

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

Animal Abstract

Element Code: ARADA01030

Data Sensitivity: Yes

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Lichanura roseofusca*

COMMON NAME: Rosy Boa

SYNONYMS: *Lichanura orcutti*, *Lichanura roseofusca gracia*, *Lichanura trivirgata roseofusca*, *Charina trivirgata roseofusca*

FAMILY: Charinidae

AUTHOR, PUBLICATION: Cope, E.D. 1868. "Observations on some vertebrata presented by Wm. M. Gabb, of San Francisco, which were procured by him in western Nevada and the northern part of Lower California." Proceedings of the Academy of Natural Sciences of Philadelphia 20:2.

TYPE LOCALITY: "The southern region of Lower California

TYPE SPECIMEN: ANSP 6699, collected by William M. Gabb, date unknown.

TAXONOMIC UNIQUENESS: Two species occur in the genus, both occurring in Arizona. Taxonomy of the genus has been contested, with the genus being considered monotypic by some authorities and comprised of two to three species by others (Holycross and Mitchell 2020). Recently, Wood et al. (2008a) recommended recognition of two species in *Lichanura* based upon phylogenetic analysis of mitochondrial DNA sequence data and preliminary morphological character concordance. This taxonomic arrangement has been supported by the Integrated Taxonomic Information System (ITIS 2021) and Holycross and Mitchell (2020).

Wood et al. (2008a) suggested using *Lichanura orcutti* for this taxon, because the mtDNA lineage of *L. trivirgata* encompassed the same geographic region where the type specimen of *L. roseofusca*, giving *L. orcutti* taxonomic priority. This taxonomy is recognized by ITIS (2021), though Holycross and Mitchell (2020) state that *L. roseofusca* should be given priority, as the multilocus genetic perspective provides new insights into lineage distributions and alleviates this problem.

DESCRIPTION: Short, stout snake, with a stubby tail and head not much wider than neck. Known maximum length of 44.1 inches (112 cm) (Wright and Wright 1957). Small spurs are found lateral to the cloaca in males and are sometimes present, though reduced, in females (Holycross and Mitchell 2020). The eyes are small and the pupils vertical. The cloacal scute is undivided (Holycross and Mitchell 2020).

In Arizona populations one middorsal and two lateral stripes run the length of the body from the head to the tip of the tail. These stripes are brownish-orange to reddish-brown and 3-7

scale rows wide, with even or uneven margins. The ground coloration is pearlescent off-white to light bluish gray. The middorsal stripe typically continues onto the head anterior of the eyes, and the lateral stripes usually terminate at the posterior margin of the eye, though there is often dark flecking on the lateral aspects of the head (Holycross and Mitchell 2020). Ground coloration continues onto the venter, which is mottled on ventral scale rows and scutes with small and irregular blotches that approximate the color of the dorsal stripes. Neonatal pattern is as in the adult, though colors may be slightly subdued (Holycross and Mitchell 2020).

AIDS TO IDENTIFICATION: This heavy-bodied snake is distinct from other snakes in Arizona, except the closely related *L. trivirgata*. In Arizona, the coloration of dorsal stripes readily distinguishes *L. trivirgata* from *L. roseofusca*. Although the dorsal stripes of Arizona *L. roseofusca* can be dark reddish-brown, they are not nearly as dark as the lightest dorsal stripes in Arizona *L. trivirgata*. Additionally, the species appear to be allopatric in Arizona, with *L. trivirgata* occurring south of the Gila River, whereas (with the exception of populations in the Gila and Tinajas Altas mountains), *L. roseofusca* is found north of the Gila River (Holycross and Mitchell 2020).

ILLUSTRATIONS:

Color drawing (Stebbins 1966: plate 30)

Color photo (Behler and King 1979: plate 508 and 525)

Color photos (Holycross and Mitchell 2020: pages 80-80-85)

TOTAL RANGE: Occurs from the coastal regions of northern Baja California and across southern California east into western Arizona and the southern tip of Nevada in the Newberry Mountains (Holycross and Mitchell 2020).

RANGE WITHIN ARIZONA: Vouchered from sites in the Aquarius, Castle Dome, Cerbat, Chemeheuvi, Dome Rock, Gila, Harcuvar, Harquahala, Hualapai, Kofa, Laguna, Little Harquahala, McCloud, Mohave, Muggins, Music, New Water, Poachie, Plomosa, Tinajas Altas, and Vulture Mountains, and the rocky hills and mountains near the headwaters of the Santa Maria River in La Paz, Maricopa, Mohave, Yavapai, and Yuma Counties (Jones et al. 1981, Hahn and May 1972, Holycross and Mitchell 2020). There are sight records and reports from the Bismark, Buckskin, Copper, and Eagletail mountains but no vouchers exist from these localities (Holycross and Mitchell 2020).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: Primarily a nocturnal, non-venomous rock dweller that spends most of its time deep in rock crevices or underground. Docile and unhurried snake, making it a favorite in the pet industry (Wright 1921, Holycross and Mitchell 2020). Most often encountered during the mating season in early spring. Most are found after dark, though surface activity in morning or late afternoon is not uncommon in early spring. These snakes are infrequently encountered during the dry period of early summer, with surface activity and movements increasing during

the summer rainy season. They remain active as late as September (Merker and Merker 1995, Holycross and Mitchell 2020). They have been found on the surface in winter (Merker and Merker 1995). In two radio telemetry studies from Arizona and California, Boas were most frequently found underground, with rodent burrows being used extensively. Individuals generally showed high site fidelity and no signs of territoriality (Diffendorfer et al. 2005)

When encountering predators, *L. roseofusca* usually remain motionless, or may occasionally attempt to crawl away. If grasped or molested, the snake will sometimes void the cloaca or form a ball with the head hidden among its coils (Grinnell and Grinnell 1907, Wright and Wright 1957). Wood et al (2008b) published two accounts of predation on this species by unidentified raptors.

