

## NONGAME FIELD NOTES

# Great Plains Narrowmouth Toad

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### SCIENTIFIC NAME:

*Gastrophryne olivacea*.  
From the Greek *gaster*  
(=belly) and *phryne* (=toad),  
possibly referring to the pot-  
bellied appearance, and from the  
Latin *oliva* (=olive), referring to the  
general coloration.

**DESCRIPTION:** Small; up to 1.5 inches long; females usually larger than males. Relatively stout body tapers to a narrow, pointed, flattened head. Smooth, tough body skin forms a fold along back of head. Eyes resemble small, black, glass beads. Legs short, forelegs slender when compared to stout, stubby hind legs. No webbing between toes. Dorsal coloration olive-brown, light tan, or grayish, with at least a few dark spots. Distinct bars or blotches usually present across thigh and calf. Underside usually immaculate, but strongly mottled in some Arizona upland populations. Males have dark throat, especially during breeding season. Young have distinctive, dark, leaflike pattern on back, fading with age.

**HABITAT:** In Arizona, from desert grassland (mesquite) to oak woodland. Found in deep, moist crevices or burrows, often with various rodents, and under large flat rocks, dead wood, and other debris, near streams, seeps, and ephemeral pools. More terrestrial than aquatic in habits.

**DISTRIBUTION:** Ranges throughout most of the Great Plains to northern Mexico, east to the Gulf of Mexico, and west to the Sea of Cortez, then north into south central Arizona. Limited occurrence in Arizona, mainly on the Tohono O'odham and Gila Indian reservations, and in and near the Patagonia and Pajarito mountains. From sea level to approximately 4,100 feet.

**BIOLOGY:** These inconspicuous little toads live a primarily subterranean lifestyle, surfacing at night, usually after heavy summer rains, to breed and occasionally to feed.



During these wet periods, males make their way to pooled water and commence calling. At a distance, their breeding chorus has been likened to the "baaing" of sheep and, in closer proximity, to the buzzing of honeybees. Upon attracting a mate, the male grasps her from behind and "glues" himself to her back with a viscous skin secretion, which ensures a good connection and reduces the possibility of disturbance from rival males.

The eggs, laid in a film at the water's surface, are fertilized as they are laid. Narrowmouth toads develop quickly, growing from egg to toad in 24 to 50 days.

This species is myrmecophagous (ant-eating), which may account for the tough skin and the fold of skin across the neck, both affording protection from ant bites and stings. Narrowmouths share burrows with tarantulas, lizards, moles, and many other creatures. Once, in the Texas hill country, I overturned a large flat rock and revealed a narrowmouth cohabiting with such dangerous bedfellows as two scorpions and a black widow spider.

**STATUS:** The Great Plains narrowmouth toad is included on the Department's list of *Threatened Native Wildlife in Arizona* (1988) as a candidate species due to known and suspected habitat threats, but is neither listed nor proposed for listing by the U.S. Fish and Wildlife Service as endangered or threatened. This species is abundant across most of the Great Plains.

**MANAGEMENT NEEDS:** Several recent Heritage-funded surveys have confirmed that Great Plains narrowmouth toads still occur at most historical localities in Arizona. This information suggests that active management is not necessary at this time, although continued monitoring would help to ensure the presence of this tiny toad among our native fauna. ♣