ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Animal Abstract **Element Code:** ARADB16010
Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Gyalopion canum* (Cope, 1860)
COMMON NAME: Chihuahuan Hook-nosed Snake; Western Hooknose Snake
SYNONYMS: *Ficimia cana* Cope
FAMILY: Colubridae

AUTHOR, PLACE OF PUBLICATION: *Gyalopion canum* Cope, Proc. Acad. Nat. Sci. Philadelphia, Vol. 12, p. 241, p. 243 (footnote). 1860.

TYPE LOCALITY: According to Degenhardt et al. (1996) "The type locality was near Fort Buchanan, Arizona. Webb (1966) placed this locality "near Sonoita Creek above Patagonia, 45 mi. SE Tucson, Santa Cruz County, Arizona.""

TYPE SPECIMEN: Holotype: USNM 5284 (formerly USNM 4675), collected by Dr. B. J. D. Irwin; the sex and date of collection were unspecified (Degenhardt et al. 1996).

TAXONOMIC UNIQUENESS: Colubridae is a medium- to large-sized family containing about a dozen subfamilies and more than 90 species. *Gyalopion* is a very small genus with only 2 members, *G. canum* and *G. quadrangulare* (Thornscrub Hook-nosed Snake) both of which occur in Arizona.

DESCRIPTION: *G. canum* are small, stout snakes with average adult lengths of about 7-11 in (18-28 cm), with a record length of 15 inches (38.4 cm) observed (Degenhardt et al. 1996). They have an upturned rostral scale (snout) that comes to a point in the air, and lies flat or concave and wide on the head. *G. canum* may present a tan, yellow-brown or gray ground color, with a white, pale or slight salmon hued underside. The body contains a minimum of 25(30) dark brown or black horizontal jagged splotches that may become increasingly more pronounced on the head; 8-12 on tail. This brown mask crosses the top of the head and covers the eyes on most specimens (Brennan 2006). They have round pupils and smooth dorsal scales; mid-body scale rows usually total 17. There are seven upper and seven lower labials, and the rostral scute splits the internasals but reaches back only as far as the prefrontal scales. Their anal plate is divided, although Degenhardt et al. (1996) reports that it may be single or divided. (Behler and King 1979; Degenhardt et al. 1996; Stebbins 2003; Brennan 2006; Brennan and Holycross 2006; BISON-M 2007).

AIDS TO IDENTIFICATION: *G. canum* are most easily identified by their upturned and pointed rostral and smooth scales. They are most commonly confused with various species of

Heterodon (hog-nosed snakes), but the *Heterodon*'s keeled scales are an obvious point of distinction (Degenhardt et al. 1996).

ILLUSTRATIONS:

Color Photo (Behler & King, 1979 (1992): Plate 588)
Color Photo (Degenhardt et al. 1996: Plate 85)
Color Illustration (Stebbins 2003: Plate 47)
Color Photo (C.S. Lieb 1990: http://museum.utep.edu/chih/theland/animals/reptiles/gyca.htm)
Color Photos (Randy Babb and Richard Lane, http://www.reptilesofaz.com)
Color Photo (Brennan & Holycross 2006: Page 109)
Color Photo (T. J. Devitt, *in* Herps of Texas – Snakes 2000: http://www.zo.utexas.edu/research/txherps/snakes/gyalopion.canum.html)
Color Photos (Tim Burkhardt 2005, http://www.mexico-herps.com/serpentes/gyalopion/gyalopion-canum)
Color photos (John O. Hollister, *in* http://www.herpo.com/trans-pecos/snakes/gcanum.html)
Color photo (Suzanne L. Collins 2001, *in* CNAH http://www.cnah.org/detail.asp?id=145)

TOTAL RANGE: *G. canum* can be found from western Texas, throughout much of central and southern New Mexico, into the southeast portion of Arizona, south to northeast Sonora, Nayarit, Zacatecas, San Luis Potosí, and Michoacán, Mexico.

RANGE WITHIN ARIZONA: *G. canum* have been recorded in the extreme southeastern part of the state including Pima, Graham, Greenlee, Cochise, and Santa Cruz counties. Most records are for Cochise and Santa Cruz counties.

