education Centre, the nests were carefully collected and moved for incubation - Salthaven has a special permit to do this.



Approximately 10 weeks later, in late August, we received the call. Twenty-four tiny northern map turtles had hatched and were ready to head home! The turtles were taken back to the location they were found along the Sydenham River. The toonie sized

hatchlings were released, one by one, back into the river, many

of which quickly swam away and hid beneath the vegetation along the edge of the river - one major obstacle achieved to make their way back home.

The northern map turtle is a Special Concern species under the federal Species at Risk Act and provincial Endangered Species Act and is also a specially protected reptile under the Ontario Fish and Wildlife Conservation Act. Declining

numbers in the population have led to the designation of special concern. Some of the causes for the decline include habitat loss or degradation; water pollution; boating and road mortalities; and the decline in molluscs, a primary food source for female turtles. Reproduction can also be challenging for the northern map turtle. Females don't reach breeding maturity for nearly 12 years and only produce 10-17 eggs which have a high mortality rate from nest raiding by foxes and raccoons.

## Interpretive Signs Dot the Watershed

As one of the most biologically diverse watersheds in Canada, there are many interesting things to learn about the Sydenham River. Interpretive signs have been installed at several Conservation Areas and public lands to inform visitors of the unique and rare species that inhabit the Sydenham River. The signs explore many topics from creating snake habitat to identifying aquatic species at risk. Keep an eye out – we have more interesting interpretive signs to come.



## Healthy Sydenham Headwaters Initiative

Thanks to landowners, the Healthy Sydenham Headwaters Initiative has been a resounding success! In the past 3 years, 50 hectares of land have been retired and returned to natural landscape. Nearly 50 landowners implemented stewardship projects on their properties including riparian buffers, tree planting, wetlands, wildlife movement corridors, windbreaks, and tallgrass prairie.

Implementing stewardship projects in the headwaters has far-reaching impacts downstream. If the headwaters aren't bringing clean water downstream, no amount of habitat restoration work downstream will be able to counteract the continual influx of sediments and nutrients from upstream.

The Healthy Sydenham Headwaters Initiative was a 3 year joint project with the SCRCA and the Middlesex Stewardship Council which targeted an area in the southwest corner of Middlesex County and includes the East Sydenham River headwaters and the Strathroy-Caradoc Sand Plain.

## Ask a Pro - How can monitoring water quality help aquatic Species at Risk?

Fish and mussels can be used as bio-indicators of habitat conditions and long-term stream health since different species exhibit different tolerances to pollutant levels and habitat change. Sensitive species tend to be the first to disappear from a stream or river when it is polluted or otherwise impacted. It follows that these same sensitive species are more likely to eventually become "species at risk". On the other hand, presence of a wide variety of species, including those sensitive to pollution and habitat change, indicates a healthier system.



*Jessica Van Zwol, Healthy Watershed Specialist, St. Clair Region Conservation Authority*

**Eastern Sand Darter:** This darter is a unique and small member of the perch family. In the Sydenham, they prefer areas with a sandy bottom. The biggest threat to this species is silt or clay being washed into and covering its sandy habitat. The presence of the eastern sand darter suggests little to no impact from siltation or pollution for that part of the river.



*Credit: Joseph Tomelleri*

## What can landowners do to help improve water quality and help protect aquatic Species at Risk?

Financial incentives are available to landowners to implement best management practices. Projects to plant riparian buffers (native grasses, shrubs and/or trees), reduce erosion on farmland, or create wetlands can help keep soil and nutrients on the land where it is needed, preventing it from entering the Sydenham River or other local creeks and streams. Contact Jessica at the St. Clair Region Conservation Authority (519 245-3710 ext. 241) to learn more about types of projects that could qualify for funding.





The St. Clair Region Conservation Authority includes a Species at Risk program as part of its commitment toward conservation education. Over 11,000 students participate in conservation education programs each year.

## Aquatic Species at Risk in the Sydenham River

### Mussels

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

### Fish

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

### Reptiles

eastern foxsnake - **Endangered**  
 eastern spiny softshell turtle - **Threatened**  
 Blanding's turtle - **Threatened**  
 snapping turtle - **Special Concern**  
 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.

