AMPHIBIANS

Species Accounts

Santa Cruz long-toed salamander
(*Ambystoma macrodactylum croceum*)

Santa Cruz long-toed salamander

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

General Habitat: Sacramento-San Joaquin Province, Standing Ephemeral Water Coastal Scrub

The Santa Cruz long-toed salamander is a relatively small (four to 12 inches), black salamander with yellow-orange blotches. It frequents coastal woodlands and chaparral near the ponds and freshwater marshes in which it breeds. This salamander spends a significant portion of its life underground in the burrows of small mammals such as mice, gophers, and moles. It can also be found among the root systems of some plants in upland chaparral and wooded areas. This salamander usually breeds in shallow, temporary freshwater ponds, both natural and human-made. At the onset of the rainy season (November or December), adults begin their annual nocturnal migration from their upland chaparral and wooded summer retreats to the breeding ponds. As the ponds dry (May-August), young salamanders move at night away from the ponds to subterranean or vegetative cover.

The Santa Cruz long-toed salamander is currently known from three population clusters (metapopulations) in coastal areas of Monterey and Santa Cruz counties. Since its federal listing, 10 additional breeding sites have been discovered. Of the 12 known breeding sites, seven have been documented to support breeding efforts in the last five years. Of the other five sites, three have experienced habitat degradation that prevented breeding, and two sites have not been surveyed for at least five years.

The natural patchy distribution of this salamander has resulted in it being especially susceptible to population declines resulting from both human and natural factors, including habitat loss and degradation, collection, predation and parasitism by introduced and non-native organisms, and weather conditions. In Santa Cruz County, primary threats have been road construction and urbanization. In Monterey County, the main reasons for decline are extensive and intensive agricultural practices and urbanization.

Two localities are partially protected by a DFG Ecological Reserve and a USFWS Wildlife Refuge. Habitat at another locality, although protected by a conservation easement granted to TNC in 1982, was seriously degraded by previous saltwater intrusion.

DFG management activities over the last three years included participation in development of the USFWS April 1999 draft revised recovery plan for the salamander, acquisition of a recently-discovered breeding site, and ongoing fencing and habitat maintenance on DFG Ecological Reserves.

The status in 1999 of the Santa Cruz long-toed salamander: *Stable to Declining.*

Siskiyou Mountains salamander
(*Plethodon stormi*)

Siskiyou Mountains salamander

CA - T (1971)
FED- None

General Habitat: North Coast Conifer Forest

This slim-bodied salamander has short legs, with five toes on the hind feet and

four on the front feet. Its color is dull brown to chocolate brown on the dorsal surface and sides, often profusely speckled with white or yellowish flecks. The ventral surface is purplish gray. Adults reach four to six inches. In California, this salamander occurs in scattered locations along Joe and Dutch creeks in the upper Applegate River drainage and along Seiad and Horse creeks in the Klamath River drainage, Siskiyou County. Most occurrences are on federal lands. Typical habitat for this species consists of rock outcrops or loose rock rubble and talus covered with moss or leaf litter in heavily wooded areas. This salamander is known to occur at elevations up to 5,700 feet.

The most serious threat to this salamander appears to be the removal of overstory vegetation within its range by clear-cutting in areas of rock outcrops and talus slopes. This practice eliminates the moist microhabitat necessary for species survival. Inferential information suggests clearcutting via tractor logging might lead to localized extirpations; however, there are extant populations on many sites that have been logged more than once in the past. The documented range of this species is now known to be significantly larger than previously believed (in the mid-90s). It has recently been found at elevations and in habitats previously thought to be unoccupied and unsuitable.

The Siskiyou Mountains salamander is identified as a survey and management species in the USFS Northwest Forest Plan. Interim requirements for federal lands require a protective buffer around all occupied habitat. Current USFS practices require a minimum 100 foot buffer zone around this salamander's habitat and a survey for the species prior to any habitat disturbance.