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Typically nocturnal or crepuscular, *G. canum* prefers to spend the majority of its time underground in burrows or within rocks at the base of canyons or in grassy foothills. Their blunt rostrum suggests that they are skilled burrowers and the semi-fossorial character of these snakes makes sighting difficult. Surface rock and loose soils for burrowing are used for cover. Most surface encounters occur after rain or during mild or cloudy days. Although not well studied, *G. canum*'s active periods probably occur from April into the mid-fall when they undergo hibernation during winter. The somewhat unique anti-predator behavior these snakes display may include cloacal popping and closed mouth striking, though they have not been known to actually bite. They are also likely to whip their tails around when touched and smear musk on a pursuer. (Brennan 2006; Degenhardt et al. 1996; NatureServe 2006).

REPRODUCTION: The reproductive biology of *Gyalopion* is not well known, but *G. canum* have been observed to lay between 1-4 eggs during June or July (Brennan & Holycross 2006; Degenhardt et al. 1996); although it is likely that not all females produce eggs each year (Goldberg 2002, in NatureServe 2006). Lays eggs in underground burrows or dens.

FOOD HABITS: The preferred diet of *G. canum* is spiders, scorpions, centipedes and other arthropods; however, they may also feed on small snakes and lizards, and reptile eggs. (Degenhardt et al. 1996; Brennan & Holycross 2006).

HABITAT: In Arizona, *G. canum* is most frequently encountered on gentle sloping bajadas or in low foothills with rocky or gravelly soil grown with creosotebush or grasses. It is occasionally encountered in the lower reaches of mountainous terrain along ridges and in canyons. (Brennan 2006). For their total range, they prefer a rocky or loose gravelly soil to facilitate burrowing. They may also be found under rocks or in outcroppings of gypsum or limestone. (NatureServe 2006; Herps of Texas—Snakes 1999).

ELEVATION: In Arizona, *Gyalopion canum* can be found from 3,690 to 5,400 feet (1125-1646 m), based on unpublished records from the HDMS (AGFD, accessed 2007). Commonly found between 1,000 - 6,000 feet (305-2100 m) throughout its range (Brenner 2006; Stebbins 2003).

PLANT COMMUNITY: *G. canum* largely occur in low grassy foothills, Chihuahuan desertscrub flatland, and semiarid desert grassland communities of mesquite, creosotebush, and agave. They may also be found in lower mountainous terrain in canyons and along ridges. In higher elevations, *G. canum* have been observed to inhabit Madrean Evergreen Woodland areas of persimmon-shin oak, juniper savanna, or pinyon-juniper woodlands. (Brennan 2006; Brennan & Holycross 2006; Degenhardt etal. 1996; Natureserve 2006; Stebbins 2003).

POPULATION TRENDS: Unknown in Arizona. *G. canum* is common and regularly occurring within its total range. NatureServe (2006) reports the Global Short Term and Long Term Trends as Stable, and indicate the Global Abundance at 100,00-1,000,000 individuals. They go on to report that the "Total adult population size is unknown but certainly exceeds 10,000 and probably exceeds 100,000 (conservatively assuming a density of 2 adults per square kilometer in an area of occupancy of at least 68,000 square kilometers). This snake is fairly common in Texas (Tennant 1998)."

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None.
STATE STATUS: None.
OTHER STATUS: None.

MANAGEMENT FACTORS: For is range, no major threats have been identified (NatureServe 2006).

PROTECTIVE MEASURES TAKEN: None

SUGGESTED PROJECTS: Little is known about the life history and reproduction biology of *G. canum*.

LAND MANAGEMENT/OWNERSHIP: BLM – Safford and Tucson Field Office; NPS – Coronado National Memorial; USFS – Coronado National Forest; State Land Department; Private.

SOURCES OF FURTHER INFORMATION

REFERENCES:

Behler, J.L., and F.W. King. 1979. The Audubon Society Field Guide to North American Reptiles and Amphibians. A Chanticleer Press Edition. Alfred A. Knopf. New York. P. 612.

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Degenhardt, W.G., C.W. Painter, A.H. Price. 1996. Amphibians & Reptiles of New Mexico. University of New Mexico Press. Albuquerque, New Mexico. Pp. 351-353.

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NatureServe. 2006. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: January 17, 2007).

Stebbins, R.C. 2003. A Field guide to Western Reptiles and Amphibians. Third edition. Houghton Mifflin Company. Boston, Massachusetts. Pp. 414-416.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

Origin of scientific name (Beltz 2006):

Gyalopion: Greek – small hollow – poss. Ref. up-turned rostral with distinct concave dorsal surface.

canum: Latin – grey or whitish grey – poss. Ref. color when preserved.

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