

population can be used to identify specimens in long term ecological studies.

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## LIFE HISTORY NOTES

See *Herp. Review* 19(2) for author's instructions.

### ANURA

**BUFO MARINUS** (Marine Toad). **PREDATION.** On 31 October 1987 in savanna woodland close to Alter do Chão Pará, Brasil (2° 31' S, 55° 00' W) at 0813 h I intercepted a grisson (*Galictis vittata*) entering the forest from the savanna, with a large (ca. 25 cm TL) *Bufo marinus* hanging from its mouth. The grisson stopped within five m of me for about 20 sec. The frog was not collected but as *B. marinus* is the only large bufonid in the area there can be no doubt as to its identity. *Bufo marinus* are extremely common in the area and it is unlikely that the adult grisson had not been exposed to toads before. Rather, it seems that the potent skin toxins of *B. marinus* are not an effective defense against grissons.

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**RANA AREOLATA AESOPUS** (Florida Gopher Frog). **MOVEMENT.** An adult female *Rana areolata aesopus* (84 mm SVL), marked at the Breezeway Pond on the Katharine Ordway Preserve/Swisher Memorial Sanctuary, four km E of Melrose, Putnam Co., Florida, on 30 March 1987, was caught in a Sherman live trap set at the mouth of an active gopher tortoise burrow on 26 July 1987. The recapture occurred 2.0 km WSW of the Breezeway breeding pond on a disturbed longleaf pine-turkey oak site dominated by planted slash pine. We believe this to be the first documented observation of a long-distance movement for this species. Carr (1940,

*Herpetology of Florida*, p. 64) states these frogs "...travel some distance to congregate at widely separated ponds, since I have found them a mile (1.6 km) from water."

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## CROCODILIA

**CROCODYLUS ACUTUS** (American Crocodile). **NEST DEFENSE.** In Panama, American crocodiles are known to nest in clearings and to defend their nests from green iguanas (*Iguana iguana*) that sometimes excavate crocodile eggs while nesting (Dugan et al. 1981. *J. Herpetol.* 15:409-414). Slider turtles (*Trachemys scripta*) occasionally nest in these clearings too, but construct much shallower nests than do iguanas or crocodiles (Drummond 1983. *Copeia* 1983:529-530). Here we report observations of aggressive behavior by a ca. 3 m crocodile towards *Trachemys* that nested in the small island of Siothia adjacent to Barro Colorado Island, Panama.

Between 4 and 24 February 1988 we observed four instances of nest-defense through a telescope at a distance of 400 m. In the first, the crocodile entered the clearing from the lake and attacked a large *Trachemys*, as the latter moved rapidly out of the clearing into the forest. In a second incident the crocodile entered the clearing, grasped a turtle by the carapace in its mouth, and shook it. The turtle moved a short distance after its release and the crocodile repeated this behavior. Following the second release, the turtle moved at greater speed into the water. In the third case, the crocodile entered the clearing to interrupt a digging turtle by flipping it onto its back.

During the next five min, the crocodile bit at the turtle four times while the turtle struggled to right itself. The turtle regained its feet and fled unpursued to the water. In the final incident we noticed a turtle in the clearing moving towards the shoreline. As it slid down the bank, the crocodile surfaced, grasped the turtle in its mouth, and thrashed it back and forth in the water for a period of ca. one min. At this time, another large crocodile (presumably the mate) surfaced and swam toward the first crocodile, which entered the clearing. When we arrived at the nest site by boat several minutes later, the second crocodile swam away and the crocodile in the clearing entered the water and followed. There was no sign of a dead or injured turtle along the shoreline, although three seemingly undisturbed large turtles were visible in the water nearby.

It is curious that despite ample opportunity, the crocodile failed to seriously injure any of these turtles. Unlike iguanas, which nest-defending crocodiles do occasionally kill, nest-defending turtles probably rarely if ever disturb crocodile nests. Apparently, crocodiles defend their nests rather indiscriminately against many intruders. However, both iguanas and turtles that succeed in laying near a crocodile nest may benefit from the crocodile's general defense of the area.

Submitted by **VIVIAN P. PAEZ** and **BRIAN C. BOCK**, Smithsonian Tropical Research Institute, Apdo. 2072, Balboa, Panama

## SAURIA

**CALLISAURUS DRACO** (tailed Lizard). **FEEDING.** In Sonora, Mexico, population of lizards are common in cotton fields (1985. Western Reptiles and Amphibians Houghton Mifflin Company). I captured a reproductively mature lizard (CL = 74.05 mm) during the middle of the dry season in the coastal zone of the "El Choyero" SW Hermosillo City on 1 July 1988. The lizard was killed and his stomach contents were analyzed for food. I found 42 beetles (Coleoptera) and a young crab (Crustacea). The lizard's stomach contents were analyzed for chemical contents. The lizard was deposited in the herpetological Collection of the University of Sonora.

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