

REPTILES AND AMPHIBIANS of the BALDWIN HILLS

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ABSTRACT

A survey of the herpetofauna was conducted as part of a general biota survey of the Baldwin Hills, Los Angeles County, California in 2000. Nine species of reptiles and amphibians have been previously reported from the Baldwin Hills. Eight of these are represented in museum collections. Two other species have been previously reported but not verified. During the current survey five species were encountered including one species not previously documented. These included the Southern Alligator Lizard, Western Fence Lizard, Side-blotched Lizard, Gopher Snake, and the recently introduced turtle, the Red-eared Slider. In addition to these five, several other species are expected to occur, including the Common Kingsnake, reported by KHSRA personnel, but not verified during the present study. All species encountered in 2000 were considered habitat generalists; no endangered or threatened species were noted. Although all but one species are native, the current herpetofauna of the Baldwin Hills is composed of remnant populations of species that have adapted to urbanization.

Habitat loss has been the primary cause of species extirpation within the area. Because the Baldwin Hills are surrounded by urbanization, they are isolated from other natural areas, effectively preventing dispersal of amphibians and reptiles. Gene flow, therefore, is low to nonexistent. While preservation and restoration efforts could improve habitat values, the pressures associated with surrounding urbanization will complicate efforts to protect population viability. Two species of slender salamander, recorded previously, were not detected. Continued habitat loss and degradation and low rainfall during this study may have contributed to the apparent decline in amphibian species richness. Protection of existing patches of natural habitat from further degradation is recommended to maintain the status of currently occurring species.

INTRODUCTION

The Baldwin Hills are located in the western portion of the Los Angeles Basin and represent one of the largest areas of natural open space within the highly urbanized Los Angeles Basin. A previous biota survey for the Baldwin Hills was conducted in 1975 and revised in 1978 (County of Los Angeles 1982). The present survey was conducted for the purpose of updating the species

composition of the herpetofauna in the Baldwin Hills. This report presents the results of field surveys conducted in 2000, reviews the previous status of the area's herpetofauna, provides ecological profiles for a number of selected reptile and amphibian species, and offers preliminary conservation recommendations.

METHODS

Ground surveys during daylight hours were conducted within natural coastal scrub areas of the Kenneth Hahn State Recreation Area (KHSRA) on the following dates: 2 and 16 February, 28 March, 5 June, and 27 July 2000. Surveys consisted of searching under vegetation and other surface debris as the major vegetation associations were transected. Night surveys for amphibians and a trapping survey for aquatic turtles were not performed because of lack of suitable habitat. The locations of amphibians and reptiles, or their signs (e.g. shed skins), when encountered, were determined with a GPS unit. In addition to reviewing historical literature and museum databases, personnel from KHSRA and Stocker Industries were queried for information regarding possible recent sightings of amphibians and reptiles within the study area.

HISTORICAL INFORMATION

Nine species of reptiles and amphibians have been reported from previous work in the Baldwin Hills [Table 1; County of Los Angeles 1982, Collections of the Natural History Museum of Los Angeles County (LACM) and the Museum of Vertebrate Zoology (MVZ)]. Eight of these species are represented in museum collections spanning the period from the 1920s through the early 1960s. Three other species have been reported but not verified. Among those species previously documented are two snakes, three lizards, two slender salamanders, one toad, and one treefrog.

ANALYSIS OF THE CURRENT BIOTA

Species identification and the location in which they were observed are plotted in Fig. 8. Of the nine previously documented native species, four were observed during the current survey, although several additional species are likely to occur there (Table 1). One previously undocumented species, the introduced Red-eared Slider, was encountered in an artificial pond at Holy Cross Cemetery during the current survey. Additionally, KHSRA personnel related anecdotal evidence of one species of snake (Common Kingsnake) that has not been previously reported from the area.

It is likely that past and continuing modifications to the natural landscape due to oil extraction and urbanization have had an important impact on the

general composition and abundance of the herpetofauna of the Baldwin Hills. Species composition and abundance is directly related to the amount of suitable habitat that is available. The remaining open space within the Baldwin Hills region supports a matrix of native vegetation and areas landscaped with ornamental species. Areas supporting native vegetation are highly fragmented and many are in the process of being replaced by non-native species. No natural aquatic habitats presently occur within the Baldwin Hills region; artificial drainages and an artificial water course located in KHSRA provide limited habitat values for amphibians and reptiles within the area.

