

## Turtles

Turtles have been around for a long time, and have changed little in 200 million years. They live in a wide variety of habitats: the sea, saltwater marshes, freshwater areas, and the land.

All turtles have a shell made of an upper carapace and lower plastron. The inner layer of the carapace is formed from the spine and flattened ribs and tends to be more arched in land turtles than their aquatic cousins. Most turtles have an outer layer of hard plates. In some, these plates have growth rings that can be counted to make a rough determination of the turtle's age. The plastron of the male in many species is concave for ease in breeding. Turtles have a beak rather than teeth, and most are omnivorous. Maturing in 5 to 7 years, turtles have a lifespan of 25 to 50 years, though in captivity they may live three times that long. Many turtles and their eggs are used by humans as food.

Worldwide there are approximately 240 turtle species. Twenty six of these species are in danger of extinction. There are eight species native to Nebraska.

On practically any sunny day, April through October, if the temperature is not too high, painted turtles can be observed basking on a log in our ponds, and in rivers, lakes and marshes throughout the state. They get their name from their colorful plastron and the bright yellow stripes that adorn their head, limbs, and tail. Painted turtles are omnivorous but cannot swallow outside of water because they have a fixed tongue.

Looking like a creature from the age of the dinosaurs with its jagged carapace, massive limbs and menacing head, snapping turtles are also common throughout the state wherever there is permanent water. Quite aggressive on land, and capable of administering a painful bite, many of us have stories of encounters with these animals. They are most active in the evening and at night, and are rarely seen basking. They will eat anything they can catch.

It is common to see female painted and snapping turtles in early summer when they are searching for nesting sites. They may travel quite a distance for this purpose, they are sometimes found crossing the road. In both these species, temperature during incubation influences the sex of hatchlings. Lower temperatures result in mostly males.

Though less common, almost every spring we spot a spiny softshell turtle when she climbs out of the creek for egg laying. Softshells can be quite large, with a flat olive-green shell and an incongruously tiny head with a pointed, upturned snout. They eat aquatic insects, fish, and amphibians Basking on sandbars in rivers, streams or lakes, softshells are wary and so disappear into the water at the slightest disturbance. Fast swimmers, softshells can remain submerged for as long as five hours since they can exchange gas through their skin. They spend the night, and the winter months, buried in sand or mud.



Softshell turtles get their name from the outer layer of their carapace, or upper shell. Unlike most other turtles that have horny plates covering the bony inner layer, softshells have a tough, leathery layer with flexible edges, resembling a pancake. Breeding in May, they lay 12 to 30 eggs that look like undersized ping pong balls. The young hatch in two months if the eggs have not been devoured first by hungry skunks, raccoons or opossums. They remain easy prey while young. Nebraska has two species of softshell turtles, the more pugnacious spiny softshell, and the smooth softshell that prefers large rivers.

The Chet Ager Building of the Nature Center is home to a Blanding's turtle. This yellow-throated "semi-box" turtle has a long neck and a single hinge in its under-shell. When frightened, it pulls its body inside. Its shell cannot close as tightly as a box turtle's. The Blanding's turtle can be found in the northern part of the Midwest including northeast Nebraska. Because of loss of habitat and nest predation, this turtle is on the threatened or endangered list in many states.

Blanding's turtles live in the clean shallow water of lakes, ponds, marshes, and creeks that have lots of plants growing in them, but often wander around on the land nearby. These turtles are most active during the morning. They can be seen basking in the sun if it is not too hot. They eat crayfish, insects, fish, frogs, and plant material.

Indoors at the Nature Center we have a retinue of ornate box turtles each with their own feisty personality. When determined to get across the room, one questions their reputation of being slow. Because their plastron is large and equipped with a hinge, they can completely close their shell, a marvelous defense against predators. Most other turtles are vulnerable if they get flipped over on their back.

Box turtles are creatures of the land and need sandy soil to dig suitable nighttime and winter burrows. They are common in the Nebraska sandhills. Some people bring them back from vacation for pets and then tire of the long-term commitment involved. If box turtles are released in this area they cannot survive. The Nature Center is providing a home for some of these abandoned turtles, but has limited resources. It is always best to leave wild animals where they belong – in the wild.

