

Couch's Spadefoot

Scaphiopus couchii
Family Pelobatidae



Global Rank: G5

State Rank: S1 (CO); S3 (CA); S5 (AZ, NM)

Distribution: Ranges from southwestern Oklahoma, central New Mexico, and south-central Arizona to the tip of Baja California, southeastern California, and central Texas. Isolated populations are in the vicinity of the Petrified Forest National Monument in Arizona and in Otero County, Colorado. It extends from near sea level to around 5,600 ft. (1,710 m.) in elevation.

Description: Adults reach up to 3 1/2 in. (8.7 cm.) in snout-vent length. A large greenish, greenish-yellow, or brownish yellow spadefoot, with an irregular network, blotches, or flecks of black, brown, or dark green. The belly is whitish. The eyes are widely separated with the width of the eyelids about the same as or less than the distance between them. No boss exists between the eyes, and there is no pug-dog profile. Spade on the hind feet is black and sickle-shaped. Males are often more greenish than females, dark marking above is usually subdued or absent, and throats are pale. The voice is a plaintive cry or groan, declining in pitch, like an anxious bleat of a sheep.



Current range of the Couch's spadefoot

Reproduction: Breeding activity usually occurs during summer rains in temporary rain-filled depressions. Up to 90 percent of the breeding occurs on the first night following pond formation. Breeding is non-random with larger males mating more often. Eggs numbers vary, but average about 3,300 eggs. Eggs hatch in as little as 15 hours, depending upon water temperature. Tadpoles have the most rapid rate of development of any North American anuran, and metamorphose at approximately 15-20 mm. in snout-vent length.

Food: Couch's spadefoot is a generalized arthropod predator, concentrating mainly on ground-dwelling species. Over 80 percent of the diet is comprised of beetles, orthopterans, ants, spiders, and termites. Those arthropods with well-known chemical defenses, such as blister beetles, velvet ants, stink bugs, and millipedes, are usually not included in the diet. They may be able to consume enough food in one meal to last an entire year. Studies found that they may consume as much as 55 percent of their body weight in a single feeding of termites. The high energy content of termites and their simultaneous emergence with the Couch's spadefoot during the first summer rains, probably makes the presence of termites essential to the survival of spadefoot toads in the desert.

Habits: The Couch's spadefoot is probably the most xeric adapted of all North American anurans with reports of up to three years without sufficient rainfall to stimulate emergence. Habitat includes arid grasslands and areas of creosotebush and mesquite, where soils are sandy and well-drained. It occasionally is found in irrigated agricultural lands and may be abundant on desert highways after summer thunderstorms. The species is largely nocturnal and spends most of its life buried in the soil and emerges only during spring and summer rains.

Management Implications: Skin secretion while handling may be toxic to some humans. Pain may be experienced with scratched areas, and incessant sneezing and discharges from eyes and nostrils have been noted. Secretions from other spadefoot species may have the same results. The availability of termites may be important to the survival of the species.

Important References: Stebbins, R.C. 1985. A field guide to western reptiles and amphibians. The Peterson Field Guide Series, Houghton Mifflin Company, New York, NY; Degenhardt, W.G., C.W. Painter, and A.H. Price. 1996. Amphibians and reptiles of New Mexico. University of New Mexico Press, Albuquerque, NM.