Newsletter of the Adopt-A-Pond Wetland Conservation Programme, Sponsored by Banrock Station Wetlands Foundation Canada

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Amphibian Voice

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'SPRING' INTO ACTION

Young Boy Saves Critical Turtle Habitat

By: Ed and Katharine Cilley

Exner Marsh is a 116-acre nature preserve in the Village of Lake in the Hills, Illinois, a far northwestern suburb of Chicago.

The Illinois Department of Natural Resources (IDNR) wrote that: "Exner Marsh is the remnant of a shallow glacial lake; it contains high-quality open pond, emergent marsh, and calcareous floating mat bog natural communities. The latter is rare in Illinois. Hydrologically, it is dependent upon the surrounding watershed. Land use changes within the watershed have the potential to alter the character and diversity of both its flora and it fauna through affecting land cover, water quantity and water quality."

Henry Cilley with his Youth Conservationist of the Year award. Photo by: Blair Skinner

Exner Marsh has the largest known population of Blanding's turtles in McHenry County – over 70 turtles have been tagged by McHenry County Conservation District. However, less than 40 are sexually mature – capable of reproduction. And since they are a long-lived species, females do not lay a clutch every year, and the clutches are small – seldom exceeding a dozen eggs.

Henry Cilley is now 12 years old and in 6th grade. When his adventure started, he was in the 3rd grade. Henry is a quiet child that doesn't want attention. He has a huge heart, and doesn't like to see things die. Those facts, plus his love of nature, brought us to helping turtles.

And in the case of Exner Marsh, Henry couldn't understand why anyone would want to hurt turtles, and kill them, to build a store.

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In this Issue

Prior to moving to our current home in 2003, we lived about a mile from Exner Marsh.

In January of 2002, Henry was in the 3rd grade and his teacher was teaching a science unit titled "Kids Can Save the Earth." They were studying endangered and threatened species, learning the differences between the two and finding out some information on different species. As part of the unit, his teacher, Mrs. Dorothy Miller, found an article in the Northwest Herald newspaper that talked about the threatened Blanding's turtles just a mile from the school, at Exner Marsh. The article talked about a planned development, which included a Walgreens drugstore and a strip mall on the land that bordered the marsh. According to the IDNR, the marsh was home to several threatened and endangered plants and animals, including: the endangered Yellow-headed Blackbird; the threatened Sandhill Crane; Pied-Billed Grebe; Common Moorhen; Blanding's Turtle, and the threatened plant Bog Bedstraw. The main focus however, was on the Blanding's turtle population. Mrs. Miller thought the children would really learn from a story that involved turtles so close to home. Henry wanted to know more. He wanted to go and get the turtles and bring them home to take care of them. All 72 of them! Mom said no way!

A Blanding's turtle – the species of turtle Henry wanted to help save.

Henry and his little brother Ethan appreciating a local butterfly. Photo: Ed Cilley.

A few weeks after Mrs. Miller presented the article at school, another article appeared in the paper and Henry read it with his Dad. Over the next few months, Henry continued to ask us what was happening with the turtles. We watched the newspapers and checked on-line. Since Mom said Henry couldn't bring the turtles home, we had to find other ways he could stop the turtles from getting hurt or killed. We talked to Henry about having his class write letters and sign a petition, so he suggested this to his teacher.

One of the assistant teachers in the school said that she would hand deliver the letters to Ed Plaza (Village President of Lake in the Hills). About the same time, while trying to find out what was happening, Mom called the reporter that was responsible for many of the articles. The fact that Henry cared so much was unbelievable to this reporter. And they ran a story about Henry's efforts on the front page of the Northwest Herald.

Ed Plaza told the newspaper that the letters and petition he received from Henry's third grade class were his own business and no one else's, since they went to his home and not Village Hall. Well that one comment infuriated EVERYONE. The article made us even busier. What followed were many more articles and letters to the editor. We also met the Stewards of the Lith Fen, Alan and Barbara Wilson, two of the most amazing people we have ever met.

