



Amphibian Voice

Vol. 20 No.1

ISSN 1705-8228

Winter 2010

Turtle Rescue and Rehabilitation

Helping Turtles on Roads

By: Julia Phillips, Adopt-A-Pond Coordinator

"I found an injured turtle on the side of the road. Do you know of anyone who might be able to help?"

Unfortunately, this is a question we hear all too often at Adopt-A-Pond in the spring and early summer months of the year, the same time of year that female turtles commonly cross roadways on their way to nesting sites. In both urban and rural areas, roads often dissect the wetland habitats where turtles live from the seasonal nesting sites where they lay their eggs. This means that in order to find a suitable nesting site turtles are often forced to travel across busy roads, and ultimately risk getting hit by a vehicle.

Sadly, one of the greatest threats to the sustainability of turtle populations in Ontario is road mortality. Hundreds of turtles are injured or killed on Ontario's roads each year, and as urbanization and development continue to

increase, so do the number of road networks that fragment and destroy turtle habitat. For nesting females (and indeed, for all turtles moving overland on their way to find new habitat), this means that there are fewer and fewer safe routes for travel.



Photo: Janine Holman

Motorists pull over to allow a female snapping turtle to cross a busy rural road on her way to a nesting site.

Perhaps the most unfortunate part is that, for many turtles, a collision with a car translates into a slow and painful death at the side of the road, a place where injured animals are

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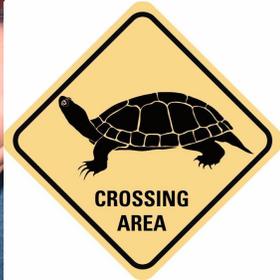
vulnerable to predators, scavengers, the burning heat of the sun, and the lashing forces of wind and rain.

The good news is that there are a number of things you and your community can do to prevent these unfortunate events from occurring. Several actions can help mitigate turtle road mortalities and raise awareness about the impact of roads on the sustainability of turtle populations in your community:

1) If you see a turtle trying to cross the road, please stop to help it! Most turtles in Ontario are small and harmless, and can be picked up by placing your hands on either side of the turtle's body, and moving it across the road in the direction that it was already heading.



Photo: Jennifer Robertson



Larger turtles, such as snapping turtles, require more caution. To pick up a snapping turtle, you must handle it at the back of the shell, where there are almost perfect little handles on either side of the carapace (upper shell) to hold on to. The turtle can be lifted up, or dragged gently across the road. Never pick up a snapping turtle by the tail, or the sides of its body, as this can be harmful for both you and the turtle. If you are not comfortable picking up a snapping turtle, there are alternate ways to move it.

If you have access to a blanket, shovel, car mat, piece of wood, or any other flat surface, you can gently lift the turtle onto the object, and drag it across



Photo: Adopt-A-Pond

the road. It is very important that turtles are handled for minimal periods of time, as they are not necessarily aware that you are trying

to help them, and may become stressed or agitated. Remember to follow road safety regulations



Photo: Adopt-A-Pond

when stopping, and be sure the road is clear and safe before you begin to assist a turtle.

2) If you notice an area that is a hotspot for turtle crossings in your community, install a turtle crossing sign and encourage motorists to slow down! To receive a sign, you will need to obtain permission from your municipality so that local road workers can install it in an appropriate location. For more details on how to obtain a turtle crossing sign please visit: <http://www.torontozoo.com/AdoptAPond/turtleCrossing.asp>

3) Report your sightings to Ontario Turtle Tally! Adopt-A-Pond maintains an on-line database where you can submit details about observations of the turtles you see near roads, or any other habitat. Observations are used to map distributions of turtle species across the province, and to identify important areas where conservation initiatives are required. Reports of dead turtles are equally as important as reports of live turtles as they help us to identify road mortality hotspots. To obtain a Turtle Tally package that includes a Turtles of Ontario identification guide, or for more information on how to report turtle sightings to our on-line Turtle Tally registry please visit: <http://www.torontozoo.com/AdoptAPond/TurtleTally.asp>

Editor's Note:

Given the threat that roads and invasive species pose to the sustainability of turtle populations in Ontario, there is an overwhelming need for individuals, organizations, vets and volunteers to care for turtles that are found injured or dying on the sides of our roads, or pet turtles that are no longer wanted. In this edition of Amphibian Voice, you'll hear from three rescue and rehabilitation organizations devoted to treating sick and injured native turtles, and one organization devoted to rescuing exotic pet turtles in Ontario. Without the efforts of recovery centres such as these, many more turtles would be lost due to fatal encounters with cars, and many more invasive species would be released into the wild every year. To all those dedicated to the rescue and rehabilitation of turtles everywhere, we thank you!

