



What Came First: The turtle or the egg?

We had a very exciting morning NH LAKES headquarters a few springtime's ago...

As we walked along the brick path leading into our office on a warm, spring morning in early June, we were greeted by a beautiful turtle. What more? She was laying eggs! She seemed to be in trance, and not nearly as excited to see us as we were to see her. We watched her deposit the last of what appeared to be eight eggs in a hole that she had dug in the grass. Then, using her hind legs—and never looking back to see the results of her hard work—she covered the eggs with soil and waddled off back towards the steep bank behind our building which leads down to a pond. Being naturally inquisitive people, we were eager to get to our desks, turn on our computers, and conduct some internet research to learn all we could about the turtle and when we might expect to meet her babies. **Here's what we learned...**

We had seen a painted turtle. The painted turtle, scientifically named *Chrysemys picta*, is the most widespread turtle that is indigenous to North America. It lives in slow-moving rivers and streams and along lake shorelines in at least 45 states in the U.S. as well as in southern Canada and northern Mexico. These turtles spend most of their time in the water but they are often seen in groups during summer days basking in the sun, lying on logs and rocks sticking partly out of the water. During the winter, painted turtles hibernate by burying themselves in the mud beneath the water. They eat insects, snails, leeches, mussels, tadpoles, frogs, fish eggs, duckweed, algae and lily pads.

It is relatively easy to identify a painted turtle by the distinctive markings on its head—the face has yellow stripes with a large yellow spot and streak behind each eye, and on the chin it has two wide yellow stripes that meet at the tip of the jaw. The top shell, smooth and oval, is constructed out of several small black plates and has red markings around its edge. The underside shell of the painted turtle's body is yellow. The color of its skin is olive to black with red, orange, or yellow stripes on its legs and tail. And, its feet are webbed.

Baby turtles are called hatchlings. Painted turtles mate in the spring and the fall and females dig nests between late-spring and mid-summer to lay eggs. As it turns out, females typically choose areas that are



A painted turtle outside of the NH LAKES office laying eggs.



anywhere from approximately 50 to 300 feet away from the water's edge. They choose areas where the sun will shine throughout the day and they appear to be particularly fond of the insulation that dirt and gravel provide for the eggs. Since the females do not stay and incubate the eggs, their duty as a mother is to provide them with the warmest spot possible, which is usually in our yards, along our roads, or on construction sites. After strategically choosing a spot, the female urinates on the dirt (to loosen it up and make it easier for digging) and then gets to work digging out a hole with her hind legs. Of course, this part of the process takes a while since she works at turtle speed! Once the hole is deep enough (about 3 to 8 inches), she releases the eggs into it (usually 8 to 20 eggs). The white, oval shaped eggs are just about the size of a nickel. After the eggs are laid, she covers them up with soil and the incubation process begins while she returns to the water. Painted turtle eggs typically take 60 to 90 days to hatch, but have been known to take even longer—sometimes not hatching until the following spring!

Making it to adulthood is difficult. Unfortunately, painted turtle eggs are vulnerable to predators. It is not uncommon for nests to be ransacked and eggs to be eaten by snakes, crows, chipmunks, squirrels, skunks, raccoons, and foxes. Once hatched, the hatchling's shell is soft and offers little protection from these predators. Assuming hatchlings make their way safely into the water, they are also in danger of being eaten by aquatic animals including some fish, frogs, and snapping turtles. If the painted turtles manage to make it to adulthood, their hardened shell protects them from many predators, but they are still vulnerable to raccoons, hawks, bald eagles, and even alligators (hopefully not in New Hampshire, though!). Painted turtles defend themselves against predators by kicking, scratching, biting, urinating, and hissing (the only noise they can make). And, unlike some land-based tortoises, they can flip back over if they are flipped upside down. Painted turtles are genetically adapted to survive extended periods of subfreezing temperatures with blood that can remain super cooled and skin that resists freezing—but sometimes they succumb to the hardest freezes in New Hampshire.

Other factors that threaten the population of painted turtles are habitat loss, which includes draining wetlands to build structures and roadways, removing logs and rocks (basking sites) from waterbodies, removing natural shoreline vegetation which allows more predator access to turtle basking areas (not to mention allowing more pollutants to flow into the waterbody), and human foot traffic which can crush them.

Though executed with the best intentions, the female turtles expose their eggs to danger, along with risking their own lives. They seem to prefer laying eggs in the sand along roadways which means they must often cross roads; unfortunately, this can create quite the obstacle course for caring drivers and often results in turtles becoming roadkill. In addition, the urine the egg-laying females use to soften the sandy soil attracts prey such as raccoons and skunks.

If you see a turtle laying eggs, you might want to consider constructing a protective barrier to ensure that the eggs do not get stepped on by people. We constructed a fence out of a few basic office supplies to keep our visitors from inadvertently walking on the nest!



Painted turtles bask in the sun on logs and rocks during the summer to raise their body temperature.

If you get the chance to witness a painted turtle laying eggs, enjoy the exciting event! While they certainly are not aggressive animals, it is important to be respectful of painted turtles. Though it may be tempting, please don't pick them up or touch their eggs, or make them your pet. Turtles are proven to survive longer out of captivity; in fact, a painted turtle in the wild can live up to 40 years! Be respectful of their nests, and, if you choose to set up a protective barrier, make sure it won't trap the hatchlings when they arrive. If you see a wild animal digging for the eggs, don't run out and try to save them—it is part of nature and not worth the risk!

We kept our eyes on the turtle nest for a few months, but never did see any hatchlings—we're hopeful they were born and made it to the pond before we—or anyone—could meet them!

NH LAKES is the only statewide, member-supported nonprofit organization working to keep New Hampshire's lakes clean and healthy, now and in the future. The organization works with partners, promotes clean water policies and responsible use, and inspires the public to care for our lakes. For information, visit www.nhlakes.org, email info@nhlakes.org, or call 603.226.0299.

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