

# Life in the



# Slow Lane

## Can New Hampshire's turtles dodge the hazards of modern life?

BY MICHAEL MARCHAND

I've always liked turtles. I remember the first painted turtle I held as a kid, excited to see one up close after studying field guides for many cold winter months. As a third-grader, I adopted a pet turtle named Patience that my neighborhood friend could no longer care for. I still have Patience, and she looks the same as the day I first adopted her. I remember counting the growth lines that are laid down annually on Patience's shell – similar to counting rings on a tree stump – and estimating that she was at least 25 years old; that means she's now 50 years old or older!

This longevity impresses most people, but it's not that unusual for many turtles; some species live a century or more! The oldest known Blanding's turtle was 77 years old and still laying eggs. With appropriate care in captivity, it would be unusual for many turtles to not live a really long time. The full extent of this lifelong commitment to a pet is frequently overlooked when people make the spontaneous decision to own a turtle.

Historically, turtles have had a good strategy for success: a hard shell, a long life, new offspring throughout their lives. While humans' ability to bear children declines with age, turtles, once mature, can apparently produce young until the day they die. The earliest known turtle occurred about 220 million years

ago; today, there are about 300 turtle species worldwide, and their unique body structure has changed little over the years.



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My interest in turtles as a youngster intensified as I pursued undergraduate and graduate degrees in wildlife conservation. As I learned more, I became concerned for their very existence. In New Hampshire, four of our seven native turtles are considered Species in Greatest Need of Conservation in the N.H. Wildlife Action Plan. Two of these species, Blanding's turtle and spotted turtle, are also protected under the N.H. Endangered Wildlife Conservation

Act. This declining trend is not unique to New Hampshire: nearly 50 percent of modern turtles worldwide are either threatened with extinction or already extinct.

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# TURTLES of



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## **BLANDING'S TURTLE (N.H. ENDANGERED)**

Blanding's turtles have a bright yellow throat and a high-domed shell with small yellow flecks. They favor vegetated wetlands, vernal pools and slow-moving rivers. These turtles require large landscapes with minimal development and few roads; they may make extensive overland excursions in search of nesting sites. Restricted to southeastern New Hampshire. Nongame biologists are actively working to identify and conserve the best remaining populations.



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## **SPOTTED TURTLE (N.H. THREATENED)**

A small 3-5 inch turtle recognized by numerous yellow spots covering a dark carapace (shell). Spots may also be found on the turtle's head and limbs. Spotted turtles prefer shallow vegetated wetlands and vernal pools, and use terrestrial habitat for travelling between wetlands, laying eggs, and periods of inactivity during high temperatures. Restricted to southern New Hampshire.



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## **WOOD TURTLE (N.H. SPECIAL CONCERN)**

A 5-8 inch turtle characterized by its sculptured shell, with orange on the neck and forelimbs, the wood turtle is associated with slow to moderately flowing streams. Makes extensive use of terrestrial habitats during summer, including floodplains, meadows, woodlands, fields and wetlands. Wood turtles hibernate in slow-moving streams and rivers under riverbanks, root masses or woody debris. They are very good climbers. Found throughout New Hampshire, except at high elevations.



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## **EASTERN BOX TURTLE (N.H. SPECIAL CONCERN)**

Commonly confused with Blanding's turtles, box turtles have a highly domed shell but are much smaller (4½ -7 inches). The shell typically has a pattern of irregular yellow or orange markings over a brown or black base. Primarily terrestrial, but can be found in or near shallow water. This is New Hampshire's least common turtle – so rare, unfortunately, that we don't know of a single population, only scattered reports of individuals. Eastern box turtles were once common pets, so most observations are presumed to be released pets.

# New Hampshire

## COMMON MUSK TURTLE

A 4-5 inch turtle with a smooth, domed olive-brown or black shell. On the head and neck are two yellow stripes terminating at the nose. The common musk turtle has fleshy “barbels” on the chin and throat used for sensory purposes. Also known as “stinkpot” for a pungent odor it releases. Musk turtles are primarily aquatic, found in ponds, shallow lakes, slow-moving streams and rivers. May climb out onto limbs over water to bask.

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## PAINTED TURTLE

The most common turtle in New Hampshire, and found statewide, the painted turtle has a smooth, 4-6 inch shell. The head and neck are streaked with red and yellow stripes; there are two yellow spots behind each eye. Sometimes called sun turtles, they are frequently observed basking in the sun, often climbing limbs and rocks in wetlands to do so. Male painted turtles attract females by waving their extra-long front nails in the water. These turtles occupy a variety of habitats, including freshwater wetlands, ponds, lakes, streams and rivers.