We made hundreds of phone calls and searched on-line to find out what we could do, if anything. During one of our calls, the IDNR said "there isn't anything that can be done, the development will proceed and it's a done deal." That only fueled our families fire!

We started a petition drive that called for all the responsible parties to work together as a team for the betterment of Exner Marsh. The timing was right, because there was an Open House at Henry's school, and the principal allowed us to set up a table to talk about the turtles. Henry also distributed these petitions to all the classrooms.

Henry was in Cub Scouts, so we contacted the Area Council and Henry talked to the Blackhawk Area Council Roundtable to ask for the Cub Scouts and Boy Scouts to sign petitions and write letters. He spoke to approximately 250 adult Scout leaders. We had petition forms for both children and adults. We collected over 700 signatures and an untold amount

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of letters – many were sent directly to the Lake in the Hills Board.

After collecting the signatures, Henry and his Dad presented them to the Village Board and each gave a small speech.

The State reviewed the proposal and the research by all parties. We received a letter from John Nelson, Northeastern Illinois Threats Coordinator for the Illinois Nature Preserves Commission, describing the plan.

- Six artificial nesting sites are being constructed at sites all around the marsh
- The developer agreed to build and maintain a special water drainage system for the parking lot
- Special lighting will be used in the parking lot, so insects are not drawn away from the marsh
- Turtle barriers will be installed between the marsh and the development – so the turtles will have a very hard time getting out of the marsh and a very easy time getting home
- Two stormwater detention ponds will be dug to filter the water that flows into the marsh
- 10 acres of the 30 acre development were DONATED to the McHenry County Conservation District

As a result of his efforts, Henry received several awards. In May 2003, Henry was presented with the "Youth Conservationist of the Year" award from the Illinois Audobon Society. He was the youngest recipient ever. And John Nelson presented him with a "Certificate of Appreciation" from the INPC. The Scouts recognized his efforts, as did the McHenry County Schools Environmental Education Program.

Henry still doesn't get why he matters – all that matters is that the turtles will be ok.

As of February 2005, construction has still not begun. Walgreens has pulled out of the development because they were not getting the road access they wanted. The Lith Board is just looking at final approval. But most importantly the turtles laid eggs!

Toad Patrol: From Toad Tunnels to Television

By: Michelle Lee and Lisa Sealock

Warmer temperatures and longer days usually signal the arrival of spring. As toads emerge from their winter burrow and migrate to their spring breeding territory, they are often forced to navigate busy highways and roads, which results in many deaths. Unfortunately, many toads "croak" before they have a chance to really croak.

While vacationing in England George Sarson, a resident of Kitchener, Ontario, first learned about something called a toad tunnel. Toad tunnels are designed to enable a population of toads to bypass a local roadway while migrating to their breeding pond. Toad tunnels are very successful and their installation was greatly appreciated by devoted groups of weary locals who, over many breeding seasons, had been toting loads of toads across the road in large buckets.

Switzerland built the first toad tunnel in 1969. Germany, Spain, France and England followed soon after and in some areas there are as many as 20 tunnels along a 50 metre stretch of road. A toad tunnel is more than a long hole under a road. It must allow sunlight into it and prevent cool drafts from drying a toad's skin. Fences must zig-zag along the road leading to the entrance and two tunnels are always necessary to prevent toad jams.

These tunnels are successful because research suggests that certain species of toads are very faithful to the breeding ponds where they were born, and return year after year, keeping that same migration.

After returning from vacation, George Sarson sat musing with some mistletoe and a box of toy frogs, the character of Mistle-Toad™ was born. In one short year, that name led to the highly successful Mistle-Toad™ boxed chocolate line. It was the seed of what would become, nearly a decade and a half later, the Toad Patrol™ television series. The idea of Toad Patrol™ had been inadvertently planted into Sarson's mind when he first learned about toad tunnels. Sarson, keeping in mind the toads and their plight, kept rolling with his original idea and nine more characters emerged. Very soon villains and a story were added to the mix. The show follows nine Toadlets and their migration to the Fairy Ring – the gateway to the sanctuary known as Toad Hollow.

