



Amphibian Voice

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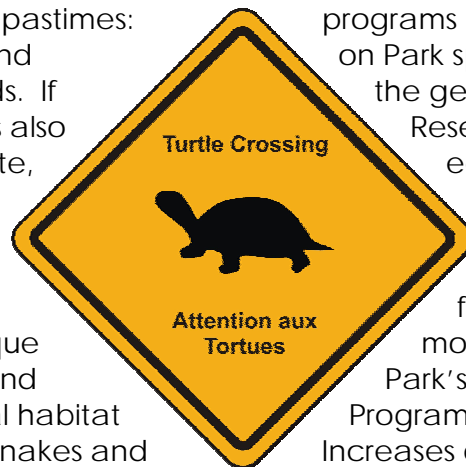
Summer 2006

GREAT LAKES BIODIVERSITY

Research and Conservation at Georgian Bay Islands National Park

By: Victoria Evans, Species at Risk Biologist, Georgian Bay Islands National Park

Georgian Bay's 30 000 islands provide a stunning backdrop for many Canadian pastimes: cottaging with family, fishing and enjoying a campfire with friends. If you happen to be a reptile, it's also the perfect place to find a mate, rear your offspring and catch a meal. Where the Canadian Shield sweeps down to meet the Mixedwood Plains Ecozone there lies a unique blend of wetlands, shorelines and mixed forests that provide ideal habitat for toads, frogs, salamanders, snakes and turtles.



it that way. In-park monitoring and research programs are adding to our pool of knowledge on Park species, and they're helping to gauge the general health of the local ecosystem.

Researchers are currently focusing on the ecology and habitat preference of the Spotted turtle and why Five-lined skinks have colonized some of the 59 islands that compose the Park but are not found on others. Salamander monitoring is an important part of the Park's Ecological Integrity Monitoring Program, and helps to determine forest health. Increases or decreases in salamander populations may indicate a positive or negative trend in ecosystem health.

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In the heart of this paradise you'll find Georgian Bay Islands National Park, home to 34 species of amphibians and reptiles, and a team of staff intent on keeping

In 2003 the Park began a three-year study on road mortality along the Honey Harbour Road that extends from Port Severn north into Honey Harbour in the District of Muskoka. This research highlights the problem of wetland areas fragmented by roadways. During this study 95 turtles and 346 snakes were killed by vehicles while attempting to cross the road, particularly in areas where the road divided wetland areas. Approximately 14% of the turtles killed on the road

were species at risk, and a shocking 80% were Midland Painted turtles, which leads one to wonder how much longer the pattern can continue before this common species becomes at risk. This project has led to the installation of wildlife crossing signs along the road and the creation of "Turtle Crossing" stickers to raise awareness for the reptile road mortality issue. Partner groups such as the Trent-Severn Waterway, Kids for Turtles and Six Mile Lake Conservationists Club have been instrumental in these efforts, from supplying the road signs to delivering educational programs.

The knowledge that comes from these and other research projects will help guide future conservation actions and planning decisions in and around the park. Together we are making strides toward a culture of conservation and a brighter future for some of the most unique residents of Georgian Bay.



From L to R: Ted King (Township of Georgian Bay), Victoria Evans (Parks Canada), Elvin Schell (Township of Georgian Bay) and Anne Lewis (Six Mile Lake Conservationists Club) install a turtle crossing sign along the Honey Harbour Road in the summer of 2005.

How to Help a Turtle Cross the Road!

1. Most turtle species can be picked up by gently holding each side of the turtle where the upper shell (carapace) meets the lower shell (plastron). CAUTION: Snapping turtles, Stinkpots and Spiny Softshell turtles can bite when feeling threatened! Keep hands and fingers away from the head and sides of these turtles (they can reach right around!). If possible, use a shovel or strong branch to slide them off the road.

