

# Illinois Turtles



Photo: Ontario Ministry of Natural Resources

## Junior Varsity Lake Shelbyville Eco-Meet 2013



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# Illinois Turtles

## Glossary

**estivate:** periods of inactivity during the otherwise “active” season, generally during the warm times of the year. Periods of aestivation vary between individuals, lasting between 2 and 93 consecutive days

**carapace:** the top, or back, portion of a turtle shell

**carnivorous:** feeding on meat (animals)

**cloaca:** a chamber in the abdomen of some vertebrates that receives products of the reproductive, urinary, and digestive tracts before emptying to the exterior through the anus

**embryo:** an organism in its early stages of development

**endangered species:** a species in danger of becoming extinct within all or part of its range

**herbivorous:** feeding chiefly on plants

**hibernate:** become inactive during cold periods of the year

**juvenile:** individual that has not attained sexual maturity

**keratin:** hard, tough, fibrous protein produced in the skin—the basic substance that makes up scales, claws, fingernails, and hair

**omnivorous:** feeding on a mixed diet of animals and plants

**plastron:** the belly, or bottom, portion of a turtle shell

**scutes:** enlarged scales such as those covering the bony shell of most turtles  
siltation deposition of fine mineral particles (silt) on the beds of streams or lakes

**terrestrial:** land based, or living on land

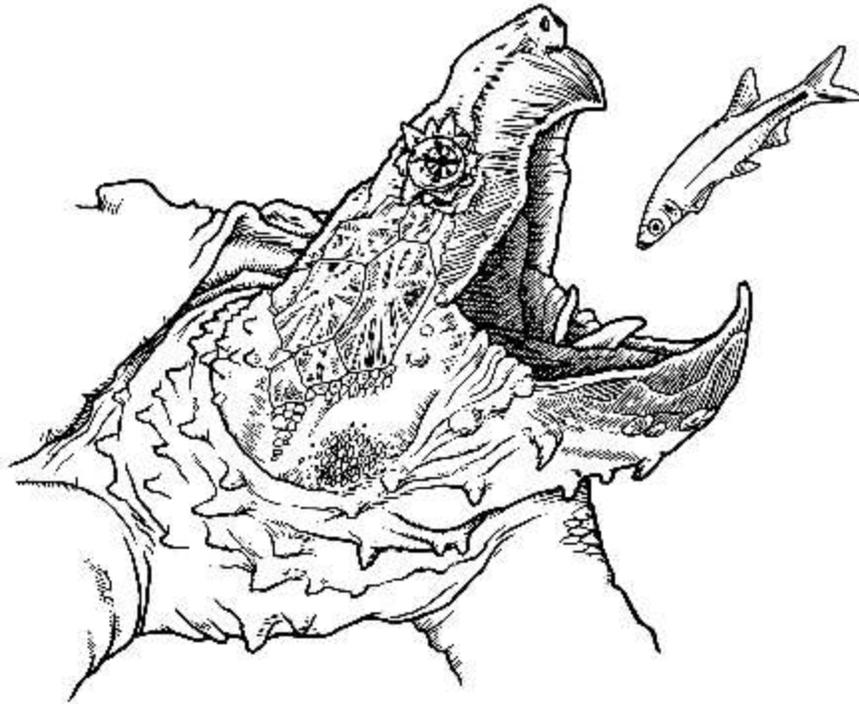
**threatened:** species a species likely to become endangered

## **Habitat and Diet**

Some turtle species are associated with specific habitats. For example, the two Illinois **terrestrial** turtles, the eastern box (*Terrapene carolina*) and the ornate box (*Terrapene ornata*), are found in woodlands and prairies, respectively. Rivers are the favored habitat of the smooth softshell turtle (*Apalone mutica*), alligator snapping turtle (*Macroclmys temminckii*), and common map turtle (*Graptemys geographica*). Blandings turtles (*Emydoidea blandingii*) are commonly associated with marshes. Mud turtles tend to frequent temporary ponds or wetlands, while the closely related common musk turtle (*Sternotherus odoratus*) resides in permanent water. The highly adaptable snapping turtle (*Chelydra serpentina*), painted turtle (*Chrysemys picta*), slider (*Trachemys scripta*), and spiny softshell turtle (*Apalone spinifera*) thrive in a variety of habitats and conditions.

Most Illinois turtles are opportunistic **omnivores**: they eat whatever they happen to find. The snapping turtle's diet includes large amounts of plant material in addition to aquatic invertebrates, crustaceans, and small water fowl. A few species are chiefly **carnivorous** or **herbivorous**. Soft-shell turtles are carnivores, feeding on **aquatic** invertebrates, such as insects. Map turtles feed on snails, clams, and some insects. The diets of some species change with age. For example, young sliders are carnivores, feeding on insects. Adult sliders, however, eat primarily plants. River cooters (*Pseudemys concinna*) are mainly herbivorous as adults. Their diet consists of a mixture of algae and plants.