Turtle S.H.E.L.L. / Tortue S.H.E.L.L.

By Andrew Mott (Board of Directors)



Having seen one too many turtles lying injured on the road in 1998, Michele and Douglas St. Cyr undertook steps to see what could be done to help them. Finding that there was no indigenous turtle rescue program in existence in Ontario, they decided to take matters into their own hands. So, in 1999, Turtle S.H.E.L.L. (Safety Habitat Education Long Life) was incorporated and later registered as a Canadian charity. Now, many years later, Michele and Douglas probably know as much as anyone about the treatment, shell repair and care of injured turtles. Turtle S.H.E.L.L. Tortue is one of Canada's pioneering organizations in the rescue and treatment of turtles.

Turtle S.H.E.L.L.'s mandate is to:

- * Provide public education about, and promote awareness of the plight of indigenous turtle populations and their habitats.
- * Install turtle road crossing signs, in order to identify important turtle crossing areas. This also helps to identify the locations of nesting areas and highlights the importance of preserving them for future generations.
- * Continue to maintain the Turtle Rehabilitation Centre.
- * Encourage community involvement and assist educational authorities in developing programs to reach the public and students of all ages.
- * Establish a province-wide network of turtle emergency drop off and turtle rehabilitation centres and make them readily available to the public for the care of injured turtles.

Although turtles hibernate through the winter, it does not mean that Turtle S.H.E.L.L. is inactive during this period. It operates its Rehabilitation Centre, which is overseen by Michele Andre-

St.Cyr and Suzanne Reardon. On average more than 25 turtles are over-wintered at the facility each year.

Rehabilitated turtles are released close to where they were originally found, as they have an amazing homing instinct and will do their utmost to return to their home waters, thus endangering themselves again if they have to cross roads to get back to where they came from.

Turtles vary considerably in their response to captivity. Some remain timid; others suspicious or aggressive, while others take to it happily. For most, it is akin to a stay at Club Med, with heat, sunlight, high quality food, clean water, and no predators. Occasionally it seems as if rehabilitated turtles do not want to leave, like the big old snapping turtle that swam back to his rescuers a number of times when being returned to his stream. Usually though, the turtles are happy to disappear into the depths.

Winter activities also include giving public presentations, preparing educational CDs, publishing and distributing paper booklets and puzzles for children and distributing an educational book called "Let's Talk Turtles" to schools across Ontario.

This is also a busy time for fundraising, grant applications, facilitating other groups to get approval for new road sign installations, etc. There are now over 700 turtle crossing road signs installed across Ontario that were designed by Turtle S.H.E.L.L. These yellow signs with a black pictogram of a turtle with tire tracks across it are easy for busy drivers to see and understand.

Education must extend beyond adults because the youth of today will become the drivers of tomorrow. Taught by the behaviour of their parents they will inevitably affect turtle populations and their environment. By promoting our concern for turtles we hope to increase respect for all wildlife.

Turtle S.H.E.L.L. operates out of Rockland, Ontario, near Ottawa. Please visit the Turtle S.H.E.L.L. website at www.turtleshellortue.org, or contact motherturtle@turtleshellortue.org for more information.

Toronto Wildlife Centre Gives Turtles a New Lease on Life

By Julia Coey, TWC staff member

When an ailing, fractured Blanding's Turtle arrived at Toronto Wildlife Centre, veterinary staff were shocked at the extent of his injuries. The lower half of his shell was broken into seven pieces and he had limited use of his hind legs and tail.

Vet staff immediately put him on pain medication, and an in-depth examination and X-rays revealed that he had spinal trauma. After consulting with TWC's head veterinarian, staff determined that there was a reasonable chance his spinal injury would heal. He was given an anti-inflammatory drug to reduce the swelling in his spine, and staff got to work fixing his shattered shell. Using a combination of metal hooks, wire and a metal plate, they were able to painstakingly stitch his shell back together.



