

Wild Things in Your Woodlands

Common Snapping Turtle (*Chelydra serpentina*)



The common snapping turtle is our largest and most widely distributed freshwater turtle. It has a long stegosaurus-like tail with a jagged upper surface, a stout head with a sharp hooked beak, an olive-green to black carapace that is jagged toward the tail end, and prominent claws on all four feet. These turtles can be fairly large, exceeding 14 inches straight-line carapace (upper shell) length and weighing up to 45 pounds. On the underside, the plastron is yellow or grayish, and quite narrow relative to other turtles, frequently giving the appearance that the turtle has outgrown its shell. Although adult males tend to be slightly larger than females, they can be difficult to distinguish. Male snapping turtles can reach sexual maturity at the age of 4 or 5 years, while females may take several years longer. Average adult life spans of 20 to 30 years have been recorded in several studies, with some females living as long as 40 years.

During the summer months, common snapping turtles often can be seen moving from their freshwater habitats to upland areas in search of nesting sites. When egg-laying is complete, these turtles move back into water at which time they can be difficult to spot. Snapping turtles often remain partially submerged in the mud with only their eyes and nostrils protruding above the surface. In this position, their head resembles the head of a basking frog, except darker and more pointed. Unlike other aquatic turtles, snappers are seldom seen basking out of the water. Instead, they usually are only seen with their head and sometimes upper carapace visible at the surface.

Similar to most turtles, snappers usually do not bite if stepped on underwater, nor do they bother swimmers. In fact, if you do not actually see a snapper, the chances are good that you will never know it's there. The reason for their name is obvious, however, when they are encountered on land. Unlike all other turtles in our region, they can be very aggressive, lunging their heads forward and biting with the slightest provocation (or sometimes just as a warning). With their sharp claws and fierce jaws, large individuals can do much damage, and are best left alone.

Common snapping turtles can be found in any body of freshwater, small to large, from sea level to altitudes up to 1600 ft in the Northeast. They occur throughout New

York State, even in Central Park. Although some individuals enter coastal brackish waters, snapping turtles prefer slow-moving freshwater areas, with muddy bottoms and emergent vegetation that provide good foraging and escape cover. The common snapping turtle is omnivorous, and will eat just about anything, live or dead. Its most frequent food items are aquatic plants and non-game fish, but it also eats insects, small mammals, young waterfowl, amphibians, and other reptiles. Snappers feed throughout the warmer months, but fast during the winter, remaining dormant and burrowed in the pond bottom or in the banks.

Breeding begins soon after snapping turtles emerge from dormancy in the spring, and mating may take place from April to November. The nesting period for females lasts around 3 weeks, from May through June, with a peak at the beginning of June. Females prefer to lay their eggs on rainy afternoons and evenings (heavy rains may help wash away scents that lead predators to the nests). They generally choose open sites near wetlands, with well-drained sandy or loamy soils. They also are seen nesting in forest clearings or agricultural fields, and on bare soil banks or road embankments. The nesting female first digs a nest chamber with her rear feet and claws, then fills the underground chamber with eggs. Eggs are spherical and pliable, like soft ping-pong balls that bounce around in the nest chamber. A single nest may contain from 20 to 40 eggs, exceptionally as many as 83. Successful eggs hatch from September through October. As with many other turtles, the length of incubation can vary by several weeks, depending on location and temperature.

Like many other reptiles, the sex of the hatchlings is determined by temperature of the eggs while they are in the nest. Under warmer conditions (above 85° F) only female turtles are produced; at intermediate temperatures (from 75° to 85° F) males are produced; and in nests colder than that, females are produced. Interestingly, in some nests, the heat of the sun from above causes eggs in the upper nest to be warmer than eggs down deeper. This differential heating creates females near the top of the nest and males near the bottom. So, for sex determination, there is an element of luck involved in whether an egg was dropped into the nest early or late, or in some cases the way in which the egg bounced as it fell. This environmentally controlled mechanism is called temperature-dependent sex determination.

Common snapping turtles generally are abundant throughout their range, but in some areas are very sparse due to several pressures. As in many other reptile species, snappers are highly vulnerable to predation at early life stages. Predation of nests in many areas is high, ranging from 30% to 100% of the nests in some studies. Main predators of the eggs such as raccoons, crows, and dogs, are frequently associated with high human populations. Also, with increased development often comes loss of wetland and nesting habitat, which are both essential for snapping turtles. Some local populations have been severely depleted by over-harvesting for their meat, and this decline is a major concern. Because of the diet and the habits of snapping turtles, they may accumulate high concentrations of contaminants, such as PCB and mercury, in their tissues. This could pose a health hazard to people who eat snapping turtle meat.

Landowners can enhance habitat for snapping turtles by maintaining the natural hydrology of wetlands and preventing unnatural drainage. Because snapping turtles frequent emergent vegetation for feeding and resting cover, maintaining native vegetation in and throughout shallow wetlands and around the margins of large, deep ponds will benefit this species (and other turtles as well). Provide a buffer zone of natural vegetation of 100 feet or more surrounding ponds and wetlands. Turtles, as well as other animals

such as frogs and salamanders, require both wetland habitats and surrounding upland habitat to remain healthy. By maintaining open areas with loose soil near aquatic habitats, landowners can also ensure that these turtles have adequate nesting sites. Old log landings, maintained as open habitat, can make suitable nesting sites. By focusing on both upland and wetland habitat, landowners can attract and provide for snapping turtles and a wide diversity of other wildlife.

Adapted from “Hands-On Herpetology: Exploring Ecology and Conservation” by R. L. Schneider, M. E. Krasny, and S. J. Morreale.

Kristi Sullivan coordinates the Conservation Education Program at Cornell’s Arnot Forest. More information on managing habitat for wildlife, as well as upcoming educational programs at the Arnot Forest can be found by visiting the Arnot Conservation Education Program web site at ArnotConservation.info