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South American River Turtles (*Podocnemis* spp.)

A Lost Legacy in Turtles

The South American, or Amazon river turtles are large to very large species of semi-aquatic turtles belonging to the smaller classification of turtles known as the Pleurodira, or side-necked turtles. Consisting of six species, the South American river turtles are distributed within the Amazonian river basin and its tributaries and surrounding wetlands of South America. Primarily herbivorous to omnivorous in the wild, these large semi-aquatic turtles will utilize their powerful jaws to capture and consume many various fruit, vegetable, and other aquatic plant matter, as well as small fish, carrion, aquatic insects, crustaceans, and other invertebrates or smaller animals. Most of the South American river turtles can be identified by their low to moderately keeled carapaces ranging in color from blackish, brownish, to grayish-brown, and the several large, cream colored to yellowish or orangish-yellow spots or blotches on their jaws and alongside their heads on an otherwise grayish to olive-gray skin color.

Taxonomy

Life: All living, physical, and animate entities

Domain: Eukaryota

Kingdom: Animalia

Phylum/Sub Phylum: Chordata/Vertebrata

Class: Reptilia

Order: Testudines

Suborder: Pleurodira

Family: Podocnemididae

Genus: Podocnemis

Species: *Podocnemis* spp.*

**Taxonomy subject to change and revision.*

Lifespan and Longevity

Given the correct husbandry and care, South American river turtles can be expected to attain longevity of at least 20 to 30 years or more.

Distribution and Habitat

South American river turtles, as their names imply, are indigenous to the Amazonian River, its tributaries, and surrounding large lakes, streams, and wetlands of the Amazon Basin.

Specifically, they may be found in Guyana, French Guiana, Venezuela, and Colombia to Ecuador, Peru, Bolivia, and Brazil. These turtles may also be found in seasonally flooded forests, floodplains, and other wetlands as well.

Origin/History

Podocnemis spp. Wagler, 1830. Specific species would have other authors first describing them during other years.

The most common species to have appeared in the pet trade are the Yellow Spotted River Turtle (*P. unifilis*), Red Headed Amazon River Turtle (*P. erythrocephala*), and Savanna Side necked Turtle (*P. vogli*). These turtles were formerly an important staple in pet turtle species during the 1960's and 1970's; however increased importation and exportation restrictions from CITES Appendix II listing, as well as Endangered Species Act listings requiring additional permits and documentation have drastically reduced the availability of these turtles. Captive born South American river turtles are still available, but in much smaller numbers than before.

Experience Level Required

Intermediate/Moderate to Advanced.

Size

Adult South American river turtles can be very large turtles, and are also sexually dimorphic with females reaching larger sizes than males. The carapace, or upper shell length may range from 14 to 18 inches on average, or occasionally even greater sizes in some specimens.

Housing and Enclosure

Enclosure System: Semi-Aquatic. South American river turtles are semi aquatic 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 50 to 120 gallons or larger for most adult South American river turtles. A general rule of thumb to follow for most aquatic to semi-aquatic turtles is to provide water that is at least 1 ½ to 2 times the turtle's height in depth 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 South American river 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. River 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 65 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 turtle to emerge completely from the water as well. Be sure to provide a basking area or platform for your South American river 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. While humidity is somewhat less important for most aquatic to semi-aquatic turtles, a general humidity level should be at, or around about 60 to 75%.

Feeding, Diet, and Nutrition

Omnivorous to Carnivorous; In the wild, most South American river turtles are herbivorous to omnivorous, feeding on carrion, small fish, snails, crustaceans, mussels/clams, and other aquatic invertebrates, as well as fruits and aquatic vegetation. Young and juvenile turtles tend to be more carnivorous to omnivorous than adults.

In captivity, variety is important, and South American river turtles can be given a more widely varied amount of food items associated with an omnivorous diet, including many of the commercial omnivore mix or turtle diets, small feeder fish of appropriate size and nutritional value, leafy greens such as turnip, mustard, and collard greens, superworms, earthworms, mealworms, feeder roaches or crickets, freeze dried shrimp, krill, redworms, and even small, frozen thawed rodents on occasion. Avoid or strictly moderate any foods that are high in fat or protein, however. Other acceptable foods can include water hyacinth, watercress, duckweed, kale, carrot tops, and many other various fruits.

Commercially available canned or pelleted turtle diets are not good staples for feeding aquatic to semi-aquatic turtles, and should not exceed roughly 25% of their diets; Variety is always best. A varied diet is important, and providing additional vitamin D3 and calcium supplementation two to three times weekly feeding also is also essential for their overall health and well-being, and to prevent Metabolic Bone Disease (or MBD), pyramiding, or other shell, bone, and growth maladies caused by improper diets or nutrients. 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

South American river turtles, when captive born and raised, can become very tame and personable pets, often even approaching their keepers for food. However, they can become very large, and somewhat difficult to handle simply due to their size, weight, and tendency to scratch, as with many other aquatic to semi-aquatic turtles. 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

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