2. Always be very careful not to drop the turtle as this can cause serious damage to their shell or limbs.
3. Move the turtle onto the shoulder of the road making sure to *keep them pointed in their original direction*. Turtles are creatures of habit that know where they want to go, and moving them off-course may result in a second dangerous attempt to cross the road.
4. Always wash your hands after handling turtles or any other animal.
5. Record and submit a turtle tally to Adopt-A-Pond (www.torontozoo.com/adopt-a-pond/TurtleTally.asp)!

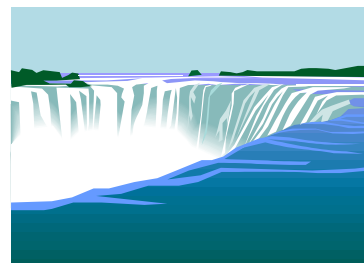
Great Lakes at a Glance

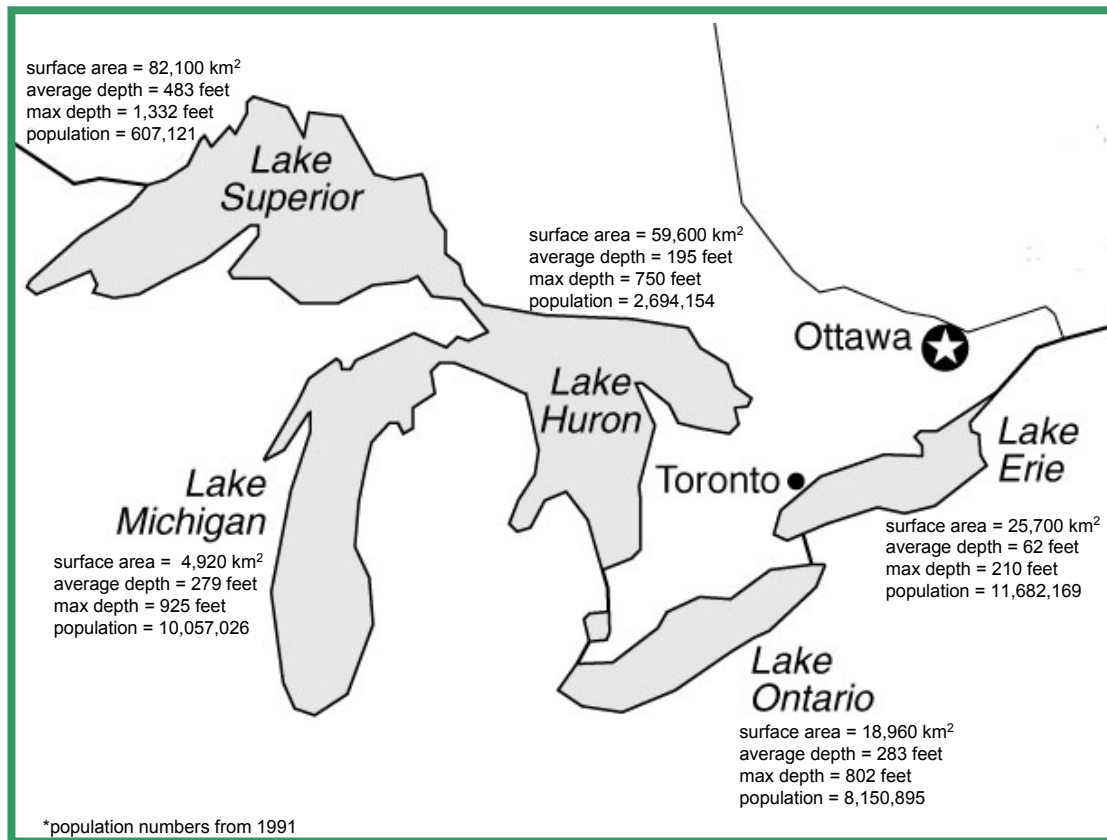
*By: Heather Marcks,
Curatorial Conservation Assistant*

Extending more than 1200 kilometres from west to east, the North American Great Lakes form the largest freshwater lake system on earth and contain 20% of the surface freshwater supply. The Lakes are so big that you can see them from the moon!