The status in 1999 of the Siskiyou Mountains salamander: *Stable.*

Tehachapi slender salamander

Tehachapi slender salamander
(*Batrachoseps stebbinsi*)

CA - T (1971)
FED- None

General Habitat: Cismontane Woodland
Lower Montane Conifer Forest
Riparian

This relatively large and robust slender salamander grows to about five inches. It is distinguished by its relatively large feet and long legs. Its dorsal color is dark brown with lighter patches sometimes forming an indistinct band. The ventral surface is dark grey-black. It occurs in small areas in the Piute and Tehachapi mountains southeast of Bakersfield, Kern County, where it lives in rock talus in foothill woodlands, usually on north-facing slopes.

No comprehensive surveys have been conducted since 1979. The limited number of sites occupied by this species makes it extremely vulnerable to any changes in its habitat.

The status in 1999 of the Tehachapi slender salamander: *Unknown.*

Kern Canyon slender salamander

Kern Canyon slender salamander
(*Batrachoseps simatus*)

CA - T (1971)
FED- None

General Habitat: Cismontane Woodland
Lower Montane Conifer Chaparral

This species has relatively long limbs and tail and a narrow head. The color is black on the sides and ventral surface, while the dorsal surface has dashes and patches of bronze and light reddish-brown pigment which may form an imperfect dorsal band. Adults grow to four to five inches. This salamander is found in the lower Kern River Canyon from about Democrat Hot Springs downstream to Live Oak Picnic Area in Kern

County. Most known localities for this species are within Sequoia National Forest. Individuals occur beneath rocks, rotting logs, and other surface material, as well as large rock slides and talus on rather steep north-facing slopes.

Road construction, mining, dam construction, small hydropower development, and logging in the lower Kern River Canyon are potential threats to this salamander.

Like other lungless salamanders, this species is generally restricted to small areas in suitable patches of habitat. These salamanders are often vulnerable to activities that disrupt the hydrology of riparian canyons, forest floor and other habitats that require a moderate amount of moisture. No comprehensive surveys for this species have been done since 1979.

The status in 1999 of the Kern Canyon slender salamander: *Unknown.*

Desert slender salamander

Desert slender salamander
(*Batrachoseps aridus*)

CA - E (1971)
FED - E (1973)

General Habitat: Seeps
Sonoran Desert Scrub

This species is a moderately small, slender salamander with a short tail. Coloration is blackish above, overlaid with an indistinct lighter band. Ventrally, the trunk is a darker blackish-maroon, and the underside of the tail is flesh-colored. Adults grow to about four inches. This salamander is known only from Hidden Palm Canyon, a tributary of Deep Canyon, about 10 miles south of Palm Desert, Riverside County. It is found in crevices between limestone sheets and under limestone slabs and other rocks along the base of cliffs where continuous water seepage occurs. During the late winter and early spring, these salamanders may occasionally be found beneath rocks and other objects on the floor of the canyon.

The primary threat to this species is its extremely restricted distribution. Prolonged drought, water pumping, and storm erosion are potential threats. The entire habitat for this salamander is located within the DFG's 160-acre Hidden Palm Ecological Reserve. A DFG Management Plan for the Ecological Reserve was developed in 1975. A management committee coordinates management of the Reserve. A recovery plan for the salamander was published by the USFWS in 1982.

In September 1976, a severe tropical storm destroyed about 50 percent of the salamander habitat in the Ecological Reserve. A study was initiated to determine the amount of remaining habitat and the status of the salamander population. During the study, it became apparent that the remaining habitat needed protection from further erosion. A gabion structure of heavy-mesh wire filled with rocks was installed at the edge of the remaining habitat area to prevent further erosion of the soil. Since the 1976 flood, DFG personnel have observed no more than three salamanders on any one visit. The habitat is improving, however, and the DFG has initiated a habitat monitoring program.