Blanding's turtle following extensive shell repair by Toronto Wildlife Centre staff and veterinarians.

As Canada's busiest wildlife hospital, Toronto Wildlife Centre (TWC) treated eleven different species of reptiles and amphibians, and over 120 turtles in 2009. Overall, TWC treats an average of 5000 sick, injured and/or orphaned wild animals each year and fields close to 30,000 calls from the public through its Wildlife Hotline. Most reptiles and amphibians admitted to TWC are suffering from human-related injuries caused by cars, glue traps, domestic cat attacks, and, at this time of year, because they have accidentally been

disturbed from hibernation. TWC also gets a large number of turtles that have been taken from the wild and raised as pets by well-intentioned, but poorly informed people. Many of these turtles arrive at the centre suffering from nutritional deficiencies so severe that they are unable to survive even with expert care.



Dr. Sue Carstairs caring for an injured Blanding's turtle at the Toronto Wildlife Centre in July, 2009

Working with these unique species is challenging but TWC's veterinary team have plenty of experience creatively providing care for most reptiles and amphibians found in Ontario—from the smallest salamander to a 16 kg snapping turtle. Fractured turtle shells are set, tiny doses of antibiotics are calculated, recovering patients are tube fed and enclosures that mimic the animal's natural habitat are designed and maintained (e.g., turtles get two kinds of spectrum lights, deep tanks with dry area access, plants and rocks, and specialized food).

The damage to the Blanding's Turtle's shell was so severe that it did not heal in time for a pre-winter release. Instead, he will spend the winter at the centre, being fed his natural diet of crayfish, snails, worms, berries and leafy greens. When he regained full use of his back legs, he was moved to a larger enclosure to prepare him for release in the spring. In time, the fragments of his shattered shell will fuse and it will be almost as strong as it was before—with a few extra ridges and some impressive-looking scars.

Toronto Wildlife Centre is a registered charity dedicated to the rehabilitation of sick, injured and orphaned wildlife, and to educating the public on wildlife-related issues. Please visit www.torontowildlifecentre.com for more information.

Update from the Kawartha Turtle Trauma Centre



By Gina Varrin, K TTC Communications Director

The Kawartha Turtle Trauma Centre (K TTC) is a charitable organization that works to preserve Ontario's native turtles. The Centre is located in the heart of cottage country, in Peterborough, Ontario and has been in operation since 2002. There is no government funding available for wildlife rehabilitation in Ontario, so the K TTC relies entirely on donations and grants to run its unique turtle hospital.

The centre was lucky to be housed in donated spaces for the first seven years of operation. First, we were housed at the Riverview Park and Zoo, and then at a garage just north of town. But each year, as news of the centre spreads, we get more and more turtles, and require more and more space to house them.

This past spring, just as reports of injured turtles started to trickle in, the K TTC moved for a third time to a warehouse in the city's south end. Unfortunately we were unable to find a donated space and now have to pay market rent and utilities to keep the centre running.

Our other big news of the year was that we brought on a new vet, Dr. Sue Carstairs. Dr. Carstairs also brought with her a handful of volunteer vet techs from Seneca College, where she teaches part-time.

Due to the move we were not able to take in patients this past summer. However, other wildlife rehabbers offered to treat our patients for us! A Turtle Taxi program was established to coordinate volunteer drivers. Injured turtles dropped off at the Riverview Park & Zoo in Peterborough were transported to the Toronto Wildlife Centre for initial intake and treatment. Once the turtles were stabilized, they were

released or transported back to the K TTC for long-term rehabilitative care.

Over 65 turtles were admitted this past summer, all due to phenomenal support we received from:

- 1) The Riverview Park and Zoo (for continuing to serve as a drop-off location)
- 2) The Toronto Wildlife Centre (for taking in and treating our patients)
- 3) The many volunteer drivers who made countless trips to Toronto without any expectation of compensation, and
- 4) The many concerned citizens who took the time to drop turtles off

Although things are looking up, a new building and new staff means that our operating costs have increased substantially. Our board of directors have been busy submitting grant proposals, and we are pleased to announce that their efforts are starting to pay off! To date the K TTC has received \$4,975 from the Shell Environmental Fund and two \$5,000 grants from the TD Friends of the Environment to cover new equipment costs! As a result of these grants we have acquired an x-ray machine and lab equipment, reducing our need to take the turtles off-site for vet services!

