

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Animal Abstract

Element Code: ARADB35050

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Tantilla nigriceps*

COMMON NAME: Plains Black-headed Snake, Plains Blackhead Snake

SYNONYMS: *Scolecophis fumiceps*, *Homalocranian praeoculum*

FAMILY: Serpentes:Colubridae

AUTHOR, PUBLICATION: Kennicott 1860:328

TYPE LOCALITY: Near San Antonio, TX; San Diego, TX

TYPE SPECIMEN: USMN 22386, paratype; USMN 15669, paratype

NOTE: USMN 2046 and 4491, on which the species was originally described, have been lost or destroyed.

TAXONOMIC UNIQUENESS There are sixty-six species in this genus, with 4 species occurring in Arizona. No subspecies are recognized (Holycross and Mitchell 2020, ITIS 2022).

DESCRIPTION: This snake is relatively small with a long slender appearance (Holycross and Mitchell 2020). Total snout-vent length (SVL) in males averages 172 mm (6.77 in) and 212 mm (8.34 in) in females (Holycross and Mitchell 2020). Total tail length (TL) in males averages 220 mm (8.66 in) and 260 mm (10.23 in) in females (Holycross and Mitchell 2020). The longest individual recorded measured 354 mm SVL (13.93 in) and 423 mm TL (16.65 in) (Painter et al 2003). Tail length comprises 18-22% of total body length (Perry and Hauer 1996). *T. nigriceps* ranges in color from a tan or yellow-brown to cream-colored dorsally, and displays a dark-colored to black head cap (Holycross and Mitchell 2020). The head cap stretches 2-6 scales posterior of the parietal furrow and can appear pointed or convexed (Holycross and Mitchell 2020). Ventrally, a wide red, pink, or orange midline runs down the of the abdomen and is bordered by white or cream edges (Holycross and Mitchell 2020). Scales are smooth, and in 15 rows dorsally (Holycross and Mitchell 2020).

AIDS TO IDENTIFICATION: *T. yaquia* and *T. wilcoxi* are distinguishable from *T. nigriceps* by the presence of a light-colored nuchal collar, which *T. nigriceps* lacks (Holycross and Mitchell 2020). Distinguishing *T. hobartsmithi* from *T. nigriceps* is accomplished by measuring how many scales the black cap extends beyond the furrow at the posterior end of the parietals. If the cap extends 3.5 scales or further, it is *T. nigriceps* (Holycross and Mitchell 2020). *S. semiannulata* can be distinguished from *T. nigriceps* by the presence of a loreal scale, stockier appearance, and a lack of red, pink, or orange coloration on the belly, which is

present in *T. nigriceps* (Holycross and Mitchell 2020). *D. punctatus* is distinguished from *T. nigriceps* by presence of a loreal scale, a significant cream-yellow nuchal collar, dark spotting on the belly, and bright orange to red-orange coloration on the ventral scales extending to the edges (Holycross and Mitchell 2020).

NOTE: Differentiating between *T. hobartsmithi* and *T. nigriceps* in the field is challenging and, in some instances, unreliable as noted by Holycross and Mitchell (2020).

ILLUSTRATIONS: Black and white drawing (Stebbins 1966: plate 35)
Color photo (Behler and King 1979: plate 460)
Color photo (Babb, in Holycross and Mitchell 2020, pg. 372)
Color photo (Babb, in Holycross and Mitchell 2020, pg. 377)

TOTAL RANGE: Ranges from “southeastern AZ, eastern and southwestern NM, eastern CO, and southwestern NE east to western and central KS, western OK, western and central TX and south into the Mexican states of Chihuahua, Coahuila, Nuevo León, Tamaulipas, and Durango (Lemos Espinal and Smith 2007 a,b; Ballinger et al, 2010; Valdez-Lares et al. 2013; Wilson and Mata-Silva 2014, 2015).