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The first 13 episodes tell the story of that quest. We see the world from the perspective of the Toadlets; trees as big as skyscrapers; a large leaf can shelter them from a summer downpour; fallen logs are gigantic obstacles to overcome; and a small stream has all the force of a raging river.

Beauty Stem. Puff Ball, and Fur Foot, taking a break from one of their many adventures.

It is in the forest that the Toadlets discover that not everyone they meet wants to have them for dinner. They meet friendly salamanders and turtles, while a wisecracking bullfrog offers helpful advice. Even the stompers (humans) have been thoughtful enough to create toad tunnels so that migrating toads can cross the roads in safety.

The entrance of a toad tunnel. Image courtesy of ACO.

Adopt-A-Pond salutes a great cartoon series inspired by the real-life challenges that toads face. This is a truly unique series that helps to illustrate the magic and wonder that can be found in nature. As a special addition to this year's Spring Toad Festival, Toronto Zoo will be hosting the premiere screening of **The World of Toad Patrol**. The program airs on Teletoon and will be available on DVD for the first time ever! Kids will enjoy the premiere viewing of the DVD and have the opportunity to meet the creator of the series, George Sarson, throughout the day. There will be a colouring contest (for kids 12 and under) to win a fantastic prize pack and other fun activities that you won't want to miss! The DVD and video of **The World of Toad Patrol** will be available for sale at the Toronto Zoo gift shop. We "hop" to see you for what promises to be a "trilling" event.

Adopt-A-Pond's 6th Annual Spring Toad Festival will be held Saturday, April 30th and Sunday, May 1st, in the Americas Wetlands. The premiere screening of The World of Toad Patrol will be held on Sunday, May 1st, in the Group Events tent, located in the Discovery Zone. For more information contact Lisa Sealock at 416-392-5999.

Students Use Science, Urban Geography and Activism to Prevent Urban Sprawl in Pickering

By: David Gordon

Have you ever wondered if High School students could really make a difference to the environment? Well for two years now students at Dunbarton High School in Pickering, Ontario have been using science, geography and their own political savvy to fight for sustainable cities and watershed preservation. And they have been making important career connections while at it.

In 2003 Dunbarton High School was approached by community members from the Rotary Club of Pickering, Friends of the Rouge Watershed and the Rouge-Duffins Greenspace Coalition. Each expressed the need for proactive involvement to ensure that the ecological health of the large tracts of undeveloped lands in North Pickering be maintained throughout whatever future development might occur. The City of Pickering and the Greater Toronto Airports Authority were actively planning the development of large undeveloped areas in North Pickering that had for over 20 years been under easements preventing significant development. As a consequence of this effective development freeze the agricultural and natural ecosystems of the Rouge River and Duffin's Creek watersheds were relatively undamaged, especially considering their close proximity to the GTA. At the same time as local authorities were pursuing development plans for these areas the Province of Ontario launched its Greenbelt Initiative which seeks to stop urban sprawl in the GTA and preserve remaining natural and agricultural areas such as those in North Pickering. There was a real and pressing need for young people to become involved in shaping the future development of their community.

So after much thought we realized that we could combine ideas from science, urban geography and civics to create a course that allowed students to use

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environmental science to contribute to these very real land use debates. The students could do a real scientific study of ecosystem health before development and over the years we would be able to document any changes as development proceeded. And why stop there – so we added a cooperative education component for students to make community and career connections in the area of environmental science. Thus was born our Interdisciplinary Studies Field Links and Community Studies Program.

Of course to pull all this off we needed help. The Toronto Region Conservation Authority helped us pick the study sites – directly downstream in Duffins Creek from the proposed Seaton development. Friends of the Rouge Watershed pointed us to a small feeder stream near Box Grove under imminent threat. We partnered with Citizens Environment Watch, a University of Toronto based non-profit community organization that provides technical support to citizen groups wishing to undertake scientific studies of local waterways (they sent a U of T student mentor to train our students and to work with us each day in the field). Grants from the Rotary Club of Pickering and TD Canada Trust paid our equipment and transportation bills, and we received invaluable strategic advice from the activists in the Rouge-Duffins Greenspace Coalition.

