

## Giant Musk Turtles

### *Staurotypus salvini* and *Staurotypus triporcatus*



An adult Chiapas Giant Musk Turtle, *Staurotypus salvinii*. Photo by Tom Joel Morgan.

**Comments:** These large turtles from Central America are some of the most irritable turtles kept in the turtle world. They require focus and an interest in keeping species that, to breed, will probably require you to keep them individually except for supervised visitations.

#### **Taxonomy:**

*Staurotypus salvinii* Gray, 1864 Chiapas Giant Musk Turtle

*Staurotypus triporcatus* (Wiegmann, 1828) Giant Musk Turtle

**Distribution:** *Staurotypus salvinii* is found in the lowland Pacific drainages of Oaxaca and Chiapas in Mexico, Guatemala, El Salvador, and Belize. *Staurotypus triporcatus* is found in Gulf and Caribbean drainages of Mexico, Belize, NE Guatemala, and western Honduras.

**Captive Care:** Water conditions do not seem to be overly important for Giant Musk Turtles, but the ideal is water around 12–14" (30–35 cm) deep, acidic from the addition of peat moss, oak and almond leaves, and oak limbs and logs, and cleaned and oxygenated with a good filtration system. These turtles



Giant Musk Turtle, *Staurotypus triporcatus*, spotted in Felipe Carrillo Puerto, Mexico. Photo by Daniel Durán Arceo.

will spend time on land and we suggest adding a hot basking area in the 90–95° F (32–35° C) range at the water's edge, giving them the ability to bask in shallow water.

**Feeding:** In nature, the Giant Musk Turtle, *Staurotypus triporcatus*, feeds on a wide variety of prey including fish, crayfish, amphibians, clams, snails, and even smaller turtles. In captivity, they feed well on fish, earthworms, crayfish, and commercial turtle diets. Like all Musk Turtles, they love to eat and have a tendency to become obese if not given a large, creative enclosure. Offer them a clean, warm environment with neutral to slightly acidic pH and a variety of underwater exploration sites to keep them active and healthy.

*Staurotypus* of all sizes feed aggressively on fish, chopped chicken gizzards, thawed rodents, and commercial pellets. In Europe, two adult *Staurotypus* fed a diet very high in protein (rodents and cat food) resulted in turtles with cholesterol crystals in the corneas of their eyes (Farkas, 2006).

**Breeding:** These large turtles need to be kept individually throughout the year, especially in indoor enclosures, even large ones. The ideal for captive breeding is to keep them in large stock tanks or



Outdoor ponds for *Staurotypus* should offer deep water, lots of sight barriers, and live plants. Even then, turtles should be observed for signs of aggression and fighting to prevent injuries. Photos by Russ Gurley.



*Staurotypus* are excellent swimmers. This one was spotted foraging for food near Petén, Guatemala. Photo by Jaico Caballero.



Mexican Giant Musk Turtle, *Staurotypus triporcatus*, spotted at Cosamaloapan de Carpio, Veracruz, México. Photo by Axelnay.



Hatchling Mexican Giant Musk Turtles, *Staurotypus triporcatus*, and one of the hatchlings in a few short weeks. Photos by Russ Gurley.



Fecal sample of a Mexican Giant Musk Turtle, *Staurotypus triporcatus*, filled with the shells of aquatic snails and clams. Photo by Donald McKnight.

large Waterland Tubs in a room with an ambient temperature around 82° F (28° C ) for most of the year and to cool the room to 60–65° F (16–18° C) for a couple months during a winter. Once the room is warmed again to 82° F (28° C), and both the male and female have been fed well for a couple of weeks, attempts can be made to introduce the male to the female's enclosure. They should be monitored closely because if the female is not receptive, violence will occur quite quickly. If she is receptive, as in *Claudius*, another irascible species, mating can go quite smoothly. Mating typically takes 30 minutes and the male should be removed immediately after copulation to avoid any accidents. The females can be quite aggressive, biting the face of the courting males and occasionally causing serious injuries.

*Staurotypus* females dig deep nests and occasionally will bury themselves and lay eggs (8 to 10 is the typical clutch size) deep in the sand and remain with the eggs for a number of days. There are reports of

*Staurotypus* clutches with no eggs to incubate because the eggs have been damaged by the female staying in the nesting area. Also, if a female does not have access to a laying area with a deep sand substrate, she will often lay the eggs in the water. Goode (1994) reported that a female at the Columbus Zoo in Ohio produced six clutches of eggs a year.

This species requires a diapause for successful incubation. One successful European breeder sets eggs at 84° F (29° C) for 11 days, then at 75° F (24° C) for 28 days to break the diapause, and then back to 84° F (29° C). This has led to successful hatching at 167 days of incubation (Bakowskie and Bakowskie, 2011).

This species does not exhibit TSD, so the incubation temperatures should not affect the sexes of hatchlings.

### Works Cited and Suggested Reading

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\* *Staurotypus salvinii* and *S. triporcatus* are listed on Appendix II of the Convention on International Trade in Endangered Species (CITES).