A fundraising committee was also struck this past year, and has been busy selling merchandise and planning fundraising events. A new t-shirt design was chosen this spring from dozens of contest entries, and has proven popular with our supporters. In November, the first ever Turtle Crawl walk-a-thon raised \$2, 237.20! Our next big event, the "Art of the Turtle" auction will be held on Friday, May 14, 2010. If you are interested in donating art or attending the event please contact fundraising@kawarthaturtle.org.

The K TTC is a charitable organization that is very grateful for the tremendous amount of interest and support we have received from our volunteers, members, local residents and the broader wildlife rehabilitation and conservation community over the past year. If you would like to support the centre please consider becoming a member or volunteer, making a donation, or spreading the word about the work we do. For more information please visit us online at www.kawarthaturtle.org, or contact us at (705) 741-5000, or K TTC c/o Riverview Park and Zoo, PO Box 4125, Peterborough, Ontario, K9J 6Z5.

Little RES Q Provides Good Homes for Unwanted Pet Turtles

By Marc Ouelette, Director, Little RES Q



The *Little RES Q* is dedicated to the rescue, rehabilitation and relocation of pet turtles and other small reptiles in Southern Ontario in an attempt to keep them from being released into the wild. We provide a better option for those who, for one reason or another, cannot take care of their reptiles anymore.

Many small reptiles, especially turtles, get purchased as pets for a young family member without the family fully understanding the costs in both material and time needed for proper care of the animals. And sadly, all too often these poor creatures suffer from neglect even when the owner has the best of intentions.



This pet Red Eared Slider was released into the wild in Ontario. Sliders are not native to Canada and are not likely to survive here. They may also carry diseases that harm native turtles.

Generally, pet stores provide precious little information about the care needed by these critters. Often these pet owners get fed up and wrongfully believe releasing their pet into our ecosystem will be the best for them. Because of this, Red Eared Sliders are now on the Invasive Species Specialist Group's top 100 world's worst invaders list. They are nature's generalists, adapting to a wide range of

ecosystems and thriving in them within a single generation.

So just how hard is it to care for a Red Eared Slider? It's actually easier than people realize after the initial start up costs. First thing's first: think long term. Purchase an aquarium big enough to house your turtle as an adult, rather than a small one just for now. The rule of thumb is 10 gallons of water per inch of turtle shell for an adult. So a 9 inch turtle should be in a 90 gallon tank. Then the second biggest factor is filtration. Turtles make a lot of waste. Get a filter that's rated for twice the size of the tank it's used in and you're set. That will be the biggest expense, but it will save countless hours of cleaning.



Eastern Box Turtles are commonly sold in pet stores but this species is also not native to Canada.

UV lighting is essential as well as a basking spot for your turtle to sun itself on, but you can be creative about how you do it. Water temperature should be maintained around 72-76°F by a water heater or other source. A basking light over one end of the tank can be used to provide an area where the turtle can warm its body temperature to approximately 80°F.

Past the set up stage, turtles over the age of 6 months only need to be fed 2-3 times a week. A diet of commercial pellets, romaine lettuce, guppies, crickets and fruits should be offered. Even though your turtle will constantly beg for food, overfeeding can result in a number of health issues.

Little RES Q has several locations throughout Ontario, including Scarborough, Quinte West (Trenton), London, Thorold, and Bracebridge. For more information on our rescue, or to make a donation, please visit our site at www.littleresq.net or email us at inquiries@littleresq.net

Where do frogs and turtles go in the winter?

By Brandon Ackerman, Dunbarton High School
(Grade 12 Co-op Student)

Both frogs and turtles hibernate to protect themselves from freezing during the cold winter months. Hibernation is a state of inactivity and metabolic depression, characterized by lower body temperature and slower breathing.

In Canada, frogs and turtles begin to ready themselves for hibernation anytime from late September to late November (depending on fall temperatures). The habitat that these animals choose as an overwintering site varies according to species and seasonal conditions.



