

# REPTILES

## SPECIES ACCOUNTS

### **Desert tortoise** (*Gopherus agassizii*)

CA - T (1989)

FED - T (1990)

General Habitat: Mojavean Desert Scrub  
Sonoran Desert Scrub



**Desert tortoise**

The desert tortoise is a medium-sized tortoise with an adult carapace length of about eight to 14 inches. Males, on average, are larger than females and are distinguished by having a concave plastron, longer gular horns, larger chin glands on each side of the lower jaw, and a longer tail. Carapace color varies from light yellow-brown (horn color) to dark grey-brown. A composite of characteristics often is necessary to distinguish the desert tortoise from the other species of gopher tortoises, but its most unique feature is its very large hind feet.

The desert tortoise ranges from southern Nevada and extreme southwestern Utah south through southeastern California and southwestern Arizona into northern Mexico. In California, desert tortoises occur in northeastern Los Angeles, eastern Kern, and southeastern Inyo counties, and over most of San Bernardino, Riverside, and Imperial counties. The desert tortoise inhabits river washes, rocky hillsides, and flat desert having sandy or gravelly soil. Creosote bush, burrobush, saltbush, Joshua tree, Mojave yucca and cacti are often present in the habitat along with other shrubs, grasses, and wildflowers.

The desert tortoise's range in California has been reduced 50 to 60 percent since the 1920s and is now highly fragmented. Much of the tortoise's habitat was degraded by a combination of human-related activities including livestock grazing, energy and mineral development, and OHV use. In addition, illegal shooting and collecting directly reduced the tortoise population. The desert tortoise continues to suffer from severe population losses due to disease and predation on juvenile tortoises by ravens. A disease called upper respiratory tract disease has appeared in many parts of the desert tortoise's range; the most severe outbreaks have occurred in California's west Mojave Desert, where long-term study plots have found population declines reaching 70 percent. The DFG, USFWS, BRD, and BLM are coordinating research on this disease. Veterinarians from the DFG, UCD, the University of Florida, and private practitioners are involved in the effort. Other tortoise diseases have shown up in several parts of the Southern California deserts. The disease outbreaks are probably due, in part, to population stresses related to droughts.

Studies indicate that raven predation has caused at least localized serious reductions in the number of young tortoises surviving to adulthood. USFWS bird surveys found a 1,500 percent increase in ravens in the Mojave Desert between 1968 and 1988. Another threat to desert tortoise populations includes the proposed 250 square mile expansion of Fort Irwin. 182 square miles of this proposed expansion are designated by the USFWS as desert tortoise critical habitat.

The DFG acquired over 22,000 acres of desert tortoise habitat in 1986. Some of these lands were acquired with California Endangered Species Tax Check-Off funds, which were also used to investigate the disease and raven problems. Also, DPR has provided OHV Green Sticker funds to the DFG to solve the raven problem and provide public education.

A federal Recovery Plan was completed in 1994, and USFWS has designated about six million acres as critical habitat, most of which is in California. The Recovery Plan will be implemented in California by a series of large-scale ecosystem management plans. The DFG is participating in multi-agency teams that are drafting these plans.

**The status in 1999 of the desert tortoise: *Declining.***

Threatened and Endangered Species



**Barefoot banded gecko**

**Barefoot banded gecko**  
(*Coleonyx switaki*)

CA - T (1980)  
FED - None

General Habitat: Rocky Foothills in Sonoran Desert Scrub

The barefoot banded gecko is a medium-sized lizard, 2 to 3 inches long, with soft skin and fine, granular scales. Its large eyes have vertical pupils, and the grey-brown body has various black and white spots and bands that give it a striking appearance. This species is known only from five localities in eastern San Diego County and western Imperial County. Limited distribution records indicate that the gecko inhabits rocky, boulder-strewn desert foothills, where it spends most of its life deep in rock crevices and subterranean chambers.

The rarity of this species makes it desirable for illegal collection by reptile hobbyists and commercial collectors. Anza-Borrego Desert State Park affords protection for some gecko habitat, and the DFG is involved with a federal habitat management plan for BLM land on which the gecko occurs.

**The status in 1999 of the barefoot banded gecko: *Unknown.***



**Coachella Valley fringe-toed lizard**

**Coachella Valley fringe-toed lizard**  
(*Uma inornata*)

CA - E (1980)  
FED - E (1980)

General Habitat: Desert Dunes

The Coachella Valley fringe-toed lizard is 3 to 12 inches long and has a flattened body with very fine scales. Its dorsal ground color and spotting patterns provide excellent camouflage. Its countersunk lower jaw, well-developed ear flaps, and toes fringed with long, pointed scales are all adaptations to the sandy habitat in which this lizard occurs. This species is restricted to areas of fine, windblown sand deposits in the sandy plains, sand hummocks, and mesquite dunes of the Coachella Valley, Riverside County.