The 5 Great Lakes – Superior, Michigan, Huron, Erie and Ontario – provide many human services, including: water for consumption, water for power and water for recreation. The ecological services the Great Lakes provide to humans and all other plants and animals is astounding. The Great Lakes filter water, control and stabilize flooding, maintain nutrient rich soils and waters, and moderate local seasonal climates.

Each lake is different as are the channels that connect them. The channels are an important part of the economy and ecology of the Great Lakes system. The Niagara River links lakes Erie and Ontario, and sends approximately 1400 to 2800 cubic meters of water per second over the world famous Niagara Falls.





Here's a tip to remember the Great Lakes names:

"HOMES"
 H=Huron,
 O=Ontario
 M=Michigan
 E=Erie
 S=Superior

Fast Fun Facts:

- All five of the Great Lakes are among the world's 20 largest lakes by area and volume.
- The world's largest freshwater sand dunes line the shores of Lake Michigan.
- The Great Lakes and islands within them have more than 1600 km of coastline.
- The Great Lakes watershed includes part or all of 8 U.S. states and only one Canadian province – Ontario!
- Ontario borders 4 of the 5 Great Lakes.
- Lake Superior is so large that it could contain all the other Great Lakes plus three additional lakes the size of Lake Erie.
- Manitoulin Island in Lake Huron is the largest freshwater island in the world.
- The Lake Erie walleye fishery is widely considered the best in the world.



Great Lakes Amphibians

By: Heather Marcks,
 Curatorial Conservation Assistant

Wetlands located in the coastal areas of the Great Lakes are home to thousands of plants, birds, mammals, reptiles, amphibians, fish and invertebrates. A wide diversity of plants and wildlife can be found within the Great Lakes due to the fact that there is such a variety of habitat available.

Since frogs, toads and salamanders spend part of their lives in water and part on land, the availability of both water and land habitat provides excellent opportunities for amphibians to breed, nest, forage and find shelter. Shallow waters within the many wetlands surrounding the Great Lakes also provide ideal habitat for amphibians to *thermoregulate**.

Within the Great Lakes area, all of Ontario's amphibians can be found. Most commonly, you can see or hear Bullfrogs (*Rana catesbeiana*),



Fowler's Toad

Green Frogs (*R. clamitans*), Northern Leopard Frogs (*R. pipiens*) and Spring Peepers (*Pseudacris crucifer*).

Unlikely to be seen or heard is the Fowler's Toad (*Bufo fowleri*) – a threatened amphibian. The Fowler's Toad reaches the northern limits of its range in southern Ontario and, consequently, it only occurs in low numbers here. The only place where you'll have a chance to get a glimpse of this rare amphibian is along the northern shore of Lake Erie.

Another amphibian species that is rare in Ontario is the Small-mouthed salamander (*Ambystoma texanum*). The small-mouthed salamander is only found on Pelee Island in Lake Erie. While common in the United States, the Small-mouthed salamander is actually an endangered species in Ontario.



Small-mouthed salamander

Salamanders are quite secretive, spending most of their time burrowed in leaf litter or soil, and therefore are rarely seen. Another species of salamander that you may find in the Great Lakes is the Mudpuppy (*Necturus maculosus*). Unlike Ontario's other salamanders that are terrestrial, Mudpuppies are completely aquatic. They are the largest tailed amphibians in Ontario, and they maintain their external gills and larva-like body throughout their entire lives (biologically termed *neoteny*).



Mudpuppy

Unfortunately, although many species depend on the Great Lakes for survival, they all face great habitat loss from human development. It is important to conserve this valuable, diverse ecosystem and work together to maintain the existence of common and rare species.

* Amphibians *thermoregulate*, meaning that they change their location, moving between warm and cool environments, as a form of internal body temperature control. Some amphibians will expose themselves and bask in the sun to absorb solar heat.

