Sonoran Desert Toad

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SCIENTIFIC NAME: *Bufo alvarius*. Genus is Latin for toad, as toads have been known to humans since ancient times. Specific epithet derived from the Latin *alvus* meaning womb or belly and *arius* meaning belonging to.

DESCRIPTION: The Sonoran Desert toad is the largest western species of toad, reaching lengths of 7.5 inches from snout to vent. It is squat bodied and covered with smooth, leathery skin, dark brown to olive colored on top and cream colored below. There are large warts along the hind legs, and a large kidney-shaped parotoid gland on each side of the head. An enlarged white wart is located near the rear of the lower jaw.

HABITAT: In Arizona, Sonoran Desert toads range from lowland mesquite-creosote brushland and grassland to 4,500 feet elevation in oak-sycamore dominated mountain canyons. They are generally associated with both permanent waters and temporary pools, although they have been found miles from the nearest water hole. During warmer, drier periods they take shelter in rodent burrows and other subterranean shelters.

DISTRIBUTION: The type locality as described by Charles Girard in 1859 was the "Valley of Gila and Colorado," hence its other name, the Colorado River toad. The actual range for the species stretches from extreme southeastern California throughout the Sonoran Desert region of Arizona, east to extreme southwestern New Mexico, and south through Sonora and Sinaloa, Mexico.

BIOLOGY: The Sonoran Desert toad is considered to be one of the more aquatic of the southwestern toads, spending most of its time underground to avoid desiccation, and coming to the surface only during rainfall events or periods of high humidity.

In Arizona, breeding usually coincides with the summer rains. Male Sonoran Desert toads gather around water holes using two primary strategies for attracting mates. Larger males tend to establish themselves along the shoreline of stock tanks, while the smaller males are forced to search for mates away from the pond. Breeding aggregations can be quite large; up to 200 toads have been reported from one pond alone. Once a female has been coerced, herded to, or ambushed at a suitable breeding spot, she lays a long, jelly-like string of several thousand eggs. Due to the extreme desert temperatures and rapid evaporation rates of water holes, the larval period is short. Time from egg through tadpole stage and metamorphosis into a toadlet takes only about a month. Very few toadlets survive to adulthood.

Eating habits for Sonoran desert toads could probably be described in one word: voracious. Diet studies have revealed that they eat most anything that will fit in their mouths. Stomach contents have revealed numerous invertebrates including millipedes, centipedes, wasps, and spiders. They also munch on many smaller vertebrates such as lizards, mice, and other toads.

Due to their predilection for moist places and bugs, Sonoran Desert toads are attracted to shrubby landscaping, sprinklers, and pools in urban environments. They are great critters to have around for insect control. Caution should be taken, though, if the homeowner has pets or small children. The primary antipredator defense employed by Sonoran Desert toads is a toxic skin secretion. It is not recommended to lick one's fingers or rub one's eyes after handling a toad. The skin secretion poses a threat only if ingested.

STATUS: The Sonoran Desert toad is common throughout its range in Arizona, although it may only be observed during periods of rainfall and high humidity. It is not included on the Department's list of *Wildlife of Special Concern in Arizona*. Through Commission Order 41, the department allows limited take of Sonoran Desert toads.

MANAGEMENT NEEDS: None, except ensuring that ephemeral pools and stock tanks are present for breeding purposes. It is important that these breeding sites are free of introduced exotics, such as crayfish, which will prey on the eggs and tadpoles.

Daren Riedle, the Arizona Game and Fish Department's Desert Tortoise Coordinator, is a man for all herps.