

Catalogue of American Amphibians and Reptiles.

FUNK, RICHARD S. 1981. *Phrynosoma mcallii*.

***Phrynosoma mcallii* (Hallowell)**
Flat-tailed horned lizard

Anota M'callii Hallowell, 1852:182. Type-locality, "Great Desert of the Colorado, between Vallicita [=Vallecita] and Camp Yuma, about 160 miles east of San Diego." Restricted to "close to the present town of Calexico," Imperial County, California, by Klauber (1932). Holotype, Acad. Natur. Sci. Philadelphia 8680, collected by Col. George A. M'Call, U.S. Army (not examined by author).

Doliosaurus mc'calli: Girard, 1858:408.

Phrynosoma maccallii: Cope, 1867:310.

Phrynosoma m'callii: Stejneger, 1893:190.

Anota maccallii: Cope, 1900:448.

Phrynosoma mcallii: Etheridge, 1964:621.

- CONTENT. No subspecies have been described.

- DIAGNOSIS. A moderate-sized (maximum snout-vent length about 82 mm), oviparous species of *Phrynosoma*, with an immaculate white venter, a narrow dark middorsal stripe from head to tail base, and a dorso-ventrally flattened tail. The dorsal coloration is gray, tan, reddish-brown, or whitish. There are two occipital spines 3-4 times longer than basal width, and not in contact at the base, and three temporal spines on each side. The nostrils lie within the canthal ridge. There is a single row of enlarged lateral gular scales, and the lateral abdominal fringe consists of 2 (occasionally 3) rows of spines. The ventral scales are smooth, and the peritoneum is black. The tympanum is not evident externally.

- DESCRIPTIONS. The best descriptions are in Cope (1900), Bryant (1911), Van Denburgh (1897, 1922), Smith (1946), Reeve (1952), and Stebbins (1954, 1966). Gorman et al. (1969) described the karyotype ($2n = 34$).

- ILLUSTRATIONS. Black and white photographs are in Bryant (1911), Van Denburgh (1922), Smith (1946), and Shaw (1950); drawings in Baird (1859), Cope (1900), and Stebbins (1954, 1966, 1972); and a color photograph in Behler and King (1979).

- DISTRIBUTION. *Phrynosoma mcallii* occurs in southeastern California, extreme southwestern Arizona (south of the Gila River), and adjacent Baja California Norte and Sonora, México. All localities are below about 300 m elevation.

Previously unpublished localities indicated on the map are from the American Museum of Natural History; Arizona State University; Bryce C. Brown; California Academy of Sciences; Chicago Academy of Sciences; Carnegie Museum; Louisiana State University Museum of Zoology; Museum of Comparative Zoology, Harvard University; Museum of Vertebrate Zoology, University of California; R. S. Funk; San Diego Society of Natural History; Texas Natural History Collection; University of Arizona; University of California, Riverside; University of Illinois Museum of Natural History; University of Michigan Museum of Zoology; and Philip Medica and Frederick Turner (pers. comm.): MÉXICO, *Baja California Norte*: Mexicali; mouth of Guadalupe Canyon; *Sonora*: 4 mi N Punta Peñasco; 1.9 and 4.5 mi W El Palote; 15-25 mi S Sonoyta; E tip Bahía San Jorge; 10 mi E and 3, 14, 18, 19 mi NW El Golfo; 5 mi SE and 24.3-30.4 mi N El Doctor; many localities on Mexico Hwy. 2, 2-36 mi E or ESE San Luis; 59 mi ESE San Luis. UNITED STATES, *Arizona, Yuma County*: U.S. Hwy. 80 (I-8), 5-11 mi E Yuma; Arizona Western College campus vicinity; Avenue 3E at County 17 St., SE of Yuma; Somerton Mesa; 1.6 mi N of U.S.-México boundary in San Luis, Arizona; *California, Imperial County*: near Frink; numerous localities from Algodones Dunes along Brawley-Glamis Rd.; Painted Gorge Rd.; Superstition Mt.; extreme N tip Algodones Dunes; numerous localities on East Mesa; Ogilby Rd. near U.S. Hwy. 80; near Ogilby; 10 mi SE Holtville; Coyote Wells; jct. Calif. Hwys. 86 and 78; 35 mi SE Indio; 10 mi W Calexico; *San Diego County*: 6 mi NW Carrizo; 3 mi N Borrego Springs; 3 mi E Borrego Springs; *Riverside County*: 2 mi W and 3.4 mi N Palm Desert.

