

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

Animal Abstract

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CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Callisaurus draconoides ventralis* (Hallowell, 1852)

COMMON NAME: Arizona Zebra-tailed Lizard, Eastern Zebra-tailed Lizard, Arizona Gridiron-tailed Lizard

SYNONYMS: *Homalosaurus ventralis* Hallowell, 1852

FAMILY: Phrynosomatidae

AUTHOR, PLACE OF PUBLICATION: *Callisaurus draconoides ventralis* (Hallowell, 1852) – Proc. Acad. Nat. Sci. Philadelphia, Vol. 6, p. 179. *Homalosaurus ventralis* Hallowell (1852).

TYPE LOCALITY: “Collected from “New Mexico” by Dr. S. W. Woodhouse during the exploration of the Zuni and Colorado Rivers, sometime during 1851. The type locality was erroneously restricted by Smith and Taylor (1950b) to Tucson, [Pima County], Arizona....Sitgreaves’ (1853) expedition, during which the holotype of *C. d. ventralis* was collected, traveled nowhere near Tucson, Arizona, the restricted type locality given by Smith and Taylor (1950b).” (Degenhardt et al., 1996).

TYPE SPECIMEN: HT: USNM 2670, adult male, based on original description. Dr. S. W. Woodhouse, 1851. (Degenhardt et al., 1996).

TAXONOMIC UNIQUENESS: Phrynosomatidae is a medium to large family with nearly 125 species. There are ten recognized subspecies of *C. draconoides* (Degenhardt et al., 1996), two of which are found in Arizona, including *C. d. rhodostictus* (Mojave Zebra-tailed Lizard, western AZ) and *C. d. ventralis* (south central and southeastern AZ).

DESCRIPTION: At the species level, *C. draconoides* are an average to medium-sized lizard with a flattened tail, long, slender limbs and a lean body built for speed. Snout-vent lengths average between 2.5-4.0 in (6.4-10.2 cm). The body is yellow-tan with two dark side bars extending up from the belly. The upper surfaces of the body are marked with numerous cream spots or flecks; a series of small gray-brown spots runs down the middle of the back, becoming bands on the tail. The back of each thigh is marked with a dark distinct horizontal line. Dark tail bands become black ventrally, where they starkly contrast the white background. The side bars on males extend onto the belly where they are surrounded by blue patches. Bars are faint or absent on females, and the belly lacks blue patches. During the breeding season, males may also form a bright red patch on the underside of their neck. External ear openings and the forward position of side bars distinguish it from the similar Greater Earless Lizard (*Cophosaurus texanus*). The scales of this lizard are granular; the dorsal scales are small and the ventral scales are larger,

with all grading into each other laterally; the throat has 2 folds. (Behler & King, 1979[1992]; Brennan, 2006; Brennan & Holycross, 2006; Degenhardt et al., 1996; eNature.com, 2005).

AIDS TO IDENTIFICATION: Similar to Greater earless lizard (*C. texanus*) and Common Lesser earless lizard (*Holbrookia maculata*), however both lack ear openings and the latter species lacks black bars on the underside of the tail. In the Side-blotched lizard (*Uta stansburiana*), the upper labials do not overlap, and it has only one dark blue or black mark on the side of the body just behind the front legs. (Degenhardt et al., 1996).

ILLUSTRATIONS:

Color photo (Degenhardt et al., 1996: Plate 39)

Color photo of species (Brennan and Holycross, 2006: Page 63)

Color photo of species (Gerald & Buff Corsi, 2005: <http://www.enature.com/fieldguides>)

Color illustration of species (Stebbins, 2003: Plate 28)

Color photo of species (Behler and King, 1979(1992 reprint): Plate 362)

Color photo (Erik F. Enderson, in Tucson Herpetological Society at

<http://www.arts.arizona.edu/herp/CADR.html>)

Color photos (Tom Brennan, in AZ PARC at <http://www.reptilesfaz.com/Lizards-Subpages/>)

Color photo (Suzanne L. Collins, 2001, in CNAH <http://www.cnah.org/detail.asp?id=435>)

Color photos (<http://www.wildherps.com/species/C.draconoides.html>)

Color photo (Herpscope, <http://www.herpscope.com/cgi/herpguide.cgi>)

TOTAL RANGE: *C. d. ventralis* can be found in west central New Mexico (western Peloncillo Mountains, Hidalgo County), south central and southeastern Arizona, into northern Mexico.

