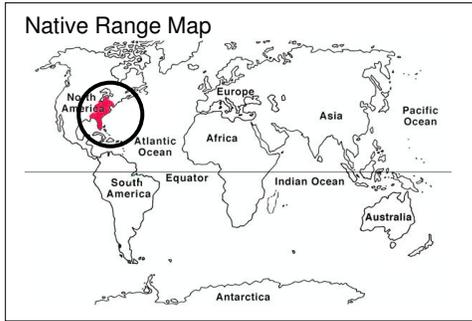


## Eastern Box Turtle



Kingdom: Animalia  
Phylum: Chordata  
Subphylum: Vertebrata  
Class: Reptilia  
Order: Chelonia  
Family: Emydidae  
Genus: *Terrapene*  
Species: *carolina carolina*



Photo courtesy of Karen Marzynski

### Habitat

- **In the Wild:** Eastern box turtles are found in open woodlands, pastures, and marshy meadows near ponds and streams in the eastern United States along the East Coast from southern Maine to Florida and west to Michigan, Illinois, eastern Kansas, Oklahoma, and Texas.
- **Exhibit Location:** Zoo to You Collection

### Characteristics

- Eastern box turtles are small, terrestrial (living on land) turtles that have high, dome-like shells and a hinged plastron (bottom of its shell) that allows total shell closure. Markings on the carapace (top of the shell) are varied. The upper jaw is slightly hooked. The toes are only slightly webbed.
- Males are larger on average than females and have thicker, longer tails and a concave plastron.
- **Lifespan: In the Wild** 40-50 years; **In Captivity** more than 100 years (record is 138 years)

### Behaviors

- This species is diurnal (active during the day), scooping out a shallow indentation in the soil in which to spend the night. They can dig under or climb over fences.
- Environmental temperature determines its activity rate. In the heat of the summer, its activity is restricted to the morning and after a rain. When it gets too hot, they hide under decaying logs and leaves, crawl into mammal burrows or into mud. When it's really hot, they go into shady pools and puddles to cool off.
- In northern regions, they go into hibernation in October or November, burrowing as deep as 2 feet into loose earth, mud, stream bottoms, old stump holes, or mammal burrows. They usually emerge from hibernation in April. Sometimes they awaken on warm winter days and change locations to hibernate.
- **Enrichments at the Zoo:** outside enclosure with grass, trees, hide, moss, water source

### Reproduction

- Eastern box turtles reach sexual maturity at approximately 10 years of age.
- Courtship has 3 phases: circling, biting, and shoving phase; preliminary mounting phase; and copulatory (mating) phase. Males sometimes fall backwards after mating with the females. If they can't right themselves, they die of starvation.
- Mating season is from the spring through October. Males may mate with more than one female or the same female several times over a period of several years. A female may lay fertile eggs for up to 4 years after 1 successful mating.
- Nesting occurs from May through July. Nests are dug in sandy or loamy soil using the hind legs. 3-8 eggs are laid in the cavity and are covered up. The eggs are elliptical with thin, white, flexible shells. The female lays several clutches a year.
- Incubation is usually 3 months, but varies with soil temperature and moisture. The temperature determines the sex of the hatchlings during incubation. There is no parental care.

### Diet

- **In the Wild:** snails, insects, berries, fungi, slugs, worms, roots, flowers, fish, frogs, salamanders, snakes, birds, eggs, carrion

- **At the Zoo:** baby mice, worms, fruit, salad greens

### **Conservation Status**

- **IUCN status** Lower Risk or Near Threatened 2004; **CITES** Appendix II
- This species is becoming possibly threatened due to collection for the pet trade, habitat destruction and fragmentation, and pollution.
- Local laws provide some protection, but their biggest threat is automobiles and heavy machinery. They are protected in Indiana and may not be collected from the wild. A special permit is required in Indiana to care for specimens.
- Predators: raccoons, skunks, coyotes, dogs, ants, crows, snakes, hogs (eggs are especially vulnerable as well as young turtles)

### **Did You Know?/Fun Facts**

- There are 6 subspecies of box turtles (4 in the United States, 2 in Mexico).
- When frightened, box turtles retract their head, tail, and limbs into their shell and clamp it shut. They wait until the perceived threat is gone. Very few species can prey effectively on adults due to this defensive technique.
- Box turtles can be dangerous to eat. At times they eat poisonous mushrooms and the toxins may linger in their flesh.
- Box turtles are famous for their hinged shell, which has great regenerative powers (grows back). A case was reported in which a carapace (top of the shell) of a badly burned box turtle underwent complete regeneration.
- New York Native Americans ate box turtle meat, used the shells for ceremonial rattles, and buried turtles with the dead.

### **Sources:**

- Brandywine Zoo, (n.d.). Animals in the zoo: eastern box turtle. Retrieved Oct. 01, 2005, from Delaware's Zoo Something For Everyone in the Family Web site: <http://www.brandywinezoo.org/boxturtl.html>.
- Friends of the National Zoo, (n.d.). Reptiles & amphibians: eastern box turtle. Retrieved Oct. 01, 2005, from Smithsonian National Zoological Park Web site: [http://nationalzoo.si.edu/Animals/ReptilesAmphibians/Meet\\_the\\_zoos\\_herps/default.cfm?id=2](http://nationalzoo.si.edu/Animals/ReptilesAmphibians/Meet_the_zoos_herps/default.cfm?id=2).
- Indiana Department of Natural Resources Division of Fish and Wildlife, (n.d.). Publications and news releases: the eastern box turtle. Retrieved Oct. 01, 2005, from Indiana Department of Natural Resources Web site: <http://www.in.gov/dnr/fishwild/publications/liferies/boxturtle.htm>.