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## SNAPPING TURTLE: *More Myth Than Monster*

Snapping turtles, frequently called snappers, are the second most common type of turtle in New Hampshire. They are also the state’s largest turtle, measuring 8-14 inches in shell length. They often appear much larger because of a large head and long, thick, jagged tail, both of which become stretched out when walking on land. The largest known wild common snapping turtle came from Orange, Mass., and weighed 76 pounds.

The heaviest snapper I’ve handled was just over 50 pounds, and that was a HUGE turtle. Adults are more commonly 20-30 pounds; reports of “monster” turtles are usually exaggerated.

Snapping turtles have a reduced lower shell; they are not capable of pulling their head and limbs within their shells, as many other turtles are. Therefore, when confronted with a threat on land, their reaction is to face it and snap their powerful jaws. In water, snapping turtles will almost always attempt to retreat.

Snapping turtles live in a wide variety of habitats, including freshwater wetlands, ponds, lakes, streams and rivers. Despite their snappy disposition, snapping turtles are primarily scavengers and opportunistic feeders; a large portion of their diet is aquatic plants. Amphibians, mollusks and crustaceans are frequently reported prey items. It’s doubtful that snapping turtles capture and consume many healthy fish, though they may eat dead, injured or sick fish. Numerous scientific studies have concluded that snapping turtles are unlikely to harm waterfowl or fish populations.



*Biologist Mike Marchand hauls a 50-pound snapper out of the water.*



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### TURTLES IN TROUBLE

If turtles have such a great strategy for success, why are so many of them in trouble? Hatchling turtles – those that recently “hatched” from an egg – have shells that have not yet hardened. These tiny turtles are chewed, chomped and swallowed by predators including great blue herons, raccoons and bass. Turtle eggs laid in well-drained soils are dug up, especially by raccoons and skunks. In some years, 100 percent of eggs in a local area may be destroyed. Turtles have overcome this relatively high risk as youngsters by having relatively low risk as adults, therefore tending to live many years once they are large enough to escape most predation. Since turtles produce eggs over many years, chances are good that a few young will survive to adulthood.

Although turtles often have the potential to live a long time, it can take many years before they can start producing young. Cooler temperatures and longer winters in the northeastern U.S. and Canada limit the number of days that turtles are active during the year; as a result, turtles may grow more slowly and take longer to reach maturity. For example, it may take 15-20 years before a Blanding’s or wood turtle in New Hampshire can reproduce for the first time.

The greatest threats to today’s turtles in the north-

eastern U.S. are loss of habitat to development and adult turtles being killed on roadways. Because turtle populations depend on extremely high adult survival, the death of adult turtles on roadways can be devastating for local turtle populations. Mortality on roadways is considered the major threat to Blanding’s and spotted turtle populations and one of the major threats for wood turtles. Even populations of the most common turtles may be adversely affected by moderately to intensely travelled roadways. In my graduate work, I found that populations of painted turtles occurring in areas of high road densities had a greater proportion of males. This is presumably a result of the increased movement, and therefore increased risk of mortality, from females needing to lay eggs on land.

The most effective strategy for maintaining these species is to conserve large, connected landscapes that have a diversity of wetlands and uplands. In southern New Hampshire, landscapes large enough to support populations of Blanding’s turtles long term are dwindling rapidly. Fish and Game biologists are actively seeking to identify the best remaining populations of these turtles, so that we can work to conserve them. Researchers are looking into the possibility of new roadway designs or improvements that would reduce impacts to turtles and other wildlife.

Individuals can help, too. If a turtle lays eggs in your lawn, no action is necessary. If you live near wetlands or have seen turtles nesting nearby, try to

prevent turtles from nesting in areas where the eggs might be disturbed later; spread mulch piles before the last week in May or cover them with plastic during nesting season. With any luck, young hatchling turtles the size of a quarter will emerge between August and October. Many painted turtles hatch from their eggs in the fall, but remain in the nest chamber until the following spring.

Though they enjoy life in the slow lane, time is of the essence for our turtles: Actions we take in the next ten years will likely determine the species’ fate over the next 100 years. **W**

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## You Can Help Turtles!

- 1) Don't collect or move wild turtles.
- 2) Never purchase a turtle native to New Hampshire.
- 3) Never release a non-native pet turtle. Non-native turtles could potentially spread diseases to our native turtles. They are also unlikely to survive.
- 4) Assist turtles across roadways – while always ensuring human safety first.
- 5) Report your observations of turtles, especially Blanding’s, box, spotted and wood turtles, to the Reptile and Amphibian Reporting Program at RAARP@wildlife.nh.gov. Details on reporting and identification of NH turtles can be found at [www.wildnh.com](http://www.wildnh.com).
- 6) Support local conservation efforts that seek to permanently conserve large landscapes with a diversity of wetlands and uplands.
- 7) Don't disturb nesting turtles.
- 8) Don't litter. Even better, help by picking up fishing line, cans and other trash left by others.



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