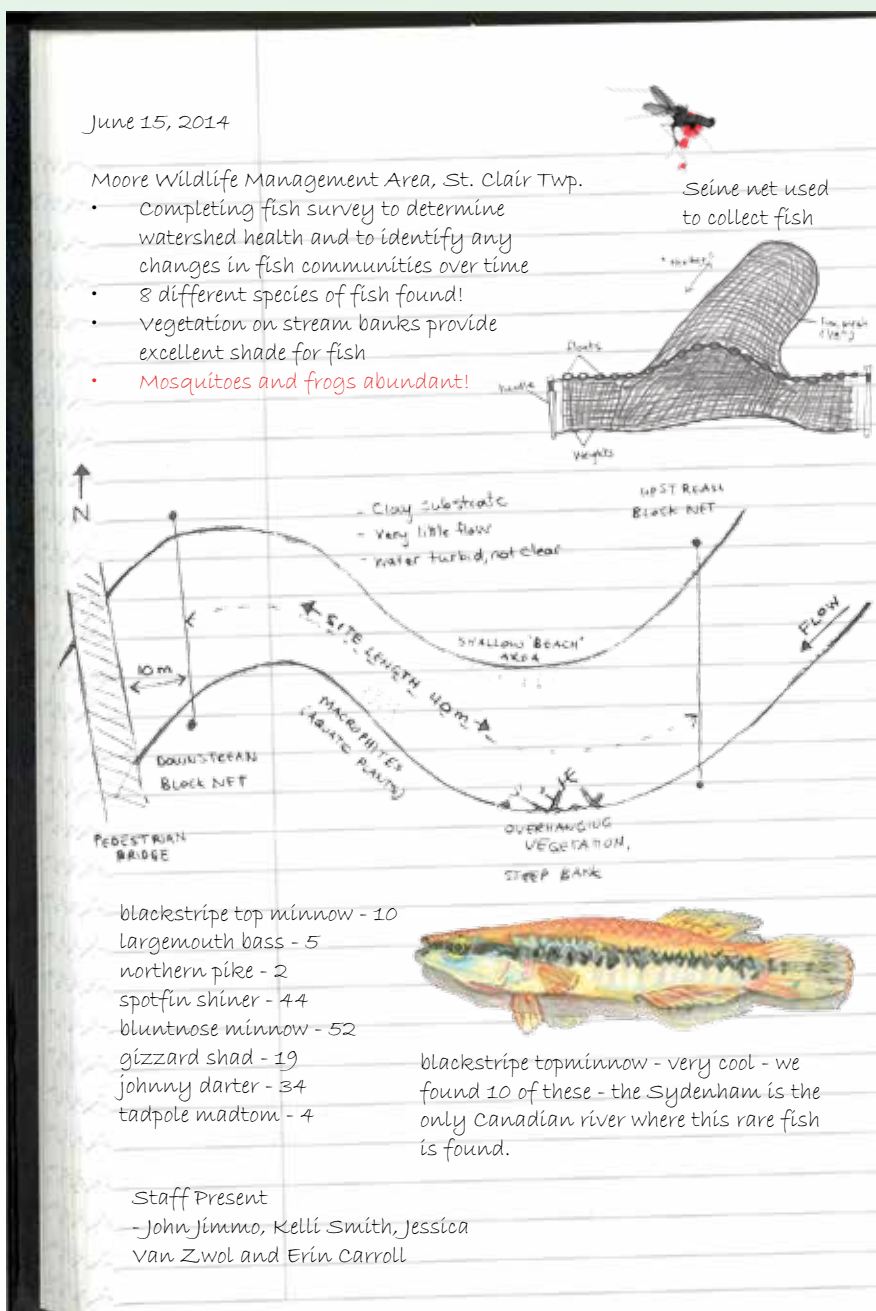
**Special Concern:** A species is of special concern because of characteristics that make it particularly sensitive to human activities or natural events.

\* The wavy-rayed lampmussel is no longer found in the Sydenham River.

\*\* Very few historical records



Mapleleaf Mussel



Unscramble these five jumbles - one letter for each dash to form the names of five Species at Risk. Then arrange the letters inside the boxes to form the answer to our riddle.

### Second Prize - "Skink on the Brink"

### Third Prize - SCRCA Gift Bag

You can send in your answer by e-mail to:  
contests@scrcra.on.ca or by mailing your answers to:  
St. Clair Region Conservation Authority  
205 Mill Pond Cr., Strathroy, ON, N7G 3P9



Be sure to include contact information so we can notify the winners.

s k g l s a r r p c e i e

r d o n h m m n r a o t t e

d\_t e g r n o o i u p

s p m f e e a u m e a l l l s

e l p s a u t t g n r i p n

Hey Nature Nut - don't keep it to yourself . .



**Draw will be held June 5, 2015**



*eastern foxsnake*

## Your Eastern Foxsnake Sightings

## Eastern Foxsnake

## *Pantherophis vulpinus*

## Endangered and Globally Rare

### What to Look for:

- Large snake (approximately 1 metre)
- Adults are yellow brown with large brown or black blotches along sides
- Adults have a reddish brown head
- Belly has a black checkerboard pattern
- Juveniles are grey with reddish brown blotches and a bar across their snout from eye to jaw

**Did you know?** This snake is not venomous • is found in marshes, wetlands, beaches, woods, and farms • is an avid swimmer • is at risk from habitat loss and human persecution

### Reward: Control rodent populations

**Help Please!** Enhance wetlands • Create snake habitat on your property • Report your sightings • Appreciate Snakes!

If you see this animal contact: St. Clair Region  
Conservation Authority [stclair@scrca.on.ca](mailto:stclair@scrca.on.ca)

## Partners in Conservation

Fisheries and Oceans Canada  
Ontario Ministry of Natural Resources and Forestry  
Ontario Ministry of the Environment and Climate Change  
Ontario Ministry of Agriculture and Food  
Ontario Trillium Foundation  
St. Clair Region Conservation Authority  
St. Clair Region Conservation Foundation  
Middlesex Stewardship Council  
Rural Lambton Stewardship Network  
Ducks Unlimited Canada  
Wildlife Habitat Canada  
Carolinian Canada Coalition  
Trees Ontario  
Ontario Land Trust Alliance  
TD Friends of the Environment Foundation

### For more information

St. Clair Region Conservation Authority  
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519 245-3710 [stclair@scrca.on.ca](mailto:stclair@scrca.on.ca)  
[www.scrca.on.ca](http://www.scrca.on.ca)