

# **Northern Map Turtle (*Graptemys geographica*)**

*Family Emydidae*

**Subspecies: None currently recognized**

**Updated 2025**



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**Description/Identification:** The Northern Map Turtle is a medium-sized to large, semi-aquatic Map Turtle species. As with most members within the Emydidae family of turtles, males and females are noticeably dimorphic in size, and several other secondary characteristics and features, with males usually being much smaller than females. Male Northern Map Turtles range from a carapace length of about 3.90 to 6.30 inches, whereas females are much larger, and may reach carapace lengths of about 6.60 to 10.60 inches. The carapace is distinctly elevated, with low black knobs on the second, third, and fourth vertebrals, the rear marginal scutes are strongly serrated, and the plastron is flat. Males also have much longer, thicker tails than females, with the ventral or cloacal opening being located much further near the tail-tip posterior to the carapace, whereas the female's tails are usually much shorter, and the ventral opening is located underneath or much closer to the margin of the carapace. Males also have much longer fore-claws than females, and the plastrons of males are concave, rather than flat as in females. Female northern Map Turtles also have much broader heads and larger, lighter colored, crushing jaws than males. The feet of Map Turtles are strongly webbed. As with most turtles, northern Map Turtles are toothless, and instead have hardened, bony, keratinized beaks and horny plates along the maxilla and premaxillae on the inside of the mouth. Also as with most aquatic turtles, the reddish to pinkish tongue is fixed to the inside of the mouth, and does not move freely or protrude outside of the mouth.

The carapace ranges in color from brown, to olive-brown or olive-green, with anywhere from one to six larger, dark irregular blotches on the posterior margins of each scute. These blotches may be encircled with lighter colored yellow or orange, or a lattice of interconnected lines or circles may be present without the dark blotches. This patterning can often become faded or obscured in older adults. The plastron ranges in color from yellow to yellow-orange, and is usually solid yellow or cream colored, but can have paler greenish markings. This pattern, if any, usually covers about 60% or less of the plastron, and can fade into a brown-yellow mottling in adults, and is replaced by dark lines along the sutures in juvenile and male northern Map Turtles. Map Turtles are so-named for the lighter, concentric lines and streaks on their carapaces said to resemble a topographic map.

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*Plastron, © J.D. Kleopfer*

The head, neck, limbs, and skin can range in color from blackish, to dark green or greenish-brown with lighter greenish, yellow, or orangish stripes or streaks. A prominent greenish, or yellow oval or irregular dorsal, or orbital blotch just posterior to each of the eyes is present. Hatchling Northern Map Turtles appear similar to the adults, but have a more prominent carapace keel, and the plastrons may or may not be more boldly marked with dark brown or black patterning. The usually lighter, more unmarked plastrons, lower carapace keels, and singular round, orbital spots or markings behind the eyes distinguish the Northern Map Turtle from Wisconsin's other two Map Turtle species, the False Map Turtle (*Graptemys pseudogeographica*), and the Ouachita Map Turtle (*Graptemys ouachitensis*).

No subspecies are currently recognized.



© WDNR.

**Range and Distribution:** Northern Map Turtles range in the United States from the Wisconsin and Mississippi River basins in Wisconsin and Minnesota, south to Missouri, Arkansas, Louisiana, Kansas, and Oklahoma, and eastward to Michigan, and south from Michigan to northern Georgia and Alabama, east to Ohio, West Virginia, and the Carolinas. Disjunct populations also occur in the Northeast U.S. in Pennsylvania and New York and Vermont. In Wisconsin, Northern Map Turtles generally range throughout the southwestern two-thirds of the state in the Wisconsin, Mississippi, and other Riverway basins. They are the most widespread of the three Wisconsin Map Turtle species.

**Habitat:** Northern Map Turtles are denizens of medium to large lakes, oxbow ponds and sloughs, and rivers or streams with moderate current, soft sandy bottoms, and ample aquatic vegetation. River backwaters, reservoirs or impoundments, marshes, or smaller ponds can also be habitats for Northern Map Turtles. Unlike the Ouachita and False Map Turtles, they are less restricted to the large rivers in

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Wisconsin, and occur as far northeast as Portage, Waupaca, Outagamie, and Brown Counties, Wisconsin along the Fox River and its tributaries/watershed.