RANGE WITHIN ARIZONA: East of the Chiricahua mountains in San Simon valley and the eastern edge of the upper San Pedro River Valley between the Dragoon and Little Dragoon mountains, Cochise Co., and in Sulphur Springs valley, Graham Co. (Holycross and Mitchell 2020).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: This species is not encountered frequently, but is fossorial, nocturnal, and secretive (Holycross and Mitchell 2020). Activity levels seems to increase with seasonal rains (Lowe 1964). Predation documented by Western Massasauga (*Sistrurus tergeminus*), Pyramid Ants (*Conomyrma spp.*), and Desert Kingsnake (*Lampropeltis splendida*) (Laduc et al. 1996; Holycross and Mackessy 2002; Sisson in McCormick and Polis 1982). Other carnivores likely prey on this species (Holycross and Mitchell 2020). When threatened, can deliver a defensive bite containing toxins that act as a deterrent (Ernst and Ernst 2003). Has been suggested that this species may aestivate during dry periods (Ernst and Ernst 2003). Captive snakes can thrive if supplied adequate food sources, but will die if allowed to desiccate (Tennant 1998).

REPRODUCTION: Oviparous. Clutch size is 1-3 eggs (Holycross and Mitchell 2020). It is speculated that mating occurs in spring, but the presence of sperm in the *vas deferens* of males from March through September could indicate a wider window (Degenhardt et al. 1996; Goldberg 2016). Offspring usually hatch 2-3 months after being laid (Degenhardt et al. 1996).

FOOD HABITS: Insectivorous. Preys on small invertebrates in leaf litter and other subterranean microhabitats (Holycross and Mitchell 2020). Reports indicate tenebrionid

beetle larvae, snails, centipedes, millipedes, worms, spiders, and insect larvae as common prey found in diet (Tennant 1998). Immobilization of prey is achieved through toxic secretions from the Duvernoy's gland (Rodrigues-Robles 1994).

HABITAT: Holycross and Mitchell describe it as a primarily “valley-bottom grassland species” in Arizona (2020), but has been recorded in a wide range of habitats including Plains Grasslands, rolling sandhills and rocky slopes (Degenhardt et al. 1996). It is described as inhabiting areas where soil is loose and rock crevices readily available (Ernst and Ernst 2003). Occasionally associated with bajadas, foothills, and lower mountains in the Chihuahuan Desertscrub and woodlands (Holycross and Mitchell 2020). Within suitable habitat, frequently found under surface debris, such as rocks, logs, yucca, cattle dung, etc., especially where moisture is retained (Stebbins 1954, Degenhardt et al. 1996, Ernst and Ernst 2003, Lemos Espinal and Smith 2007a, b).

ELEVATION: 670 to 1675 m (2198 -5495 ft) in Arizona. Found at near sea level to 2130 m (6988 ft) throughout its range ((Lemos Espinal and Smith 2007 a,b; Ballinger et al, 2010; Valdez-Lares et al. 2013; Wilson and Mata-Silva 2014, 2015).

PLANT COMMUNITY: In Arizona, primarily found in desert grasslands (Lowe 1964), desert scrublands, and woodlands (Holycross and Mitchell 2020). In Texas, it has occurred in “cedar-ocotillo, persimmon-shin Oak, mesquite-creosote, and cedar savannah” (Stebbins 1954). In Mexico, found in open grasslands near moist areas (Lemos Espinal and Smith 2007a, b). Also found in riparian woodlands of New Mexico and Texas (Chung-MacCoubrey and Bateman 2006; Bateman et al. 2009).

POPULATION TRENDS: Limited data, appears stable, though grassland habitat in southeastern Arizona is decreasing (Holycross and Mitchell 2020).

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None

STATE STATUS: None

OTHER STATUS: None

MANAGEMENT FACTORS: Conversion of grasslands to cropland appears to result in elimination of *T. nigriceps* (Lynch 1985, Ballinger et al. 2010). Grassland habitat in southeastern Arizona is declining in quality and quantity (Humphrey 1958, Bahre 1991, Bahre 1995).

PROTECTIVE MEASURES TAKEN: None

SUGGESTED PROJECTS: Distribution, habitat, population and life history studies.

LAND MANAGEMENT/OWNERSHIP: ASLD- State trust land; BLM- Tucson office; Private; USFS- Coronado National Forest

SOURCES OF FURTHER INFORMATION

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