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#### GIANT TOAD EATEN BY RED-SHOULDERED HAWK

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The giant toad (*Bufo marinus*) is a successful invader species known to southern mainland Florida since at least 1955 (Duellman and Schwartz 1958, Wilson and Porras 1983). A virtual absence of natural predators has greatly aided its establishment, and high population densities of this species have been reported in Florida (Krakauer 1968) and other target areas (Zug et al. 1975, Zug and Zug 1979). Indeed, Krakauer (1968) suggested that automobiles were the major cause of death of adult giant toads in southern Florida.

Here, I report a field observation of predation of an adult giant toad by a Red-shouldered Hawk (*Butea lineatus*) in southern Florida. At 1600 on 19 October 1993 I was walking near the stadium along the northwestern border of Florida International University, Miami (Dade Co.), Florida and saw a Red-shouldered Hawk on the grass beside a fig tree (*Ficus* sp.). Its attention was directed to the ground near its feet. When I approached, the hawk flew to the top of the tree. I examined the ground where I had first seen the hawk but found nothing. Directly above me a giant toad fell from where the hawk was perched. Apparently the toad was dropped by the hawk as it flew away.

The dead toad measured about 115 mm snout-vent length. A 40-mm hole had been torn on its underside just above the pelvic girdle, and the toad had been eviscerated. The toad had not been dead for long; the right foreleg twitched twice during my examination. No other wounds were apparent and no bufotoxin (which appears milky-white) was seen on or around the parotid glands.

It appeared that the hawk captured the toad and rolled it onto its back, presumably to avoid contact with toxins which are freely exuded under stressful conditions. Cassels (1966) reported a similar hunting technique used by rats when preying on giant toads. How well Red-shouldered Hawks may be able to exploit this novel and locally abundant food source is unknown.

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#### REVIEW

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**White Ibis—Wetland Wanderer.**—Keith L. Bildstein, 1993. Smithsonian Institution Press. Cloth, 272 pp., 23 black-and-white photos, 44 line drawings, in 12 chapters, and 3 appendices, \$22.50.—The White Ibis (*Eudocimus albus*) is one of the most numerous large birds in the southeastern United States. Although this species is locally very conspicuous in large flocks and colonies, it has received little attention in any form of literature outside of the scientific journals. *White Ibis* is a thorough discussion of nearly all aspects of the ecology of this nomadic species, told in a story-like prose that encompasses Keith Bildstein's 13 years of research on this species in South Carolina and Trinidad. Written in a style that is easy and often entertaining to read, the book appeals to those unwilling to delve into the journals, yet is also of real value to the professional ecologist or ornithologist. The text is well referenced, and Bildstein's points are regularly illustrated with tables, graphs, and scientific illustrations. The literature Bildstein cites provides both a complete history of the White Ibis literature, and includes key references for general ecological principles. The latter is of considerable value to lay readers and beginning ecologists. The numerous pen-and-ink illustrations of ibises by Michelle Davis and Pamela Cowart-Rickman are of very high quality, and add tremendously to the overall quality of the book.

The book is presented in twelve chapters. The first is on ibises in historical literature, and is exceedingly well researched. Even after my own 14 years of studying ibises, I was shocked to learn that the reverence of ancient Egyptians for the Sacred Ibis (*Threskiornis aethiopicus*) went as far as raising huge numbers in captivity for the apparent purpose of religious sacrifice and mummification, to the tune of several millions of animals.