RANGE WITHIN ARIZONA: Southeast-central and southeastern portion of state including Cochise, Gila, Graham, Maricopa, Pinal, Pima, and Santa Cruz counties. (Brennan & Holycross, 2006; UAMNH, 2006).

SPECIES BIOLOGY AND POPULATION TRENDS

BIOLOGY: *C. draconoides* is a terrestrial lizard that is almost exclusively diurnal, but sometimes is encountered asleep on the surface on warm nights. The species is inactive in cold temperatures during the fall and winter. It is known to effortlessly bury itself in loose sediment (Stebbins, 2003). It prefers small grain substrate such as sand or gravel and although most of its time is spent stationary, it does have the ability to move very quickly and is often seen in nature running bipedally (Irschick, 2002). This species is considered the fastest of the lizards in the desert. In response to a threat (e.g. predators) they are known to bend and wag their tail slowly over their back before scuttling off, exposing the “zebra” markings under the tail. Innate territorial displays exhibited by both males and females include leg flexion (push-ups), head bobs, and lateral compression of the body (Degenhardt et al., 1996; Brennan, 2006). Lizards of the Phrynosomatid

group have small home range sizes, usually less than 0.5 ha (often much less) and rarely more than 1 ha (NatureServe, 2006).

REPRODUCTION: Mating occurs in the spring typically around April or May, with clutches laid during the summer months from (May) June to August. One or more clutches of 1-15 eggs may be laid with the average being 4-5 eggs. Clutch size, which averages about 4 in Arizona for the species (NatureServe, 2006), may be significantly correlated with body size. (Behler and King 1979; Degenhardt et al. 1996; Brennan and Holycross, 2006). Eggs are laid probably underground or under rocks. The incubation period for the species is 30-32 days, and as is the case for many reptile species, the eggs gain water during incubation and die if the soil/nest in which they are laid is too dry. (Degenhardt et al., 1996). Hatchlings appear from July through November. Individuals sexually mature as yearlings (Smith et al., 1987, in NatureServe, 2006). During breeding, males often develop a splash of bright red on the underside of their neck, while females develop breeding colors of their own, a rarity in reptiles (www.wildherps.com, 2006).

FOOD HABITS: *C. draconoides* are opportunistic feeders consuming such prey items as grasshoppers, bees, wasps, and caterpillars, as well as spiders, smaller lizards, and occasionally flowers. They sit and wait for prey items to wander within close proximity. (Behler and King, 1979; Degenhardt et al., 1996; Brennan 2006; Brennan and Holycross, 2006).

HABITAT: *C. draconoides* is a ground dweller that is usually found in areas which lack vegetation and maintains a small grain substrate such as open, sandy washes, loose gravel and sometimes rocky regions.

ELEVATION: Based on UAZ collection records, elevation in Arizona ranges from about 1,200 – 4,000 ft (366 – 1220 m), (UAMNH, 2006).

PLANT COMMUNITY: Flatlands within Sonoran and Chihuahuan Desertscrub. It is associated with open ground within *Prosopis-Acacia* or *Larrea tridentata* vegetation communities. In New Mexico, dominant plant species include: *Flourensia cernua* (American tarwort), *Gutierrezia sarothrae* (broom snakeweed), *Larrea tridentata* (creosote bush), *Prosopis glandulosa* (honey mesquite), and *Zinnia acerosa* (desert zinnia). (Degenhardt et al., 1996).