Wetland Guardians

By: Christine Baptista, Wetland & Rouge River Conservation Assistant

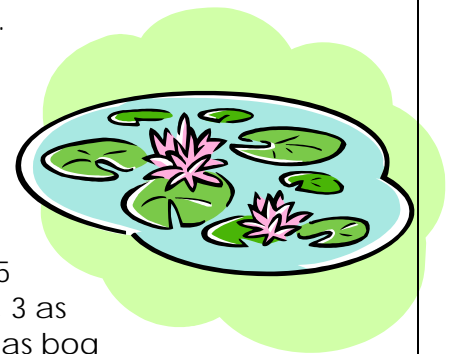
Wetland Guardians is a Canada-wide database that compiles information on the trials and successes of wetland restoration. Participants enter information into an online registry about their wetland of interest. Information includes the physical characteristics of the wetland as well as restoration methods and litigation issues.

Participants are encouraged to enter as much information as possible, but there are few mandatory fields. Anyone with internet access can view the results and search the registry for information on a particular wetland or wetland type. The registry can be used to learn from the experiences of others.

The most common reasons stated by people who have adopted a wetland are for the natural beauty that it provides to humans, and the habitat it provides to wildlife. Other reasons stated include conservation, fear of development, preservation of biodiversity and education.

To date, there are 21 wetlands registered, from Ontario to British Columbia. The most common size of registered wetlands is small (less than acre), followed by medium (1-10 acres), and large (10+ acres). Eighteen of the 21 registered wetlands are naturally occurring, of which 3 have been restored. Three wetlands are human-made, 1 of which was deepened.

There are 6 different wetland types to select from when registering, and currently 8 registrations are classified as wetland, 5 as marsh, 3 as swamp, 3 as ephemeral wetland, 1 as bog and 1 as fen.



You too can become a Wetland Guardian! Do you have a wetland that you hold dear to your heart? Have you constructed a wetland on your property? Would you like to keep your wetlands safe and natural? Visit our Wetland Guardians

webpage to learn more. You can search the database and learn how other people have saved or restored wetlands to give you some idea of where to start. You can search by wetland size (small, medium, or large), wetland state (natural, natural restored, created, or created restored), or wetland type (wetland, marsh, swamp, bog, fen, or ephemeral wetland), to compare your wetland with others in the registry.

When you have started or completed your restoration or protection project, enter your information into the database. If you succeed in protecting or restoring your wetland, let others know how you did it so that we can build on each others experiences. Having everyone's ideas and experiences readily available is a great way to connect Wetland Guardians together and help connect Canada's wetland habitats.

You can register and/or search the Wetland Guardian online registry by visiting Adopt-A-Pond's Wetland Guardian webpage at <http://www.torontozoo.com/adoptapond/WetlandGuardiansRegistry.asp>.

How Many Turtles Did YOU Tally?

By: Christine Baptista, Wetland & Rouge River Conservation Assistant

The Ontario Turtle Tally is steadily growing! In total we have had 104 submissions and 63 participants, 22 of whom have registered in 2006 alone! The participant who has submitted the highest number of observations is Dave "the Turtle Guy" Watkins! (*Look for an article written by Dave in this issue of the Amphibian Voice.*) The most common species reported is the Snapping Turtle (*Chelydra serpentina*).



Wood turtle (Photo by Colin Francey)

The species breakdown for 2006 is as follows:

Midland Painted Turtle	95
Snapping Turtle	42
Northern Map Turtle	8
Blanding's Turtle	5
Spiny Softshell Turtle	3
Stinkpot	1
Spotted Turtle	0
Western Painted Turtle	0
Wood Turtle	0

There is much variation in colouration and size among Ontario's turtles, but remember to check out the turtle species guides on our website (<http://www.torontozoo.com/adoptapond/Turtles.asp>) before submitting your observation!