**Feeding and Diet:** Northern Map Turtles are omnivorous to carnivorous; feeding on small fish, a variety of aquatic insects and insect larvae, crustaceans such as crayfish, snails, clams or mussels, and other mollusks, carrion, algae, or other aquatic plants. Feeding may occur at the surface of the water, or beneath, although males are said to have more carnivorous diets, and seldom to never feed at the surface, than female Map Turtles. As with most aquatic turtles, Map Turtles must feed in the water. The larger, crushing and dimorphic jaws of the females are better suited for crushing heavier shelled crustaceans and mollusks such as clams or mussels.

**Natural History:** Northern Map Turtles are similar in their basking, overwintering, and nesting habits to other Wisconsin Map Turtles, as well as in their temperaments. Northern Map Turtles are usually shy and timid turtles which will withdraw into their shells, or may attempt to claw, hiss, or bite on occasion if handled or captured. Northern Map Turtles are also extremely wary baskers, and will dive or plunge into the water at the slightest disturbance or suspicion. They are quite gregarious, and can be found basking in large numbers, often with other Map Turtle species. In Wisconsin, and elsewhere, all three Map Turtle species can be found basking, foraging, and overwintering together in the same areas. Northern Map Turtles rarely bask on the land, almost always basking on areas surrounded by water rather than adjacent to shore. They will also sometimes climb high into overhanging trees or branches in order to bask.

Northern Map Turtles are active throughout the year from about mid to late April through October or November, where they may overwinter deep within burrows or holes on the river bottom, underneath and behind submerged rocks and logs, within sand banks, or behind dams, beaver, or muskrat lodges. Copulation and mating are similar to that of other Map Turtles, taking place during the spring or fall. Males will stimulate females into copulation using their long fore-claws to tap or drum each side of the female's head anywhere from 1 to 14 times, although there is little to no regularity in the number of drummings or the duration of this behavior, but does appear to be species specific.

Females are able to differentiate males of their own species from the number of, and duration of these "fore-claw" dances males perform, as well as through recognition of their species-specific head markings and/or cloacal scents, so hybridization between the Map Turtle species is not known to occur. These differences in the number of contacts between Map Turtles during copulation is detailed further in Vogt's 1981 publication. Nesting then takes place on sand bars or sandy beaches or sand banks, other open sandy areas as much as one mile or more away from the water. About 10 to 20 white eggs are laid from late May through July, and Northern Map Turtles may lay one or two clutches each year, and nesting usually takes place at dawn or dusk, or on overcast days.

Hatchlings emerge from the nests in late August or mid-September, but may also emerge the following spring after overwintering in the nests. Northern Map Turtles have roughly an equal sex ratio upon

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hatching, or 1:1 males and females. As with other Map Turtles, Northern Map Turtles are primarily diurnal, basking in the morning and late afternoon, and feeding during the mid-day, and alternating between basking and feeding throughout the day. They rest on the bottoms of the river at night or on submerged rocks or logs, and are very strong swimmers.

Northern Map Turtle eggs and hatchlings are most susceptible to a large number of different predators. Many different species of birds, including large wading birds, large fish, snakes, sometimes other turtles, large amphibians such as North American Bullfrogs, large predatory or carnivorous aquatic invertebrates such as waterbugs, and a wide array of carnivorous mammals such as raccoons, opossums, skunks weasels, skunks, foxes, and coyotes and otters will all readily eat hatchling turtles or turtle eggs. Adult Northern Map Turtles have relatively fewer predators, but can still be eaten by some carnivorous mammals on occasion.

**Conservation Status:** In Wisconsin, Northern Map Turtles are listed as “Common”. They are still regulated and protected along with all other of Wisconsin’s herptiles, however under N.R. 16 and 19.275 as well as N.R. 21 and 22. Northern Map Turtles are currently not protected or regulated federally. Northern Map Turtles are currently IUCN Red-List Least Concern (LC).