So how did it all work? Two afternoons each week the students went to their cooperative education placement in the community. The co-op partners included Friends of the Rouge Watershed, Toronto Zoo, University of Toronto Freshwater Ecology Lab (Scarborough), Duffins Creek Outdoor Education Centre, Frenchman's Bay Rehabilitation Project, City of Ajax Planning Department, The Environmental Factor in Oshawa(they do ecological lawn care), Pine Ridge Garden Gallery and Chalk Lake Greenhouse. Here the students were able to connect the classroom learning about urban ecology with the very practical work being pursued by each of these organizations.

Students spent three afternoons each week in class learning about the ecology and environmental impacts of different urban forms. We took them to examine developments in both Toronto and Markham to look at examples of more sustainable urban design. Then in the spring ten full afternoon field labs were conducted at locations in the Rouge River and Duffins Creek using the protocol developed by Citizens Environment Watch. The data was used by the students to prepare and lead a public forum on sustainable urban design in June 2004. The forum was attended by over 50 individuals including the Mayors of Pickering and Ajax, and representatives from the Conservation Authority, the Ajax planning department and five community organizations. Subsequent to the public forum students were invited to present their findings to a joint meeting of the Pickering city council and senior managers. The work of the students in this course has received media coverage in both the Pickering News Advertiser and the Toronto Star (October 30 2004; www.thestar.com/green).

So what did the students learn from all this? They learned about the political, social, cultural and economic forces behind our current environmental problems. They learned the science of water chemistry and freshwater biology, atmospheric science and the ecology of freshwater ecosystems; they learned to carefully conduct technical protocols for collecting scientifically reliable data and for scientifically assessing the ecological health of watersheds; and they learned how to participate in community decision-making processes that can restore damaged ecosystems and prevent future damage. The knowledge, skills and practical experience gained by the students can only enhance their ability to act as engaged and responsible citizens. And the students were provided with the knowledge, experience and networks for making connections to further education and careers in field ecology, biology, chemistry, invertebrate zoology, environmental monitoring and enforcement, urban planning and law.

Making a difference is what it is all about. Our students were provided with an exceptional opportunity to "think globally and act locally" – by working collaboratively with the local community to enhance and preserve local ecosystems they addressed global environmental problems linked to urbanization such as deteriorating water and air quality, global warming, and declining species diversity due to habitat loss. And they were listened to – by the school, by community members, by professionals and by politicians.

If you would like more information, or if you would like to help (we always have equipment and transportation needs) please contact the school. Citizens Environment Watch can be contacted through the web (www.citizensenvironmentwatcg.org) And you can view the students 2004 Public Forum presentation "Towards Sustainable Cities" on the Dunbarton High School web site (dunbartonhs.ca).

Editor's Note - David Gordon has been teaching science, biology and environmental science at Dunbarton High School since 1991. Feel free to contact David Gordon by calling the Dunbarton High School Science Department at 905-839-1125, or by emailing him at: david_gordon@durham.edu.on.ca

Celebrating a Small Success - The Short Story of A Tiny Pond That Made a Big Difference

By: Cathy Galbraith, Durham Forest Environmental Education Centre

This story begins eight years ago at the Durham Forest Environmental Education Centre - one of three wonderful sites under the care of the Outdoor and Environmental Education Department of the Durham District School Board. Located on the Oak Ridges Moraine, this residential outdoor education centre lies within the main tract of the Durham Regional Forest and has been operating for more than 25 years. There are a thousand acres of forest surrounding the school providing a wonderful setting for visiting grade six students to live and learn together in the outdoors. It is, however, the only one of our three centres that does not have the benefit of any permanent bodies of water - definitely a drawback when it comes to the study of nature and all of it's interrelationships.

