Sydenham River Watershed

helping aquatic species at risk

March, 2012

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

Landowners Helping to Ensure the Survival of Local Snapping Turtles

Alan and Marjory Bishop, owners of farmland outside of Wallaceburg Ontario, are local wildlife enthusiasts who treasure all varieties of life the area has to offer. Their property borders a section of the east side of the McDonald Tap Drain that runs into the Sydenham River. They have spotted many different species of birds, grown an array of native plants, and observed a variety of aquatic life the neighbouring drain has to offer. One memorable species that has been seen over the years is the snapping turtle who, each year, bury eggs on their property. "Every year we see broken shells that have been dug up and eaten by local raccoons - we have never seen any survivors until last spring," described Mr. and Mrs. Bishop. Last spring, they decided to try to help save the turtle eggs from raccoon predation. Mr. Bishop gathered some scrap wood, chicken wire, staples and nails and built a turtle egg enclosure to protect a nest of eggs from persistent raccoons. On a warm day in June, they were ecstatic to find turtle hatchlings making their way towards the water's edge and watched happily as they swam away. Out of 30 broken shells they counted 29 snapping turtle hatchlings that had travelled to the water. The St. Clair Region Conservation Authority is eager to duplicate the Bishop's design of the turtle egg enclosure and make them available to our campgrounds and landowners who have turtle eggs that may be at risk of predation. With the continued success of the Bishop's turtle egg enclosure, more turtle hatchlings will make their way to the water's edge throughout the Conservation Authority's watersheds.

Alan and Marjory Bishop constructed a turtle egg enclosure to protect a nest of eggs from persistent raccoon predation. To the right, newly hatched snapping turtles scurry to find shelter in the nearby shoreline.

St. Clair Conservation

St. Clair Region Conservation Authority

Invasives Threaten Species at Risk

Invasive species can often out-compete and overwhelm native species and their habitats. This can have serious implications for Species at Risk. This year the St. Clair Region Conservation Authority has been working towards controlling the introduction and spread of invasive plants within our watersheds through a project supported by the Invasive Alien Species Partnership Program of Environment Canada.

Gardens are a major introductory pathway of invasive plants into the environment. We have been working with local gardeners and plant retailers to understand their perceptions towards invasive and native plants. Gardeners and plant retailers throughout the region filled out short surveys to help us understand:

- their awareness and perceptions of invasive plants and native plant species
- issues that are causing invasive plants to be sold to gardeners and thus planted in local gardens
- possible solutions to minimize the issues that result in the sale of invasive plants

With the community having increased awareness of the problems associated with invasive species, and how to avoid them in their own gardens, we hope to further protect our natural flora and all the life forms that are dependent on it.

This non-native honeysuckle is often planted in gardens. It is very invasive and easily migrates into natural areas where it competes with our native plants.

Here is a list of possible alternatives from the Ontario Invasive Plant Council:

Invasive Ground Cover and Grasses: English ivy, periwinkle and miscanthus
Native Alternatives: wild strawberry, wild ginger, mayapple, wintergreen, bunchberry, running euonymus, wild geranium, foamflower, bearberry, indian grass, big bluestem and switchgrass

Invasive Trees and Shrubs: Norway maple and non-native bush honeysuckles
Native Alternatives: downy and smooth serviceberry, hackberry, sugar maple, silver maple, Freeman maple, common ninebark, nannyberry and fragrant sumac

Invasive Aquatic Plants: yellow floating heart, yellow flag iris, flowering rush and European common reed (Phragmites)
Native Alternatives: yellow pond lily, fragrant water lily, water smartweed, pickerelweed, northern blueflag iris, blue vervain, river bulrush, common cattail and hardstem bulrush.

Federal and Provincial Support for Projects

The Conservation Authority received $80,000 from the Habitat Stewardship Program of the federal government to carry out habitat improvement and community awareness and outreach in the Sydenham River Watershed in 2011. $50,000 from the provincial Species at Risk Fund also helped with habitat improvement. The majority of these funds were available to farmers and rural non-farming residents to help them implement stewardship projects. 25 conservation projects were completed which help improve the quality of the Sydenham River and its tributaries. Projects include such initiatives as tree planting, streambank stabilization, and creation or enhancement of wetlands.

Did You Know?

