



# Spotted Turtle (*Clemmys guttata*)

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## **Variable Shallow Water Citizens**

Spotted turtles are a fairly small, semi aquatic pond turtle species indigenous to discontinuous portions of the Midwestern and eastern United States and southeastern Canada. These small turtles are most often distinguished by their blackish to dark brown, streamlined carapace with variable amounts of yellow to orange-yellow spots ranging from no spots to numerous spots. Being an aquatic, omnivorous species, spotted turtles are one of many turtle species whose sex can be determined by the ambient temperatures during embryonic development, and some aspects of habitat loss, degradation, and global warming are certainly negatively affecting this, and many other turtle species. Spotted turtles are highly intelligent species well, and have performed well in laboratory conducted studies utilizing mazes, and where it has been found that these turtles have at least the brain capacity of mice and rats in many respects. Unfortunately, due to their frequent terrestrial habits, small size, and oftentimes attractive appearance, spotted turtles are under threat from habitat loss and fragmentation through the construction of roads, as well as other human impacts such as over-collection and over-exploitation. They are a federally threatened and endangered species, and ensuring that only captive bred and born animals are selected can go a long way towards protecting and conserving wild populations of these turtles.

## **Taxonomy**

**Life:** All living, physical, and animate entities

**Domain:** Eukaryota

**Kingdom:** Animalia

**Phylum/Sub Phylum:** Chordata/Vertebrata

**Class:** Reptilia

**Order:** Testudines

**Suborder:** Cryptodira

**Family:** Emydidae

**Subfamily:** Emydinae

**Genus:** *Clemmys*

**Species:** *Clemmys guttata*\*

*\*Taxonomy subject to change and revision.*

## **Lifespan and Longevity**

Spotted turtles may attain longevity of 20 to 40 years or more with proper care and conditions.

## **Distribution and Habitat**

Spotted turtles are indigenous to shallow marshes, ponds, flooded fields, wet meadows, bogs, small woodland streams, and other wetlands of coastal eastern United States and the eastern

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Midwest and southeastern Canada.

### **Conservation Status**

IUCN Red List Endangered (EN).

### **Experience Level Required**

Intermediate/Moderate.

### **Size**

A fairly small species, spotted turtles usually range from 3 ½ to 6 inches in carapace, or upper shell length.

### **Housing and Enclosure**

Spotted turtles are semi aquatic to semi-terrestrial turtle species. Provide a sturdy, escape proof aquarium or commercially available plastic or galvanized stock tank or turtle tub of sufficient size with an elevated dock or basking area/access to dry land using a substrate dam. The latter are perhaps preferred for maintaining aquatic to semi-aquatic turtles in, as they are easier to clean, move/transport, and maintain than aquariums. Provide a minimum of 10 gallons of space per inch of shell, or about 40 to 90 gallons for most adult spotted turtles. A general rule of thumb to follow for spotted turtles is to provide water is only deep enough to allow for complete submersion, and at least two to three times the carapace length for adequate swimming and movement. A powerful water filter rated at least twice that of the amount of water in the enclosure is highly recommended for aquatic turtles, as they are messy and require frequent cleaning and regular water changes. Use a submersible water heater with a guard to maintain water temperatures of 75 to 85 degrees F. Substrate is optional, and foregoing it makes for easier cleaning and maintenance, but small to medium sized gravel can be used. Additional rocks, logs, live or artificial foliage can also be provided for additional foraging, basking, and hiding opportunities.

### **Temperature, Lighting, and Humidity**

Providing the correct amounts of UVA/UVB overhead incandescent and florescent lighting, and calcium-to-phosphorus ratios is essential for ensuring the health and overall well-being of spotted turtles in captivity. Without UVA/UVB, or adequate amounts of it, they can be susceptible to the abnormal bone and shell growth and development known as Metabolic Bone Disease (MBD), and other health and development maladies. Pyramiding of the scutes and shell can also occur due to poor or improper diet, lighting, or heating. Always be sure to spot clean the enclosure for urates, feces, or uneaten food at least twice per week. Be sure to periodically replace the substrate, clean, and disinfect the enclosure and its furnishings at minimum every 2 to 3 months. Spotted turtles require a thermal gradient using a ceramic or radiant heat emitter, UTH (or under tank heating pad), and UVA/UVB overhead lighting. Ambient and cool end temperatures should be within 70 to 80 degrees F and the basking area from 85 to 95 degrees F. Also be sure to maintain a light cycle of 12 to 14 hours per day, and monitor temperatures with a quality thermometer. Be sure to provide a basking area or platform for your spotted turtle to emerge completely from the water as well. More specific lighting, heating, and humidity product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

### **Feeding, Diet, and Nutrition**

*Omnivorous to Carnivorous*; In the wild, spotted turtles are primarily omnivorous to carnivorous, feeding on aquatic to semi-aquatic insects, crustaceans, mollusks, and other

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invertebrates, as well as smaller vertebrates including small fish, amphibians, and carrion, or dead and decaying plant and animal material. Some algae and other aquatic plants may also be consumed. In captivity, variety is important with most aquatic to semi-aquatic turtle's diets. Spotted turtles can be given feeder insects of appropriate size including crickets, roaches, mealworms, waxworms, superworms, or other invertebrates. They can also eat small, frozen-thawed rodents of appropriate size, but offer these sparingly, if at all. Other food items that will be accepted by these turtles can include many of the commercially available aquatic to semi-aquatic turtle or omnivore mix diets, small feeder fish of appropriate nutritional value, earthworms, redworms, freeze dried shrimp or krill, or some other meats. Dog and cat foods can also be used, but use these sparingly, if at all as well. They can also be fed some chopped greens, fruits, and vegetable material as well. Gutloading any feeder insects and providing additional calcium and vitamin D3 is essential for these turtle's optimal health and well-being. Without proper supplementation, they are susceptible to Metabolic Bone Disease, pyramiding of the shell, and other abnormal bone, growth, and health maladies. Feeding frequency will depend on the age, size, and overall health of your turtle, but typically in most cases should be twice to three times weekly. Do not overfeed them, though as obesity and other health related issues can become a concern. More specific dietary and supplementary product suggestions and recommendations that can best suit one's needs, as well as those of one's animals can be given as well.

### **Handling**

Spotted turtles are fairly shy turtles that should be handled sparingly, or in moderation in most cases. Most small to mid-sized turtle and tortoise species that are not aggressive or prone to biting can be picked up and handled either by placing both hands along both sides of the shell, or from the rear of the carapace with the thumb on the carapace and index through pinky fingers on the plastron to reduce the chances of being kicked, scratched, or nipped when they are threatened. Although most species of chelonians are not outwardly aggressive, defensive, or dangerous, they can become stressed as a result of over-handling, however, and some species, and even individual animals can be shyer than others. These are some considerations to keep in mind when handling any chelonian species.

**\*\*Also be sure to practice basic cleanliness and hygiene associated with proper husbandry after touching or handling any animals or animal enclosures to prevent the possibility of contracting salmonellosis or any other zoonotic pathogens\*\***

### **Contact**

Authored by Eric Roscoe. For any additional questions, comments, and/or concerns regarding this animal, group of animals, or this care sheet, please email and contact the Madison Area Herpetological Society at [info@madisonherps.org](mailto:info@madisonherps.org)

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