

WILDLIFE DIVERSITY NOTEBOOK: Wood Turtle



Zac Loughman

Range: Wood turtles are found primarily in northern latitudes across eastern North America. In West Virginia wood turtles have been documented in the ridge and valley province, and appear to be limited to the Eastern Panhandle. Records are present in Alleghany and Beaver counties in Pennsylvania which are very close to the Northern Panhandle, but to date no wood turtles have been collected from northern West Virginia.

Diet: Wood turtles are omnivores, and have been documented to feed on berries, mushrooms, wild flowers, carrion, fish and worms. When feeding on worms some wood turtle populations perform a specific feeding behavior called “worm stomping.” When a sizeable worm population is identified by the turtle, they stomp the ground with their front

Common Name: Wood turtle

Scientific Name: *Glyptemys insculpta*

West Virginia Status: Wood turtles are a species of special concern in West Virginia.

Description: Wood turtles have several distinguishing characteristics that make identifying them in the field rather simple. The carapace (top shell) has a central keel running down the middle of the vertebral scutes, and ranges in color from brown to olive green. Each scute has several raised ridges forming concentric circles called annuli. All of these ridges make the overall texture of the shell rough, unlike all other turtles in West Virginia, which have relatively smooth shells.

The skin along the front and back legs and first third of the neck ranges in color from orange to red, and gradually changes from these colors to brown to black along the rest of the body. Males and females are sexually dimorphic, which

means they look different. Males have shells 8.5 to 9.5 inches long, while the female’s shell ranges from 6.5 to 7.5 inches long. Males have thicker, longer tails than females and their plastrons (bottom shell) are slightly concave, while the female’s is flatter.

Habitat: Wood turtles are semi-aquatic, and prefer riparian habitats, marshes, wet meadows, and forest edges. Individual home range size ranges from six to eight acres for females and ten to twelve acres for males. Several studies on wood turtle movements indicate that most wood turtle home ranges are never more than 500 yards from streams, making these habitats crucial for maintaining robust populations. Hibernation occurs in stream beds three feet underground. Within these habitats wood turtles reach population levels of six to ten turtles for every 10 acres of land.



DNR photo

DNR biologist Kieran O’Malley conducts wood turtle surveys along the Cacapon.

feet in a rhythmic fashion. The vibration produced by stomping causes worms to rise to the surface at which point the turtle eats them. Wood turtles usually have a preferred feeding ground within their territories that they use for foraging more than other areas within their home range.

Life History: Wood turtles begin life as two-inch-long olive green hatchlings. At this point in their life history wood turtles are aquatic, spending the majority of their time feeding on plants and invertebrates along the margins of marshes and streams. Most hatchlings, up to 80 percent in a population, do not live to see the following year and become prey for raccoons, opossums and wading birds. Those that do survive the first few years of life spend the next 15 years maturing into adults. As they mature, wood turtles take on a more terrestrial existence and create home ranges that overlap with neighboring wood turtles.

Individual turtles have an intimate knowledge of their home range and have preferred basking sites, feeding grounds and overnight retreats within their territories. Males defend their territories from neighboring males. The most profitable territories are those that overlap with several female home ranges. Mating occurs in the spring follow-

ing emergence from hibernacula. Many individuals may share a hibernaculum, and this aspect of wood turtle natural history appears to be linked to their spring breeding season. Males aggressively pursue potential mates and fight amongst themselves, biting at the face and front legs of a rival male, for rights to mate with females. The majority of mating takes place in slow-moving sections of streams and wetlands and is always associated with water. Female wood turtles seek out loose loamy soil to excavate their nests 20 to 30 days after mating. Once the nest cavity is dug, she lays three to 13 eggs in the nest. Habitats used as nesting grounds include stream banks, agricultural fields and forest edges. Incubation of the eggs takes between 60 and 80 days, at which point the hatchlings emerge.

Conservation and Potential Threats: Habitat destruction and fragmentation



Wood turtle habitat is found in the Eastern Panhandle, especially at Cove Run.

Kieran O'Malley

along with illegal collecting for the pet trade are the two primary causes of wood turtle declines across their range. High levels of development are currently occurring in the eastern panhandle which ultimately may lead to declines in wood turtle numbers. One study performed in Quebec, Canada demonstrated that wood turtles reacted negatively when their territories were severely altered. Turtles tended to wander in search of quality habitat and ultimately spent more time

on roadways where the majority of turtles met an untimely end.

Wood turtles are also dependent on good stream health and excellent water quality. When waterways harboring turtles become degraded, wood turtles lose their overwintering habitat, foraging grounds, and preferred breeding habitat. Loss of this critical habitat ultimately leads to a decline in wood turtle numbers.

Wood turtles are also targeted by reptile collectors because of their reputation in the pet trade as good captives. Collecting wood turtles for the pet trade is illegal in West Virginia and every other state in which they occur. All turtles encountered in the field should be left where they are found; take a picture, not the turtle.

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Did You Know?

Wood turtles are accomplished climbers, and readily climb obstacles to get to favorite basking sites and preferred foraging grounds.

Wood turtles do not mature until they are 15 years of age, and can live for more than 50 years, making them one of the oldest animals living in West Virginia forests.

Spotted turtles are the closest living relative of wood turtles that live in West Virginia. These turtles inhabit marshes, vernal pools and ponds in the eastern panhandle, while wood turtles prefer flowing streams.