Few turtles have the speed or agility to catch fast-moving prey. Most search for food slowly along the bottom or over weed beds, grazing on vegetation and eating slow-moving animals. The occasional dead fish or fruit fallen from a riverside tree may attract large numbers of turtles. A few species catch fast-moving prey by ambush. Such turtles usually are colored to blend with their environment and have long, muscular necks that can strike out at prey from a distance. A snapping turtle, with its long, bumpy neck, mud-colored body, and algae-covered shell, illustrates these characteristics well. The soft shell turtle's pancake like shape allows for quick hiding beneath a thin layer of the sandy bottom where it can surprise its unsuspecting prey.



**The alligator snapping turtle has a "lure" in its mouth to attract small fish. As this turtle sits on the river bottom, it holds its mouth open and wiggles the pink lure on its tongue. A fish may move toward it in order to capture what appears to be a worm. Instead the fish becomes a meal for the snapping turtle!**

### **Did You Know?**

- In the wild, aquatic turtles are known to survive from 40 to 70 years while certain terrestrial species including the eastern box turtle, may live 100 years or more.
- The largest Illinois turtle is the alligator snapping turtle. In some locations it may grow to a shell length of 30 inches and a weight of more than 250 pounds. The largest Illinois specimen on record weighed about 160 pounds.
- The smallest Illinois turtle is the spotted turtle. Its greatest recorded shell length in Illinois is 4.7 inches.
- Many species of turtles have temperature-dependent sex determination (TSD). The sex of the embryo depends on the temperature within the nest at a critical period. For these species, hatchlings may be all male or all female.

- In Illinois, turtle eggs typically require about two months to hatch. Hatchlings of some species, like painted turtles, overwinter in the nest and do not move to water until the next spring.
- Most aquatic turtles hibernate underwater, often burying in the bottom muck. All but the softshells have thin-walled sacks attached to the cloaca that absorb oxygen from the water during the hibernating period.
- Yellow mud turtles typically inhabit temporary prairie ponds for two or three months in the spring, then aestivate / hibernate on land throughout the rest of the year.
- Softshell turtles have a hard, bony shell. Their name refers both to the leathery skin covering the shell (as opposed to hard scutes) and to the rear portion of the carapace that is tough but flexible.
- The flesh of eastern box turtles may be poisonous at times because their tissues store toxins of poisonous mushrooms that the turtle may eat.
- With age, the shell and skin of male sliders become dark in color. The turtles appear dull brown to black, losing the bright colors that characterize females, juveniles, and younger adult males.

## Conservation

In Illinois over the last century and a half, humans have cut down much of the forest; converted most of the prairies to agriculture; channeled, dammed and polluted many of the rivers; and drained almost 90 percent of the states wetlands. Only 11 percent of the original vegetation now remains intact. This drastic alteration of the original habitat has had a major impact on the state's wildlife and plants. In 1999, of the 17 turtle species of Illinois, four (the alligator snapping turtle, the river cooter, the spotted turtle, and the yellow mud turtle, are state **endangered** and one, the Blandings turtle, is state **threatened**. Declines of the latter three can be attributed in part to loss of wetlands. **Siltation** and channelization of Illinois rivers have seriously affected other species.

Exploitation is another important cause of declining turtle populations. Snapping turtles and soft shells are often sought for food in Illinois. While local consumption has not been a serious problem and is regulated by the Illinois Department of Natural Resources, a new concern is the growing,

demand for turtle meat and products in Asia. Food species (sliders, snappers, softshells) and pet trade species (box turtles, spotted turtles) draw high prices in that market. As Asian species disappear, markets shift to the United States to meet the demand. While a special license is needed to collect turtles in Illinois for commercial purposes, their high asking price makes poaching tempting to some people.

The keys to conserving Illinois turtles will be the rigid enforcement of current protective laws and the setting aside and maintenance of ample clean, **aquatic** and **terrestrial** habitats. If these guidelines are followed, we can expect turtles to remain in our Illinois forests, prairies, wetlands and waterways for many years to come.

Information for this study guide is from the Illinois Department of Natural Resources. [on line] <http://dnr.state.il.us/lands/education/turtle.html>

## Illinois Turtles



Alligator Snapping Turtle



Blanding's Turtle



Common Snapping Turtle



Eastern Box Turtle



Common Map Turtle



Common Musk Turtle



Slider



Eastern Spiny Softshell



Eastern Mud Turtle



False Map Turtle



Ornate Box Turtle



River Cooter



Painted Turtle



Smooth Softshell Turtle



Spotted Turtle