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THE COMMON SNAPPING TURTLE

Leo Hollein

Turtles are an ancient group of animals. Members of the class Reptilia, they evolved their shelled form more than 200 million years ago. They are considered the oldest and most primitive of living reptiles. Along with amphibians, reptiles represent a transitional stage in vertebrate evolution that diverged from the aquatic fishes and eventually gave rise to birds and mammals (Ernst, *et al.*, 1994). Most of the turtles found inland in the northeastern U. S. are aquatic and prefer calm or slow moving water. The excellent turtle habitat in the Great Swamp National Wildlife Refuge (GSNWR) in northern New Jersey supports ten different turtle species. The Eastern Box Turtle (*Terrapene carolina*) is the only truly terrestrial species. The Common Snapping Turtle (*Chelydra serpentina*) and Common Musk Turtle (*Sternotherus odoratus*) also known as the Stinkpot for the odor it emits when disturbed are primarily aquatic

and diurnal. The GSNWR has a robust population of Painted Turtles (*Chrysemys picta*) that are often seen basking in the sun on logs



in ponds and waterways. The state threatened Wood Turtle (*Clemmys insculpta*) also known as "Old Red Legs, the federally endangered Bog Turtle (*Clemmys mublenbergii*) and the petite, attractive Spotted Turtle (*Clemmys guttata*) (above) split their lives between land and water.

The GSNWR also has introduced turtle species that most likely were released in or near the swamp by their previous owners. These include the popular pet trade Red-eared Slider (*Trachemys scripta elegans*), the Red-bellied Turtle (*Pseudemys rubriventris*) and the River Cooter (*Pseudemys concinna*). These turtles are all native to North America but not to New Jersey.

It is also possible that the reclusive Eastern Mud Turtle (*Kinosternon subrubum*) inhabits the GSNWR, though none have been observed in at least the last ten years. The New Jersey Division of Fish and Wildlife says they “historically occurred in Morris County” that encompasses the GSNWR.

Like other turtles the hatchling Snapping Turtle is mostly like a miniature adult. It has the signature long tail that exceeds its top shell (carapace) in length. This is unique to snapping turtles. The rear of the carapace has distinct notches that are not found in other turtles in the GSNWR. The under shell (plastron) of the Snapping Turtle is small and is less than half the size of the carapace. This configuration leaves a lot of the turtle unprotected by its shell. The Snapper compensates by developing a large head, hooked beak, powerful jaws and a flexible neck that can be used to defend its self. Adult snappers are very aggressive if threatened or cornered while on land. Observe them from a



The largest turtle in the Great Swamp National Wildlife Refuge (GSNWR) is the Common Snapping Turtle (above) that can grow from a third of an ounce hatchling to a forty-five pound adult male. The Common Snapping Turtle has a range from Canada throughout North America and into South America. Only its cousin, the Alligator Snapping Turtle (*Macrolemys temminckii*) that occurs in the southern United States, is a larger North American fresh water turtle.

safe distance. Besides bearing a resemblance to Jaba the Hut, the adult Common Snappers have a different carapace than the snapper hatchlings. The carapace of hatchlings is rough (see next page) while the adult develops a smooth carapace.

The Common Snapping Turtle spends most of its life in the water. Its nostrils are on the tip of its head and enable the turtle to breath while barely surfacing. Snappers occupy streams and ponds in the GSNWR

where they feed primarily at night on a variety of animals and some aquatic vegetation. They prey on fish, frogs, snakes, smaller turtles, ducks and ducklings as they patrol their watery territory. Ducks trapped for banding occasionally have injuries from snapper attacks. Snapping Turtles avoid confrontations with humans while in the water.

trail to the nest and feast on the eggs. If a nest is not predated within several days, the scent trail dissipates and the nest may survive. The eggs incubate by ambient temperature for about three months and emerge from their nests in early-September through early-October. The sex of the snappers is determined by temperature as the sex of the



Adult snappers are most often seen out of water during late-May and early-June when females seek a place to deposit their eggs. Female snappers can store live sperm and produce fertile eggs from a mating that occurred late in the previous season (Ernst, *et al.*, 1994). On a warm, humid morning in late-May, I was amazed to count seven adult females on the unpaved dike roads. Snappers tend to synchronize their nestings in an apparent attempt to minimize nest predation. There were a number of scrapes where snappers had tested for potential nest sites. When a suitable location is found, the snapper excavates a 3-7 inch deep hole with its powerful rear claws. The female typically deposits 20-40 round, hard-shelled white eggs that resemble ping-pong balls and covers the nest before leaving. Thus concludes the parental duties of the snapper.

Most snapper nests are predated (shown next page). Raccoons, possums, skunks, minks and foxes follow the adult turtle scent

embryo is not fixed genetically. Higher temperatures result in female (hot babes) hatchlings while lower incubation temperatures produce males (cool dudes). There may be enough temperature difference between the top and bottom of a large Snapping Turtle nest to produce both male and females from the same clutch of eggs (Carroll 1991).

In the management area of the GSNWR there are a number of protected nesting sites where turtles can enter and lay their eggs. Fencing prevents predators from digging up these nests. Snapping Turtles have been the main beneficiaries of these safe havens as nearly all of the hatchlings recovered from these sites are Snapping Turtles. The hatchlings all exit the nest through one small hole. Thirty hatchlings were recovered from one nest. Some of these hatchlings still had their egg tooth and remnants of their yoke sack. The hatchling turtles are released in the GSNWR after they have been weighed and

measured. Upon release they have the ability to sense the nearest water source. They promptly head directly for the water and the relative safety it provides. Snappers can live up to forty years in the wild and become sexually mature after about five years. Young snappers are potential prey to a host of predators until their carapace grows to about four inches. Once they reach that size, humans are their primary threat. Coyotes, otters and bears have also been known to prey on adults. Snappers were once the most common ingredient in turtle soup. Of course, collection of snappers is not permitted in the GSNWR. However, crossing a road can still result in a fatal encounter if a car meets a snapper or another turtle species.

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Editor: Joseph DiCostanzo
Linnaean Society of New York
15 West 77th Street
New York, NY 10024
newsletter@linnaeannewyork.org
Manuscript acquisition: Helen Hays
Production and mailing: Thomas Endrey