Typically, aquatic frogs (e.g. leopard frogs, bullfrogs) hibernate underwater in deep ponds, lakes and streams where they

stay hidden behind logs and other debris to remain safe from predators. Terrestrial frogs either dig below the frost layer (to ~1 m) (e.g. American toad) to hibernate or bury themselves underneath leaf litter or wedged in the crevice of a log or a rock (e.g. wood frogs).



Most turtle species native to Ontario overwinter in ponds, springs and stream banks where they either bury themselves into the mud or stay protected in sheltered areas. Some turtle species prefer to hibernate in wetlands that freeze over entirely (e.g. painted turtle) whereas others prefer faster-moving

waters (e.g. wood turtle). Occasionally, turtles even use muskrat burrows or beaver lodges as warm winter havens!



Adopt-A-Pond's 11th Annual Spring Toad Festival

Saturday May 1 to Sunday, May 2
10:00 am to 4:00 pm, Americas Wetlands

Celebrate the arrival of spring by experiencing the frenzied courtship of American toads! Our annual festival is scheduled around the explosive breeding ritual of toads at our very own Americas Wetland Outdoor Exhibit. Come and see with your own eyes! Although the centre of attention is the emergence and breeding of toads, there are heaps of other activities for participants, including: touchables with live specimens, "Toady the Mascot," face painting, lessons on tracking wildlife and using GPS technology, and information on becoming a "FrogWatcher" or "Turtle Detective." It's "ribbiting" good fun for the whole family! Visit the Events section of www.torontozoo.com/adoptapond to find out more!



This green frog was discovered in a sump pump in 2008, over-wintered at TWC, and was released last spring.

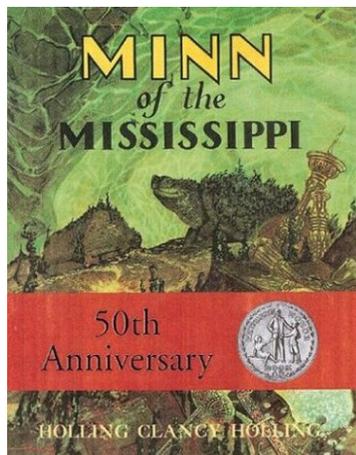


Photo: Turtle S.H.E.L.L.

Turtle S.H.E.L.L. staff repaired this painted turtle's plastron with epoxy and wire after she was hit on a roadway during a seasonal migration between wetland sites.

Ribbit's Review – Minn of the Mississippi

Written and Illustrated by Holling Clancy Holling
 Reviewed by Kelsey Godel, Dunbarton High School
 (Grade 11 Co-Op Student)



If you're looking for a book for a real turtle enthusiast, this is the book for you! *Minn of the Mississippi* is a highly educational story for children between the ages of 8-11. It is about a small Snapping turtle who defies the odds as she makes her journey down the Mississippi river.

The story begins with a baby snapping turtle, Minn, hatching from a cluster of turtle eggs. As the tiny turtles' instincts take over, they scurry to reach the river to embark on their lifelong journeys. When Minn falls behind the group, she is immediately thrown into a position where she must fend for herself in order to survive. When a stray bullet intended for a crow causes Minn to lose one of her back legs, she is faced with a unique challenge that most of the other turtles don't experience.

The story follows Minn throughout her 25 year long adventure down the Mississippi river, where she encounters waterfalls, hunters, friendly fishermen, pirate treasure, pollution, towns and cities, and all sorts of creatures along the way. Throughout the novel, there are diagrams and pictures to help explain what is going on in the text.

Minn of the Mississippi has a powerful moral message that everyone can learn from, and offers an inspiring tale about defying the odds and facing life's challenges.

Published: September 13, 1978 **Publisher:** Sandpiper
ISBN: 0395273994 **Cover Price:** \$14.95

Volume 20, No. 1

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 happily include them in future issues.

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Support for the Adopt-A-Pond Programme:

Toronto Zoo Foundation
 Environment Canada's Habitat
 Stewardship Program

Adopt-A-Pond is a non-profit wetland education programme. Costs to produce this newsletter, and other resources, are funded by grants and private donations.

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

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 using vegetable based ink!