

October 19, 2004

## **A Last Chance to See Amphibians and Reptiles**

With warm fall weather, such as we've been experiencing this year, amphibians usually remain active for most of October. With a bit of searching, frogs, toads and salamanders can all be found this month, sometimes in surprisingly large numbers. Most reptiles, however, have already made their exit for the year. Turtles are entering hibernation now, since the short days do not provide the necessary warmth to raise their body temperature sufficiently to digest food. On the other hand, Eastern Garter Snakes are still active and can be seen basking in the mid-fall sun. They are the last of the snakes to retreat to winter quarters.

It is quite common to hear Spring Peepers calling in October. The calls tend to be sporadic, however, and given by only one or two individuals at a time. The vocalizations are also restricted to the daytime and heard only in the woodland habitats where peepers make a living after leaving their spring mating ponds. Studies have shown that the frogs calling at this time of year are mostly first-year males. The fact that the sun is lower in the sky (as in the spring), may initiate this calling. However, the reproductive purpose of frog song - to attract a mate - will have to wait until next April.

As in the spring, amphibians can also be seen on mild, wet autumn nights. Warm daytime temperatures followed by an evening rain often attract Leopard Frogs, Green Frogs and American Toads to roads adjacent to wetlands or rivers. The temperature difference between the cooler evening air and the heat-retentive road surface probably explains the popularity with amphibians. The Leopard Frogs, which frequent fields during the early fall, may also be moving to their river-bottom wintering sites. Strangely enough, the frogs and toads seem to just sit on the pavement and soak up the warmth. They will even allow you to pick them up with little attempt to get away. The River Road between Peterborough and Lakefield can be a good place to see this phenomenon.

October is also a great time to find salamanders. Red-backed Salamanders, which are almost worm-like in appearance, are especially easy to find. Look under flat rocks, patio stones and logs in damp wooded areas and around cottages. Be careful, however, to gently put the rock or log back in its original position. In your searching, you may also encounter both the Blue-spotted and Yellow-spotted Salamanders. These are very attractive species which spend the non-breeding season underground, in deciduous or mixed forest, crawling about in tunnels and cracks eating small invertebrates. They sometimes surface on wet, fall nights, possibly in an effort to make their way to hibernation sites. Two years ago I found a Yellow-spotted Salamander in a woodpile and took it to school to show my students. Sally, as she (or is it he?) is affectionately known, was such a hit that we decided to make her a permanent classroom resident. She has taken to life in captivity extremely well, thriving on a diet of earthworms and store-bought crickets. Children are fascinated by salamanders and quickly lose any inhibitions they may have about holding them.

The eggs of all of our turtle species hatch from late August to early October. We most often see baby Snapping Turtles at this time of the year. In the case of Painted Turtles, however, the newly-hatched young often stay right where they are and overwinter in the same underground nest where the eggs were laid in the spring. Emergence from the ground then occurs the following spring. Unlike the adults, first-year turtles are able to withstand freezing temperatures

and to traverse the winter as a block of reptilian ice! Lab experiments have shown that the frozen hatchlings show no muscle movement, no heartbeat and no blood flow. So, how do they accomplish this feat without dying? It turns out that the turtle's cells are protected by special antifreeze compounds such as glycerol and glucose. Therefore, no freezing actually occurs with the cells themselves. The water that does freeze is in body cavities outside of the cells. In addition, the ice crystals themselves are very small and can't do much damage. This amazing adaptation to life in our cold Canadian winters is a one-shot affair, however. When the second winter rolls around, the young turtles must join the adults and hibernate in the bottom of their frozen pond.

Eastern Garter Snakes are still a fairly common sight in late October. You will often see them basking in sunlit locations. Unlike Painted Turtles which have decided to turn in for the winter by now, garter snakes still receive sufficient warmth from the weak fall sun to raise body temperature enough for hunting and digesting food. A great place to see garter snakes in the fall is the former Mark S. Burnham Provincial Park. Snakes in the surrounding area appear to move towards this woodlot in the fall because there is a "hibernaculum" here where they can get down below the frost line to spend the winter.

#### WHAT TO WATCH FOR THIS WEEK

Fall's signature constellation, Pegasus, is almost directly overhead in the evening. Its asterism, the Great Square, is most easy to see. With the help of a star chart, you should also look to the left of the Great Square for the Andromeda Galaxy, our closest galactic neighbour. If you happen to be out just before dawn, watch for the Orion constellation looming over the southern sky. Looking east, you'll also see the planet Venus.

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