When I came here in 1998 to work as Naturalist, fresh from six years of teaching outdoors in a large wetland area and taking the wonders of water and the diversity of life it brings for granted, I found myself missing the smells and sounds of life around water. I missed the calling toads and frogs during breeding season and watching as the brightly coloured dragonflies lay their eggs. I missed the "WOW" factor that comes for children when they see aquatic food chains in action before their eyes.

So in the spring of 1999 we hatched a plan to develop a small water feature within the school yard in the hopes of adding at very least a new point of interest for the children and at best a new spot for the refuge and reproduction of some of the forest wildlife. With the help of a little backhoe and a lot of muscle we built a small lined pond just beside our portable classroom.

And small is the operative word here - just 11 x 17 ft in area with a three and a half feet of water in one end and about 18 inches in the other, with a pump and filter system and a little waterfall that keeps the water well aerated and circulating. In an attempt to provide as natural an environment as possible we deposited about 18 inches of soil in the deep end for planting pond lilies. Hornwort, elodea and duckweed float in the water and large submerged pots filled with sedges, rushes, blue flag, arrowhead and water arum supply the emergent species of flora. Around the pond we developed gardens of native plants and even made an attempt at a bog garden - the jury is still out on the success of that one!

But the rest of the story is sort of like an "If You Build It They Will Come" tale. Not long after we turned on the hose to fill up our new creation did things start to happen, as the Common Whitetail Dragonflies started to hover about - and life built steadily from there. We have been truly amazed at the number of creatures that have begun to call our small pond home - at least for certain portions of their lives. The insect populations are a wonderful addition to our studies on the diversity of living things with large numbers of dragonfly, mayfly, caddisfly and damselfly nymphs, water boatmen, backswimmers and pygmy backswimmers, with whirligig beetles and water striders scurrying about on the surface and predacious diving beetles and giant waterbugs skulking in the depths - just to name a few.

One of the most rewarding results within the first year was that seven species of amphibians had found our little bit of water - and their interest has continued over the years. Arriving first each spring are the American Toads. Children watch in awe as courting males, with vocal pouches extended, sing out their familiar trill of the breeding season. The easy viewing and intimate setting of the small pond allows children to watch as the courting progresses and the females (with males tightly clasped to their backs - a position known as amplexus) release their long jellied stands of tiny black eggs into the submerged potted plants around the edges of the pond. The following few weeks allows us to see the development of thousands of tiny tadpoles feeding from the algae and developing through all stages of their metamorphosis. Then the Spring Peepers and the Eastern Grey Tree Frogs arrive to breed and the Leopard and Green Frogs come to visit too. The spring evenings at the Forest now are filled with a wonderful loud chorus of calling amphibians.

Not as noisy but equally as exciting have been the salamanders and newts that come to the water. A few sightings of secretive Blue Spotted Salamanders have caused interest but the big success story goes to the Red Spotted Newts. Amazing little creatures that we sometimes see in the forest during their terrestrial stage as red efts, they seem to be happy with the pond as a place to breed as well. Over the past few years we have seen the number of newts steadily increasing in the water and in the spring of 2004 the little fake pond in the middle of a dry forest had more tiny newt larva in it than I have ever seen anywhere! You could hardly take a net for a scoop through the water without capturing a newt larva or two.

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And not to forget the local reptile population - Eastern Garter Snakes frequent the pond too, lazily lying atop a lily pad until something good swims by to strike at with lightening speed for a quick meal. Encouraged by the success of the main pond we have also constructed two vernal pools close by in order to maximize the breeding possibilities on our site.

Birds and mammals are regular visitors as well. Songbirds drink and bathe in the waterfall and around the edges of the pond, and even Great Blue Herons have stopped by on a few occasions to see what we have to offer - lots of fun to watch until they start eating up too many frogs!! Raccoons come by at night and even a few white-tailed deer have ventured into the school area at dusk or dawn in search of a drink.

So the little pond did all we could hope for. It increased the diversity of life close by the classroom - adding greatly to the learning opportunities available to visiting students while providing a viable home and/or breeding spot for a variety of species.