Also remember that every sighting, whether of a common Painted Turtle (*Chrysemys picta*) or of a rare Wood Turtle (*Glyptemys insculpta*), is important! Even if the turtle is dead, we can still use that observation. Your reports help scientists determine population ranges and individual locations. To submit a sighting, go to <http://www.torontozoo.com/adoptapond/TurtleTally.asp?t=form> and complete the online form, or write to us to receive a Turtle Tally package, with a hard-copy data form!

FrogWatch Update: Who, What, and How Many

By: Christine Baptista, Wetland & Rouge River Conservation Assistant

Every year more and more people register to become FrogWatchers. Since the beginning of 2006, 89 new people across Canada have entered submissions, with 36 of those new people in Ontario! The Ontario FrogWatcher who has submitted the most observations over the 10-year course of the programme is Stephen Racey with a whopping 1128 submissions! This year, Lan Green has submitted the most observations to FrogWatch-Ontario. Thanks to everyone for being fabulous FrogWatchers!

The most common species reported so far this year in both Canada and Ontario is the Spring Peeper (*Pseudacris crucifer*).



The species breakdown for Ontario is as follows:

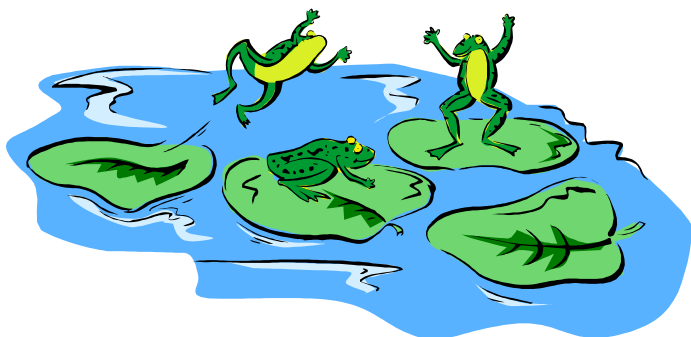
Spring Peeper	139
Gray Treefrog	56
American Toad	55
Leopard Frog	40
Wood Frog	29
Green Frog	20
Bullfrog	13
Striped Chorus Frog	13
Boreal Chorus Frog	10
Pickerel Frog	6
Fowler's Toad	5
Mink Frog	0
Blanchard's Cricket Frog	0

And some Ontario observations that we're not so sure about...

Cope's Treefrog	2
Tailed Frog	1

Did you know that you can edit an observation after you have submitted it? (This comes in handy if you accidentally click a wrong button.) Go to the FrogWatch website, login, select your location, click 'view/edit,' and then click the 'edit' icon to the left of the observation you want to change.

We would sincerely like to thank each and every FrogWatcher—without your support and wonderful observations, the programme would not be anywhere near what it is today. Keep those observations coming—we love hearing your stories, and the frogs need you too! Hoppy FrogWatching!



Great Canadian Shoreline Cleanup:

Adapted from TD Canada Trust Great Canadian Shoreline Cleanup Website

Last year, as part of the TD Canada Trust Great Canadian Shoreline Cleanup, more than 35,000 Canadians joined together to remove over 39,000 lbs of harmful debris from local ocean, lake, river, pond and wetland shorelines. Created 12 years ago by the Vancouver Aquarium in British Columbia, the TD Canada Trust Great Canadian Shoreline Cleanup boasts volunteers in every province and territory across the country, and every year the amount of people involved in cleaning our shorelines increases.

The table below illustrates the top 12 items found during the 2005 Canadian Clean-up effort and the relative abundance of each.