Since the 1970s, approximately 75 percent of this species' habitat was lost due to human activities, such as land conversion for agriculture and construction of golf courses, subdivisions, condominiums, and shopping centers. A federal Recovery Plan was approved in 1983. Three reserves, constituting 783 acres, were established in the Coachella Valley to protect remaining lizard habitat (five percent of the lizard's historical habitat) and sources of windblown sand. Five years of studies, sponsored in part by California Endangered Species Tax Check-Off funds, obtained biological information critical to the management and preservation of the lizard. Research during the 1990s found that sand "migration" due to winds may affect long-term survival of this species at two of the reserves; the dunes may be moving out of the conservation areas. Conservation of these crucial blow-sand sources is being addressed in the new Coachella Valley Multispecies HCP and the development of a Conceptual Area Protection Plan. The result will be purchase of additional sand sources and sand transport corridors to ensure an adequate supply for the lizard.

**The status in 1999 of the Coachella Valley fringe-toed lizard: *Stable.***

## **Blunt-nosed leopard lizard**

(*Gambeliasila*)

CA - E (1971); Fully Protected

FED - E (1967)

General Habitat:       Chenopod Scrub  
                                  Valley and Foothill Grassland

The blunt-nosed leopard lizard is a large lizard with a long, round tail. This lizard is grey or brown dorsally, with whitish crossbars on the back and tail. Dark blotches on the back and tail and a short, blunt snout give this species its common name. Breeding females have orange or reddish spots on the sides. Length from snout to vent in adults is three to five inches. The species was originally found throughout the San Joaquin Valley and adjacent foothills from San Joaquin County southward and into eastern San Luis Obispo County. It inhabits sparsely vegetated plains, alkali flats, low foothills, grasslands, canyon floors, large river washes and arroyos.

Urbanization and agricultural development have eliminated almost 70 percent of blunt-nosed leopard lizard habitat in the San Joaquin Valley. Of the wildlife habitat remaining in the San Joaquin Valley in 1976, 228,000 acres were identified as leopard lizard habitat. By April 1980, this habitat had been reduced to 158,000 acres. The blunt-nosed leopard lizard now occurs in scattered locations in the valley and in the eastern portions of the Coast Ranges, including the Antelope and Carrizo Plains and Cuyama Valley.

A recovery team was appointed by USFWS in 1975, and a final federal Recovery Plan was published in 1981. The DFG has established several ecological reserves that have populations of the blunt-nosed leopard lizard including Alkali Sink Ecological Reserve, Allensworth Ecological Reserve, and Antelope Plains. A coordinated effort by the DFG, TNC, the California Energy Commission, USFWS and BLM is underway to identify and protect important remaining habitats in the San Joaquin Valley and Carrizo Plain. BLM, TNC, and the DFG are combining efforts to establish the Carrizo Plain Natural Area (CPNA). CPNA will include 180,000 acres when acquisition is complete. An interim management plan has been drafted and is undergoing revision by the CPNA technical committee. Several HCPs, which should benefit the blunt-nosed leopard lizard, are being developed or are completed in Kern and Fresno counties. The establishment of the 6,000 acre Coles Levee mitigation bank will make a significant contribution to maintaining habitat for this species.

**The status in 1999 of the blunt-nosed leopard lizard:       *Stable to Declining.***

## **Southern rubber boa**

(*Charina bottae umbratica*)

CA - T (1971)

FED - None

General Habitat:       Upper Montane Conifer Forest

The southern rubber boa is a stout-bodied snake with a short, blunt tail that resembles the head. The skin is smooth and shiny. The scales on top of the head are large and sometimes asymmetrical. Coloration is olive or pale yellowish-brown dorsally and light yellow ventrally, and there may be a few dusky flecks on the lower sides. Adults grow to about two feet. This snake is known from several localities in the San Bernardino Mountains in San Bernardino County, near Idyllwild in Riverside County, and on Mount Pinos in Kern County. It occurs in conifer forests near streams and meadows.

Habitat loss is the principal cause of this species' decline. The principal causes of habitat loss include resort development, OHV activities, logging, and wood gathering. USFS has investigated the distribution of the southern rubber boa in the Angeles, Los



**Blunt-nosed  
leopard lizard**



**Southern rubber  
boa**

Padres and San Bernardino National Forests. The Southern Rubber Boa Advisory Committee was formed in the early 1980s to coordinate studies and management of this snake and to develop recommendations to lessen impacts on the snake from habitat destruction.

**The status in 1999 of the southern rubber boa: *Unknown.***



**Alameda whipsnake**

**Alameda whipsnake**  
(*Masticophis lateralis euryxanthus*)

CA - T (1971)  
FED - T (1997)

General Habitat: Chaparral  
Riparian Woodland

The Alameda whipsnake is a slender, fast-moving, diurnal snake that has a narrow neck and a relatively broad head with large eyes. Adults may reach a length of five feet and are sooty black above with a yellow-orange stripe on each side. This species is primarily associated with scrub and chaparral in Alameda and Contra Costa counties but may occur in any inner Coast Range plant community, including grasslands, open woodlands, rocky slopes, and along open streams and arroyos near scrub and chaparral. Urban development has fragmented the originally continuous range of this snake into five populations. Approximately 60 percent of the habitat critical to the survival of the species is in public ownership.