The cautionary part of the story is that there is a factor of labour in the keeping of an artificial pond such as ours. A couple of full days work are needed each spring to get things running and in the late fall to put it to bed for the winter along with the odd bit of maintenance throughout the open season. But as you go from year to year with new and wonderful discoveries it becomes a labour of love - one that children are always eager to help with. Each time I see a group of students lying on their bellies chins propped on rocks around the edge peering in to watch the goings on of life in the pond I am pleased with the work and realize that it is a good and successful addition to the forest - both for the children that visit and the animals that use it.

From the top: The initial creation of our pond, the aquatic habitat that has flourished, and a group of students discovering the wonders of nature in our very own pond. Photos: Cathy Galberg.

In the big picture of wetlands in Ontario we are but a tiny drop - but we are a drop that was not there before. And if we can pass on to the students that visit us the importance of the stewardship of wetlands for the myriad values they provide and show by example that we can all make a small difference perhaps we can help to empower them on toward making efforts in their own lives and be pleased with the difference they can make - and that would be OK too!!

So, once again this year we wait for the ice to melt and the action to begin anew.

Editor's Note – If you would life more information on how to build a pond on your schoolyard, why not request a copy of Adopt-A-Pond's *The Urban Outback – Wetlands for Wildlife: A Guide to Wetland Restoration and Frog-friendly Backyards*? This guide addresses wetland issues, backyard ponds and restoration techniques.

Even small schoolyard ponds will help enhance the survival of certain species by providing breeding habitat, food sources and areas to hibernate. Ponds can also soften the edges of urban habitats and link landscapes with existing wetlands.

These ponds will also create a unique opportunity for students to study pond life.

If every school in Ontario developed or renewed their own wetland, we would create 5,000 different special communities. We can all contribute to a healthy community by providing pieces of a puzzle that together join to form a picture of a healthy sustainable community.

Ribbet's Review

Spring 2005

By: Michelle Lee, Dunbarton High School Co-op Student

Hinterland Who's Who

http://www.hww.ca

A product of the Canadian Wildlife Service and the Canadian Wildlife Federation, Hinterland Who's Who is a user-friendly Canadian website dedicated to informing, inspiring, and involving people in Canada's wildlife. This site hosts a huge array of informative materials on the specifics of Canada from east to west, as well as issues concerning Canada and it's current environmental threats, action plans, and what is currently being done.

To cover the informative portion of the website, each species page contains charts and fact sheets dedicated to only that animal. Along with the species library is a video and sound clip library, containing 30-60 second wildlife videos including a vintage, classic, youth, and spoof video section. Some sound and video clips of wildlife feature the leatherback seaturtle, snowy owl, and wolf. Along with the wildlife are habitat pages including wetlands, woodlands and other ecozones and biomes of Canada. To help the viewer clarify some of the site content, there is a glossary containing over 400 words commonly used in environmental science.

In order to involve the audience, the site features easy action and awareness plans that can be done at home! There are lessons for backyards (building homes for wildlife to preventing wildlife mischief), what you can do in your community (educating others), and on a larger scale, revitalizing wetlands, woodlands, and other wildlife habitats.

An overall fun and interesting site that accommodates all ages and purposes, from school to play. Hinterland Who's Who is really a site to see.

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Amphibian Voice is distributed to schools and communities participating in the Adopt-A-Pond programme. The purpose of this newsletter is to provide information on amphibian, turtle and wetland conservation issues and efforts in Ontario.

Send in your stories, drawings and photographs to the address below and we will "hoppily" include them in future issues.

Editors:
Lisa Sealock
Adopt-A-Pond Coordinator

Bob Johnson
Curator of Reptiles & Amphibians

Contributors:
Ed and Katharine Cilley
Michelle Lee
David Gordon
Cathy Galberg

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Adopt-A-Pond
Toronto Zoo
361A Old Finch Ave.
Scarborough, ON M1B 5K7

Fax: (416) 392-4979
aap@torontozoo.ca

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