	Item	Amount
1	Cigarette filters	208,855
2	Food wrappers/Containers	91,404
3	Caps and lids	36,100
4	Glass beverage bottles	35,188
5	Plastic bags	31,897
6	Dining utensils	23,495
7	Straws and stirrers	20,761
8	Plastic bottles (2L or less)	19,438
9	Beverage cans	18,205
10	Tobacco packaging/Wrappers	11,945
11	Building materials	11,902
12	Cigar tips	10,418

Registration for the 2006 cleanup has already begun! When you sign up for a cleanup, you are joining Canadians from every corner of the country who are cleaning our shorelines and making them more habitable for people and wildlife. Register early for a better chance of choosing your preferred cleanup site. Actual Great Canadian Shoreline Cleanup dates are between September 16 and 24th.

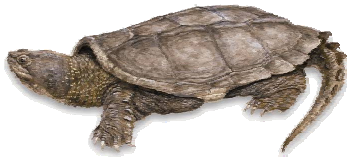
The Toronto Zoo is the coordinating organization for the GCSC in the Toronto Area. The event will take place at West Rouge Beech Park, near Lawrence Avenue and Port Union Road, on Friday September 22nd during the lunch time hours (12:30 to 2:30pm). Pre-registration is encouraged. Please contact Pinky Rivera-McCarthy at privera@torontozoo.ca or 416-392-5947.

Eglinton Flats' Urban Turtles

By: David "the Turtle Guy" Watkins

In the centre of Toronto's west end, as if called up on cue, two large snapping turtles made an appearance this June at our annual Eglinton Flats "Party in the Park" which celebrates local wildlife stewardship monitoring activities. Attended by over 100 residents and community partners, the evening's purpose was put into focus as these two creatures decided to come out of the marsh area as if to see what all the fuss was about.

Living in one of Toronto's most urbanized areas, at Jane and Eglinton, local residents and neighbourhood naturalists are well acquainted with these wandering reptiles and notifying me, the local "turtle guy", is a regular occurrence. Through sightings, conversations and daily observations, the turtles of Topham pond have become a source of great pride in our community and residents have generally approached them with substantial care and compassion. A protectionist attitude prevails over the entire natural wildlife setting in Eglinton Flats. Each spring attention is centered on the nesting habits and sightings of our huge resident urban reptiles.



Following a dozen or so snappers each spring from early June to early July, I start my walk around the pond at 6am each morning. From patches of dirt at the side of walkways to soft cedar wood chip piles in the park, I try to document all nesting sites each year. Because these nesting sites are meticulously covered up and well hidden from predators, details from other people are essential to assist in my search. Word gets around that informing the "turtle guy" of a turtle laying eggs is one of the many things any area resident can do to help. Another is to not disturb the turtles. Communicating this to the surrounding homes above the steep ravines has paid off this year as a number of residents have come forward and become 'turtle sighters' of nests in their own front yards. Turtles have actually climbed a steep ravine out of the park, sometimes traveling hundreds of feet from water sources, into residential streets. Seeing these sometimes huge

creatures for the very first time is often awe-inspiring to most urban dwellers.

So far this year, 17 nests have been documented. Unfortunately 4 of them have been destroyed by other wildlife, presumably raccoons, skunks or even the odd fox. Our community will await the fall hatching period, but during these summer months I will be worrying about temperatures and timings, predators and environmental changes. However, anticipating the thrill of seeing hundreds of small hatchlings emerge from these nests in the fall is all worth the wait.

Spectacular Spiny Softshell Sightings

By: Gavin Stairs and Penn Kemp

May 9, 2006: Thames River pond, observed four Spiny Softshell (*Apalone spinifera*) females and probably several Midland painted turtles (*Chrysemys picta marginata*) basking on a sunlit bank, mud and isolated rocks. Much carp activity in the pond, and more turtles swimming.

June 29, 2006: About 5pm, under patchy cloud and sunshine, observed four or five basking painted turtles, several more in the pond. Observed (with binoculars) several possible softshell heads in the water. An hour later, Kemp noticed a softshell female perched in the middle of open gravel on a river bar, with her neck stretched out and up, and her hind legs splayed the other way. She gave a heave up in the hind end, and kicked out with her hind legs, then again after a pause of a few seconds. This went on for several kicks and Kemp observed something dropping from the hind end. Observed approximately ten eggs laid. The turtle then bolted to the water, covering two to three metres in just a few seconds. The nest site is comprised of small cobbles and sand on the river bar, no vegetation.