POPULATION TRENDS: The species *C. draconoides* is regularly occurring in Arizona and present year-round. According to NatureServe (2006), the total adult population size for the species is unknown but probably exceeds 100,000. “This species is represented by a large number of viable occurrences that are well distributed throughout the range...Global Short Term Trend: Stable. Global Long Term Trend: Relatively Stable.”

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None

STATE STATUS: None

OTHER STATUS: None

MANAGEMENT FACTORS:

PROTECTIVE MEASURES TAKEN: None

SUGGESTED PROJECTS: None

LAND MANAGEMENT/OWNERSHIP: BIA – Tohono O’Odham Nation; FWS Cabeza Prieta and Buenos Aires National Wildlife Refuges; NPS – Organ Pipe Cactus National Monument and Saguaro National Park; Tucson Mountain Park; State Land Department; Private. May possibly occur on BLM and USFS Lands.

SOURCES OF FURTHER INFORMATION

REFERENCES:

- Behler, J.L. and F.W. King. 1979 (1992). The Audubon Society Field Guide to North American Reptiles and Amphibians. A Chanticleer Press Edition. Alfred A. Knopf. New York. Pp. 502.
- Beltz, E. 2006. Scientific and Common Names of the Reptiles and Amphibians of North America – Explained. <http://ebeltz.net/herps/etymain.html#Lizards>. Accessed: 3/29/2007.
- Brennan, T.C. 2006. Reptiles of Arizona: Zebra-tailed Lizard – *Callisaurus draconoides*. <http://www.reptilesfaz.com/Lizards-Subpages/h-c-draconoides.html>. Accessed 3/28/2007.
- Brennan, T.C., and A.T. Holycross. 2006. A Field Guide to Amphibians and Reptiles in Arizona. Arizona Game and Fish Department Publication. Phoenix, Arizona. Pp. 62-63.
- Crother, B.I. et al., J.J. Moriarty ed. 2001. Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding. *SSAR Herpetological Circular* No. 29. Pp. iv + 1-82.
- Degenhardt, W.G., C.W. Painter, and A.H. Price. 1996. Amphibians & Reptiles of New Mexico. University of New Mexico Press. Albuquerque, New Mexico. Pp. 138-141.
- eNature.com. 2005. Zebra-tailed Lizard, *Callisaurus draconoides*. Accessed: 17 January 2007. <http://www.enature.com/fieldguide/>.
- Herpscope. The Arizona Zebra-tailed Lizard, *Callisaurus draconoides ventralis*. Accessed: 3/28/2007 from <http://www.herpscope.com/cgi/herpguide.cgi>.
- Irschick, D.J. 2002. Evolutionary Approaches for Studying Functional Morphology: Examples from Studies of Performance Capacity. *Integ. and Comp. Biol.*, 42:278-290.
- Integrated Taxonomic Information System (ITIS). Retrieved 3/28/2007 from ITIS, <http://www.itis.usda.gov>.
- NatureServe. 2006. NatureServe Explorer: An online encyclopedia of life [web application]. Version 6.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: March 28, 2007).

Stebbins, R.C. 2003. A Field Guide to Western Reptiles and Amphibians. Third edition. Houghton Mifflin Company. Boston, Massachusetts. Pp. 279-280.
The University of Arizona Museum of Natural History. 2006. Collections. Accessed: 27 March 2007. <http://eebweb.arizona.edu/collections/collections.htm>.
www.wildherps.com. (2006) *Callisaurus draconoides*: Zebra-tailed Lizard [online], available: <http://www.wildherps.com/species/C.draconoides.html> [accessed 16 January 2007].

MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

Meaning of the Scientific Name:

Callisaurus: Greek *kalos* beautiful and *saurus* lizard.

draconoides: Greek *draco* dragon and *-oides* similarity to a – the species of true dragons.

ventralis: Latin *ventralis* – of the belly.

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