- The Sydenham River is considered the most mussel-rich river in all of Canada. 34 different species of mussels are found in the river.
- About 25% of the global population of the northern riffleshell occurs in Canada. The Canadian distribution is limited mainly to a 55 km stretch of the Sydenham River. A 2001-03 survey of the Sydenham River found only 228 live animals.

northern riffleshell (S. Staton)

- Juvenile mudpuppy mussels, known as glochidia, are dispersed by parasitizing the external gills of a mudpuppy host. These glochidia remain attached anywhere between 6 days to 6 months.

The mudpuppy is the host for the mudpuppy mussel's young (glochidia).

- It takes about 1,400 eggs to produce one mature snapping turtle. They take about 17 years to reach maturity (it takes longer in northern climates) but many don't make it to this age because of predation, road mortalities, and the many other threats that face young turtles.

Mac Cuddy's Legacy

An important natural area, which includes a pond and small woodland, will now be preserved and restored thanks to the Cuddy Corporation. The land, known as Cuddy Woods, was donated to the St. Clair Region Conservation Foundation by Cuddy Corporation. It is located along Mulifarry Drive, west of Strathroy on a tributary of the Upper East Sydenham River.

According to Gerald Slemko, a spokesman for the Cuddy Corporation, this is something that Mac Cuddy would have wanted. "Mac created the Cuddy Woods and pond to show his appreciation to the staff," explained Slemko.

Through funds donated by Cuddy Corporation and the federal Habitat Stewardship Program for Species at Risk, naturalization of a large portion of the 7.5 hectares of land will help to restore biological functions. The 4,500 trees planted this spring in the riparian area will help cleanse surface water, removing nutrients such as nitrogen and phosphorus before it enters the watercourse.

Projects such as this provide great ecological benefit, since natural habitat is limited in southwestern Ontario. In fact, Environment Canada guidelines tell us that we should have 30% woodland, but only about 14% of the land is wooded in the Sydenham headwaters watershed. Naturalizing lands adjacent to headwater watercourses is important for Species at Risk as well. Improved water benefits fish, mussels, turtles and other aquatic life.

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
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

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.

Brake for Snakes

Southwestern Ontario is home to a variety of snakes, many of which are Species at Risk both provincially and nationally. Eastern foxsnake is a species that has been declared a species at risk in the Sydenham watershed. Second to habitat loss, road mortality is a leading cause of population decline for snakes.

Since southwestern Ontario is highly populated by humans, a dense network of roads with high traffic volume has made it difficult for snake populations. Snakes are ectotherms, meaning that they rely on their surrounding environment to regulate their body temperature. Snakes often seek warm asphalt to bask upon to increase their body temperature during the spring and fall months. As a result, they are often run over by passing vehicles. It is important to keep a keen eye out while driving on warm sunny days during the spring and fall. And remember: PLEASE Brake For Snakes!

Win a Pair of Binoculars

Species at Risk Contest

Hints for these riddles are on page 3

This fish will be out looking for a new lawn mower in the spring.

_____

This mussel absolutely loves a tree that has a shaggy bark.

_____

This fish does a great 100 yard dash – or should I say a 10 inch dash.

_____

What mussel(s) likes to sing "Sunshine on my Shoulder."

_____

This turtle is not the "spice of my life."

_____

First Prize - Tasco 7 x 35 Wide Angle Essentials Binocular

Second Prize - Weekend Camping Pass

Third Prize - Fleece Blanket and Rain Gauge

You can send in your answers by e-mail to:
contest@scrca.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.

Draw will be held May 2, 2012

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

New Website

The Sydenham River Species at Risk website has been re-done with a new look and lots of great information. Check it out at www.sydenhamriver.on.ca

Students Learn about Local Species at Risk

When we ask students to name an endangered species, we often get answers like polar bears, tigers and whales. We are working at changing this by creating a better appreciation for local Species at Risk. The St. Clair Region Conservation Authority provides conservation education programs that reach over 11,000 students each year. One of our programs focuses on local Species at Risk. The students learn about the factors that cause species decline and the steps that can be taken to restore healthy populations.

Partners in Conservation

Environment Canada's Habitat Stewardship Program for Species at Risk
Fisheries and Oceans Canada
St. Clair Region Conservation Authority
St. Clair Region Conservation Foundation
Ducks Unlimited
Ontario Ministry of Natural Resources
Middlesex Stewardship Committee
Rural Lambton Stewardship Network
Stewardship Kent

With funding support from

St. Clair Conservation
St. Clair Conservation Foundation
Canada
Ontario
RBC
TD Friends of the Environment Foundation