In 1989, a working group of agency and university specialists was established. This group has functioned as a clearing house for new information about the snake as it becomes available. Protection efforts are underway on public lands, including Diablo State Park, various units of EBRPD, and land owned by East Bay Municipal Utilities District. For example, DPR and EBRPD are restricting access to some sensitive areas, and habitat adjacent to DPR and EBRPD lands is being acquired as mitigation for regional development projects.

USFWS listed the Alameda whipsnake as a threatened species on December 5, 1997, and produced a draft recovery plan in 1999. The federal listing package identified fire suppression activities as a potential cause of decline and recommended coordinating those activities with others to assure that controlled burns are done in a manner consistent with conservation needs of the snake. Alameda whipsnakes require open areas (caused naturally by periodic fires) to maintain optimal body temperature, and many native plants in Alameda whipsnake habitat require fire to stimulate new growth and reproduction. Fire suppression exacerbates the effects of wildfires by allowing fuels to accumulate, resulting in hotter, slower moving fires during the summer and early fall when hatchling and adult snakes are above ground. Fire suppression has also led to the encroachment of non-native and ornamental trees into grassland habitat, which further increases fuel loads.

**The status in 1999 of the Alameda whipsnake: *Declining.***



**San Francisco garter snake**

**San Francisco garter snake**  
(*Thamnophis sirtalis tetrataenia*)

CA - E (1971); Fully Protected  
FED - E (1967)

General Habitat: Standing Permanent Waters of the Sacramento-San Joaquin Province

The San Francisco garter snake is recognized by its mid-dorsal stripe of greenish-yellow bordered by a black and a red stripe on each side which may be broken or divided. The belly is greenish-blue, and the top of the head is red. Adults grow to a length of two to three feet. All known populations of this species occur in San Mateo

County. Small populations occur near freshwater marshes, ponds, and slow-moving streams along the coast from Sharp Park to Año Nuevo and east into the Santa Cruz Mountains where suitable habitat occurs.

Studies conducted in 1987 through 1989 determined that upland areas near pond-marsh habitats are important to the snake during the fall and winter. Information from these studies indicates that the females may give live-birth to their young in upland areas.

Urbanization destroyed the majority of the prime habitat for this snake, and continues to fragment remaining habitat and eliminate habitat linkage corridors. Studies have been conducted on the distribution and ecology of the snake, and this information will be used to develop management plans for specific areas such as Pescadero Marsh and Año Nuevo State reserves. In 1985, the USFWS published a final federal Recovery Plan for the snake.

Because of the snake's Fully Protected status, DFG has expended significant staff time working with BART and its contractors to avoid take of the snakes as part of the BART-San Francisco Airport expansion project. The project bisects the west of the Bay Shore project which supports the only known population of the snake on the bay side of the San Mateo Peninsula.

**The status in 1999 of the San Francisco garter snake: *Declining.***

### **Giant garter snake**

(*Thamnophis gigas*)

CA - T (1971)

FED - T (1993)

General Habitat: Sacramento-San Joaquin Province, Standing Permanent Waters  
Sacramento-San Joaquin Province, Ephemeral Streams

The giant garter snake is one of the larger species of garter snakes, with adult females commonly reaching four feet in length, and males being somewhat shorter in length. The basic color is dull brown with a checkered pattern of well-separated black spots on the dorsal side. There is a dull yellow, mid-dorsal stripe, but lateral stripes are often not present. The head is elongated with a pointed snout.

Historically, the range of this snake was the San Joaquin Valley from the vicinity of Sacramento and Antioch southward to Buena Vista and the Tulare Lake Basin. The current distribution extends from near Chico, Butte County, to the vicinity of Burrel, Fresno County. This species is one of the most aquatic garter snakes and is usually found in areas of freshwater marsh and low-gradient streams. Additionally, it has adapted to human-made habitats, such as drainage canals and irrigation ditches, especially those associated with rice farming.

As a result of human activities, the giant garter snake and its supporting natural habitat are depleted throughout its range. In addition, much of the remaining habitat is degraded or threatened in those areas that still support this species. Urbanization, including housing, business, industrial and recreational developments, often leads to the destruction of wetlands and channelization of streams. Other impacts of urbanization include pollution, destruction of food sources, predation by native and introduced species, and removal by collectors.

The American River Basin of Sacramento and Sutter counties provides some of the most important habitat remaining in California for the giant garter snake. In 1997, a federal HCP and CESA 2081 permit were developed for this area. Under the HCP/2081 permit, 8,750 of compensation acres would be preserved in perpetuity either as continued agriculture that benefits the snake (rice farming, for example), or as a minimum of 25 percent conversion to seasonal and slough wetlands. The plan allows for development of up to 17,500 acres of habitat. Similar HCPs will preserve giant garter snake habitat in San Joaquin and Yolo counties.

The DFG also is evaluating the distribution of and biological needs of this snake at the DFG's Mendota and Los Baños wildlife areas. In 1997, the USFWS established a recovery team to develop a recovery plan for the species. Several DFG biologists were



**Giant garter snake**

members of the giant garter snake recovery team, which produced a draft recovery plan for the snake in 1999.

**The status in 1999 of the giant garter snake:      *Declining.***