The status in 1999 of the Desert slender salamander: *Unknown.*

Shasta salamander

Shasta salamander
(*Hydromantes shastae*)

CA - T (1971)
FED - None

General Habitat: Cismontane Woodland
Lower Montane Conifer Forest

This salamander has webbed toes and a flattened body. The dorsal side is gray-green, beige, tan or reddish, and usually with yellow on the tail. The ventral surface is

dark with white flecks or blotches. The young are gray-green, olive, tan or reddish on the body and yellowish on the tail. Adults grow from three to four inches. The Shasta salamander primarily inhabits isolated limestone formations in several areas near Shasta Lake, Shasta County. Although this species can be found at any time of year if conditions are warm and wet enough, it is usually found from November through April. The habitat is moist limestone fissures and caves, in volcanic and other rock outcroppings, and under woody debris on the surface during wet weather in mixed pine-hardwood stands.

Nine of the 12 known populations occur on USFS land, one is on BLM land, and two are on private property. The Shasta-Trinity National Forest has developed a management plan for this species and the USFS has prepared a survey protocol for it. This species is regularly surveyed for as part of Timber Harvest Plans. Primary threats to this species are timber harvest, due to moisture loss via canopy reduction and ground disturbance, highways that cause a dispersal barrier, and rock quarries.

The status in 1999 of the Shasta salamander: ***Stable.***

Limestone salamander

Limestone salamander
(*Hydromantes brunus*)

CA - T (1971); Fully Protected
FED - None

General Habitat: Cismontane Woodland
Chaparral

This salamander has webbed toes and a flattened body. Its color is uniformly brown above and pale brown to gray below. The underside of the tail is yellowish. The young are pale yellowish-green above, changing with age through pale yellow to beige or brown. Adults grow from three to four inches.

The limestone salamander occurs in the Merced River Canyon in the vicinity of Briceburg and along Bear Creek, a tributary to the Merced River, Mariposa County. It has also been found in Hell Hollow, about four miles above Lake McClure and at the confluence of Hell Hollow Creek with Lake McClure. As its name indicates, the species is associated with limestone outcroppings. It is found in the foothill pine-chaparral belt, where it lives in rock crevices and talus, especially where overgrown with moss. It also requires a relatively steep north-to-east facing slopes that provide the shade necessary to maintain cool, moist conditions.

The DFG's Limestone Salamander Ecological Reserve in Mariposa County protects 120 acres of limestone salamander habitat and BLM has designated an additional 1,600 acres as the Limestone Salamander ACEC. The ACEC encompasses both confirmed and potential limestone salamander habitat. The DFG published a management plan for the ecological reserve in 1976. Potential threats include gold mining operations, water development, highway construction, and quarrying for limestone.

The status in 1999 of the limestone salamander: ***Unknown.***

Black toad

Black toad
(*Bufo exsul*)

CA - T (1971); Fully Protected
FED- None

General Habitat: Great Basin Province, Standing Permanent Waters

The dorsal surface of this toad often appears shiny and lacquer black. There is a narrow white or cream dorsal stripe, and the underside is white or cream with dense mottling and marbling of black. Dark markings often spot the throat. This small toad rarely exceeds three inches in body length. Adults are more aquatic and diurnal than other toad species in California.

The range of this species is extremely restricted. It is found only in and around Buckhorn Spring, Corral Spring, Bog Mound Spring, and Antelope Spring in Deep Springs Valley, Inyo County. It inhabits watercourses and marshes adjacent to the springs. This species occurs in a very limited area and is therefore vulnerable to any habitat change. A population of this species, likely introduced, was discovered in 1998 in the Saline Valley area of Death Valley National Park, Inyo County.

Genetic studies on both the Deep Springs and Death Valley NP populations are being conducted by a student at the University of Nevada, Reno in cooperation with DFG. DFG initiated a population monitoring program in 1999, in cooperation with Deep Springs College, the owner of all remaining black toad habitat in the Deep Springs area. In late 1999, DFG and the college were working on a draft MOU to continue the college's cooperative management of the toad habitat, including annual monitoring of toad distribution by staff and students, fencing several areas to exclude livestock, and changing irrigation practices to minimize impacts on breeding toads, developing eggs, and larvae.

The status in 1999 of the black toad: ***Stable.***