Little is known about longevity in the wild, but two snakes collected in 1965 during the construction of I-8 in Jacumba, California were still alive as of 2019, making them 56 and 53 years old (Holycross and Mitchell 2020).

REPRODUCTION: Viviparous Snake. Little is known of reproduction by this species in the wild. A breeding season of March-May has been reported, with young being born August-November (Grismer 2002, Stebbins 2003). Litter sizes of three to fourteen have been reported (Stebbins 2003). Gestation periods have been reported as both 120 (Spiteri 1993) and 131 days (Kurfess 1967).

Courtship consists of males moving spurs rapidly, stroking the posterior portion of the female. In response, the female may lift her tail, allowing intromission. Copulation likely lasts approximately half an hour (Kurfess 1967, Merker and Merker 1995).

FOOD HABITS: Based upon anecdotal records for this species, wild snakes appear to feed primarily on small mammals, perhaps frequently raiding nests (Rodriguez-Robels et al. 1999). *L. roseofusca* has been observed simultaneously constricting multiple prey items, a behavior with adaptive benefits for a nest raider (Medina 1959). Most observations suggest Rosy Boas forage widely for their prey, though several observations and relatively short axial muscle units suggest they might also be ambush predators (Klauber 1931, Ruben 1977). Observations of these boas in desert trees and bushes suggest they may perhaps feed upon birds or bird eggs (Shaw and Campbell 1974, Holycross and Mitchell 2020). Captives accept small mammals and birds as prey (Medina 1959, Kurfess 1967)

HABITAT: Ranges from near sea level in coastal sage scrub and creosote flats up into chaparral and oak woodlands. Abundances appear to be highest on the slopes of boulder and rock-strewn hills and mountains in Lower Colorado River Valley and Arizona Upland subdivisions of the Sonoran Desert, as well as in chaparral. Rosy Boas are occasionally found in pinyon-juniper woodlands and a few snakes have been found along desert washes among creosote flats far from rocky habitats (Lowe 1964). In winter, relatively steep (20-40°) south-facing rocky slopes are selected for. In spring the snakes move downslope and occupy washes and adjoining slopes during summer and fall (Holycross and Mitchell 2020).

ELEVATION: From sea level to about 5,000 feet (1,525 meters). Based on records in the Heritage Data Management System (AGFD unpublished data accessed 2003), elevation ranges from 700 – 5,640 ft (213-1719 m).

PLANT COMMUNITY: Desert scrub, cottonwood-willow or pine-oak riparian communities. Associated species include: brittle bush (*Encelia*), creosote (*Larrea tridentata*), false mesquite (*Calliandra eriophylla*), ironwood, saguaro (*Cereus giganteus*), *Ephedra fasciculata*, white bursage (*Ambrosia dumosa*), ocotillo (*Fouquieria splendens*), big galleta (*Hilaria rigida*), gray ratany (*Krameria grayi*), Cholla (*Opuntia* sp.), yellow paloverde (*Cercidium microphyllum*), goldenrod (*Salidago* sp.), desert globemallow (*Sphaeralcea ambigua*), rose (*Rosa* sp.), grape (*Vitis* sp.).

POPULATION TRENDS: Unknown

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None (USDI, FWS 1996)
[C2 - Full Species USDI, FWS 1994]

STATE STATUS: None

OTHER STATUS: Not Bureau of Land Management Sensitive (USDI, BLM AZ 2010, 2017)
[Bureau of Land Management Sensitive under full species (USDI, BLM AZ 2000, 2005, 2008)]

MANAGEMENT FACTORS: Road mortality and collecting by hobbyists may reduce or threaten viability of populations which are small, isolated, and readily accessible (Rosen and Lowe 1994). Fortunately, much of this species habitat is in remote terrain that is difficult to access, and the secretive nature of the species allows some protection from collection as well (Holycross and Mitchell 2020).

PROTECTIVE MEASURES TAKEN: No commercial collecting is allowed.

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

LAND MANAGEMENT/OWNERSHIP: BLM – Havasu, Kingman, Phoenix and Yuma Field Offices; DOD – Barry M. Goldwater Air Force Range; FWS – Cabeza Prieta and Kofa National Wildlife Refuges; Private.

SOURCES OF FURTHER INFORMATION

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ADDITIONAL INFORMATION:

Etymology: *Lichanura* refers to the stubby tail (*lichanos*, forefinger; *oura*, tail). *Roseofusca* references the color pattern (*roseus*, rose-colored, rosy; *fuscus*, dark, dusky).

Revised: 1991-03-27()
1998-01-29 (SMS)
2003-03-28 (SMS)
2022-01-07 (KSL)

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Arizona Game and Fish Department. 20XX (= **year of last revision as indicated at end of abstract**). X...X (= **taxon of animal or plant**). Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. X pp.