U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
BLUNT-NOSED LEOPARD LIZARD
Gambelia sila

Blunt-Nosed Leopard Lizard
Adam Zerrenner, USFWS

CLASSIFICATION: Endangered
Federal Register 32:4001; March 11, 1967
http://ecos.fws.gov/docs/federal_register/fr18.pdf (PDF)
The blunt-nosed leopard lizard was listed as *Crotaphytus wislizenii silus*. In 1975, it was moved to the genus *Gambelia* as a full species, *Gambelia silus*. More recently, the *specific* name was changed to *sila* to match the gender of the genera name.

STATE LISTING STATUS: The blunt-nosed leopard lizard was listed as endangered by the State of California in 1971.

CRITICAL HABITAT: None designated

RECOVERY PLAN: Final
Recovery plan for the upland species of the San Joaquin Valley, California
http://ecos.fws.gov/docs/recovery_plan/980930a.pdf (PDF)

5-year review: Completed February 2010. No change was recommended.
http://www.fws.gov/ecos/ajax/docs/five_year_review/doc3209.pdf (1 MB)
September 30. 1998

DESCRIPTION:

The blunt-nosed leopard lizard (Gambelia silus) is a relatively large lizard the Iguanidae family. It has a long, regenerative tail, long, powerful hind limbs, and a short, blunt snout. Adult males are slightly larger than females, ranging in size from 3.4 to 4.7 inches in length, excluding tail. Females are 3.4 to 4.4 inches long. Males weigh 1.3 to 1.5 ounces, females 0.8 to 1.2.

Blunt-nosed leopard lizards feed primarily on insects (particularly grasshoppers, crickets and moths), other lizards and occasionally plant material.

Although blunt-nosed leopard lizards are darker than other leopard lizards, they exhibit tremendous variation in color and pattern on their backs. Their background color ranges from yellowish or light gray-brown to dark brown, depending on the surrounding soil color and vegetation. Their undersides are uniformly white. They have rows of dark spots across their backs, alternating with white, cream-colored or yellow bands. See the Recovery Plan for more details about identification.

Males are highly combative in establishing and maintaining territories. Male and female home ranges often overlap. The mean home range size varies from 0.25 to 2.7 acres for females and 0.52 to 4.2 acres for males. Density estimates range from 0.1 to 4.2 lizards per acre. Population densities in marginal habitat generally do not exceed 0.2 blunt-nosed leopard lizards per acre. There are no current overall population size estimates for the species.

Breeding activity begins within a month of emergence from dormancy and lasts from the end of April to the end of June. Male territories may overlap those of several females, and a given male may mate with several females. Two to six eggs are laid in June and July, and their numbers are correlated with the size of the female. Under adverse conditions, egg-laying may be delayed one or two months, or reproduction may not occur at all.

Females typically produce only one clutch of eggs per year. But some may produce three or more under favorable environmental conditions. After about two months of incubation, young hatch from late July through early August, rarely to September.

Seasonal above ground activity is correlated with weather conditions, primarily temperature. Lizards are most active on the surface when air temperatures are between 74° and 104° F, with surface soil temperatures between 72° and 97°. Smaller lizards and young have a wider activity range than the adults.

Leopard lizards use small rodent burrows for shelter from predators and temperature extremes. Burrows are usually abandoned ground squirrel tunnels, or occupied or abandoned kangaroo rat tunnels. Each lizard uses several burrows without preference, but will avoid those occupied by predators or other leopard lizards. In areas of low mammal burrow density, lizards will construct shallow, simple tunnels in earth berms or under rocks.

Potential predators are numerous. They include snakes, predatory birds and most carnivorous valley mammals. Blunt-nosed leopard lizards themselves feed primarily on insects (mostly grasshoppers, crickets and moths) and other lizards.

DISTRIBUTION:

This species is found only in the San Joaquin Valley and adjacent foothills, as well as the Carrizo Plain and Cuyama Valley. It inhabits open, sparsely vegetated areas of low relief on the valley floor and the surrounding foothills. It also inhabits alkali playa and valley saltbush scrub. In general, it is absent from areas of steep slope, dense vegetation, or areas subject to seasonal flooding.

Although the boundaries of its original distribution are uncertain, the species probably ranged from Stanislaus County in the north to the Tehachapi Mountains of Kern County in the south, and from the Coast Range mountains, Carrizo Plain and Cuyama Valley in the west to the foothills of the Sierra Nevada in the east.

The currently occupied range consists of scattered parcels of undeveloped land on the Valley floor, most commonly annual grassland and valley sink scrub. See 5-year review (above) for details.

THREATS:

Habitat disturbance, destruction and fragmentation continue as the greatest threats to blunt-nosed leopard lizard populations. Stebbins first recognized, in 1954, that agricultural conversion of its habitat was causing the extirpation of the blunt-nosed leopard lizard.

Livestock grazing can result in removal of herbaceous vegetation and shrub cover and destruction of rodent burrows used by lizards for shelter. However, light or moderate grazing may be beneficial, unlike cultivation of row crops, which precludes use by leopard lizards.

Direct mortality occurs when animals are killed in their burrows during construction, killed by vehicle traffic, drowned in oil, or fall into excavated areas from which they are unable to escape. Displaced lizards may be unable to survive in adjacent habitat if it is already occupied or unsuitable for colonization.

The use of pesticides may directly and indirectly affect blunt-nosed leopard lizards. The insecticide Malathion has been used since 1969 to control the beet leafhopper, and its use may reduce insect prey populations. Fumigants, such as methyl bromide, are used to control ground squirrels. Because leopard lizards often inhabit ground squirrel burrows, they may be inadvertently poisoned. Visit the California Dept. of Pesticide Regulation Endangered Species Project web page for more information.

Cultivation, petroleum and mineral extraction, pesticide applications, off-road vehicle use, and construction of transportation, communication, and irrigation infrastructures collectively have caused the reduction, fragmentation of populations and decline of blunt-nosed leopard lizards.

REFERENCES FOR ADDITIONAL INFORMATION:

Montanucci, R.R. 1970. Analysis of hybridization between *Crotaphytus wislizenii* and *Crotaphytus silus* (Sauria: Iguanidae) in California. Copeia 1970:104-123.

Montanucci, R.R., R.W. Axtell, and H.C. Dessauer. 1975. Evolutionary divergence among collared lizards (*Crotphytus*), with comments on the status of *Gambelia*. Herpetologica 31:336-347.

Stebbins, R.C. 1954. Amphibians and reptiles of western North America. McGraw-Hill Book Co., Inc., NY.

Thelander, C. ed. 1994. Life on the edge: a guide to California's endangered natural resources. BioSystem Books. Santa Cruz, CA. p 272-273.

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