July 2, 2006: About 6pm. Swimming softshells with heads visible. No basking and no more laying activity.

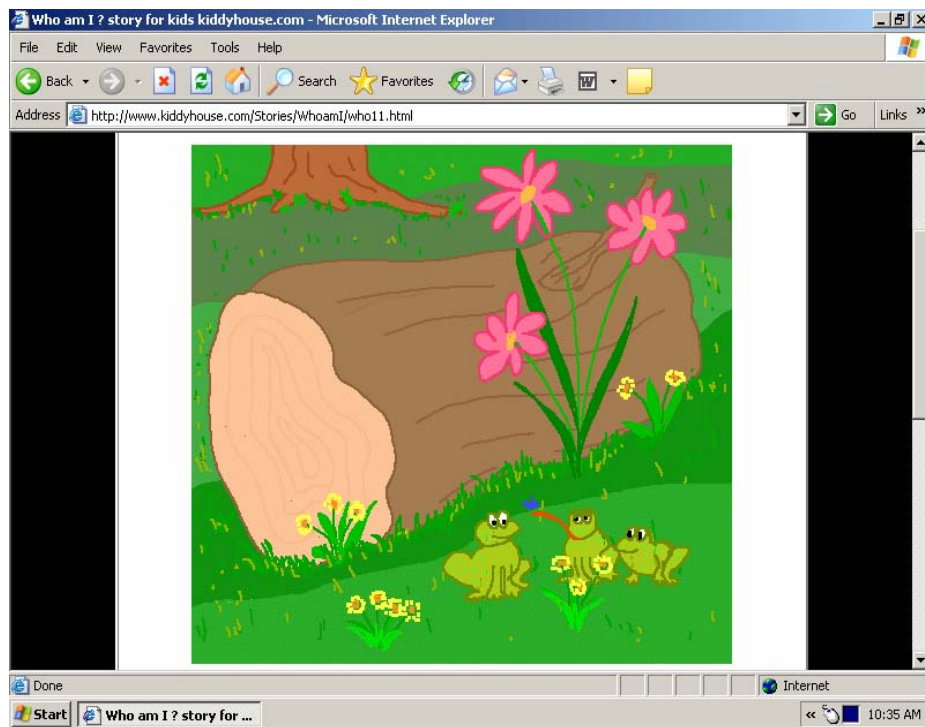
RIBBIT'S REVIEW—WHO AM I? An Online Tale

By: Maggie LLI

Found at:

<http://www.kiddyhouse.com/Stories/Whoami/who1.html>

*Reviewed By: Christine Baptista, Wetland & Rouge River
Conservation Assistant*



This story is short, and is great for children to read. Each page online is one page of the story, and the illustrations are bright and vibrant. The story is strikingly similar to *Are You My Mother?* by P.D. Eastman, in that a tadpole hatches from his egg and spends many days trying to figure out what kind of animal he is. Little "Taddy" encounters first a fish, then a tortoise, and then a newt before finally realizing that he is a frog. During this time, Taddy's body changes as he undergoes metamorphosis, and once he is fully grown and ready to emerge from the water, he finds some froggy friends to play with.

The language is extremely easy for young readers, and for an independently written and illustrated story, the computer generated art is pretty good. Though predictable after about page 3, the story still holds interest, especially for younger readers.

The only downfall of this story is that it is only online, and the pictures are not completely visible while reading the text (you have to look at the picture then scroll down the page to read the text). All in all, *Who Am I?* is a good short read for younger children and may well deserve to be bookmarked.

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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.

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We welcome support of our programme! Please make cheques payable to "Toronto Zoo" and send them to the following address. Thank you!

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