Reeve (1952) reidentified a specimen from Fort Whipple (= 2 mi E Prescott, Yavapai County), Arizona (Yarrow, 1882) as *P.*

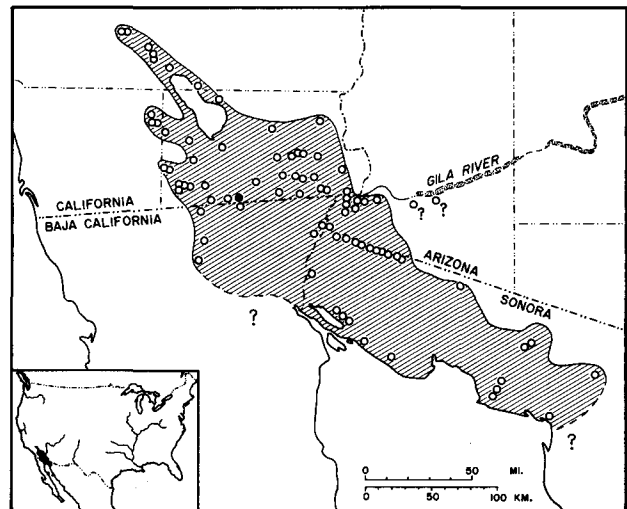
douglasi. Records from Fort Mojave (Mojave County), Arizona and Virginia City, Nevada (Yarrow, 1882) are probably based on *P. platyrhinos*. A specimen from Needles, San Bernardino County, California (Klauber, 1932) is *P. platyrhinos* (Reeve, 1952). A Tucumcari, New Mexico record (Wood, 1936) is erroneous. A record from Mohawk Mt., Yuma County, Arizona (Klauber, 1938) has not been repeated, and is indicated with a question mark on the map. A locality record east of the Gila Mts. near Wellton (25 mi E Yuma), Yuma County, Arizona where the habitat appears unsuitable, is mapped with a question mark.

- FOSSIL RECORD. None.

- PERTINENT LITERATURE. Osteological observations are in Bryant (1911), Camp (1923), Norris and Lowe (1951), and Presch (1969). These authors, and Reeve (1952), figured all or portions of the skull. Etheridge (1960) described the teeth and dentaries, and Robinson and Van Devender (1973) reported maxillary tooth counts. Reeve (1952) listed most of the known localities; others are in Van Denburgh (1922), Cowles and Bogert (1944), Norris (1949), Shaw (1950), Zweifel and Norris (1955), and Mayhew (1965). Ecological observations are in Cowles and Bogert (1944, thermoregulation), Norris (1949, habits, habitat, thermoregulation, reproduction), Heath (1965) and Brattstrom (1965, thermoregulation), and Mayhew (1965, habits and brumation). Norris and Lowe (1964) discussed background color-matching. Mayhew and Wright (1971) discussed the water-impermeable skin. Mayhew (1968) summarized information on the species, and Pianka and Parker (1975) reviewed the literature and added information on food, reproduction, and body temperatures. Other papers concern reproduction (Mayhew, 1964; Howard, 1974; Stebbins, 1954), predation (Funk, 1965), or habits and distribution (Coe, 1875; Van Denburgh, 1912; Van Denburgh and Slevin, 1913, 1921; Grinnell and Camp, 1917; Klauber, 1934, 1939; Smith, 1934; Mosauer, 1935; Cowles, 1941; Smith and Taylor, 1950; Norris 1958, 1967). Klauber (1939) reported nematode parasites in *P. mcallii*, and Ayala (1970) artificially inoculated *P. mcallii* with lizard malaria.

- ETYMOLOGY. The name *mcallii* is a patronym for Col. George A. M'Call, U.S. Army, who collected the type-specimen.

- REMARKS. The spelling of the specific epithet used in this account conforms to articles 27 and 32 of the International Code of Zoological Nomenclature.



MAP. The solid symbol marks the type-locality, open symbols indicate other localities, and doubtful records have question marks.

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