Table 1. Herpetofauna of the Baldwin Hills, Los Angeles County, California. Taxonomy follows Collins (2001) and Stebbins (1985).

Common Name	Scientific Name	Status
Black-bellied Slender Salamander	<i>Batrachoseps nigriventris</i>	C
Garden Slender Salamander	<i>Batrachoseps pacificus major</i>	CD
Western Toad	<i>Bufo boreas</i>	C
Pacific Treefrog	<i>Hyla regilla</i>	C
Southern Alligator Lizard	<i>Elgaria multicarinatus</i>	ACD
Coast Horned Lizard	<i>Phrynosoma coronatum</i>	F
Western Fence Lizard	<i>Sceloporus occidentalis</i>	ACD
Side-blotched Lizard	<i>Uta stansburiana</i>	ACD
Coastal Western Whiptail	<i>Cnemidophorus tigris stejnegeri</i>	F
Ringneck Snake	<i>Diadophis punctatus</i>	F
Night Snake	<i>Hypsiglena torquata</i>	F
Common Kingsnake	<i>Lampropeltis getula</i>	BD
Coachwhip or Red Racer	<i>Masticophis flagellum</i>	E
California Whipsnake or Striped Racer	<i>Masticophis lateralis</i>	F
Gopher Snake	<i>Pituophis catenifer</i>	ACD
Western Blind Snake	<i>Leptotyphlops humilis</i>	F
Western Rattlesnake	<i>Crotalus viridis</i>	E
<u>Non-Native Species</u>		
Red-eared Slider	<i>Trachemys scripta elegans</i>	A
Bullfrog	<i>Rana catesbeiana</i>	F

A = Species encountered during this survey

B = Species reported but unverified during this survey

C = Specimens from Baldwin Hills represented in museum collections

D = Species reported from 1975 survey (County of Los Angeles 1982)

E = Unverified report included in 1975 survey (County of Los Angeles 1982)

F = Species may occur (see text)

SPECIES ACCOUNTS

Black-bellied Slender Salamander (*Batrachoseps nigriventris*)

This species is generally associated with more mesic, wooded areas, such as oak and sycamore woodlands. It may occur sympatrically with the Garden Slender Salamander (*B. pacificus major*). There are museum records (MVZ) for this species from the Baldwin Hills, but it was not found during the 1975 or present surveys. May occur in the Hills along slopes where native vegetation is present.

Garden Slender Salamander (*Batrachoseps pacificus major*)

This species occurs in coastal sage scrub, chaparral, riparian and grassland habitats, and woodlands. It may occur sympatrically with the Black-bellied Slender Salamander (*B. nigriventris*). This species was observed during a previous survey (1975) and is also represented in museum collections (LACM). Although not detected during the current survey, this species may still occur.

Western Toad (*Bufo boreas*)

This species occurs in a wide variety of habitats, including suburban areas, and may frequent permanent water sources when available. Often encountered on roads during the rainy season. There are museum records (LACM) for this species from the Baldwin Hills. It was not observed during a previous survey (1975) or during the present survey. The potential of this species occurring in the Baldwin Hills is high.

Pacific Treefrog (*Hyla regilla*)

This species occurs in a wide variety of habitats including riparian woodlands, marshes, lakes, ponds, grassland meadows, slow moving streams, reservoirs, irrigation canals, and roadside ditches (may occur some distance from surface water). There are museum records (LACM) for this species from the Baldwin Hills. It was not heard or observed during a previous survey (1975) or the present survey. The potential of this species occurring in the Baldwin Hills is high.

Southern Alligator Lizard (*Elgaria multicaerinata*)

This species occurs in grassland, chaparral, oak woodland, and suburban areas where surface debris is present (e.g., woodpiles, trash heaps, compost piles). It is a common resident in backyards and parks. This species was observed during the current survey. It was also observed during a previous survey (1975) and is represented in museum collections (LACM).

Coast Horned Lizard (*Phrynosoma coronatum*)

This species occurs in coastal sage scrub, alluvial scrub, chaparral, riparian areas, and oak woodlands. Extensive open areas with sandy or gravelly soils and abundant ant colonies are preferred (the displacement of native ant species by the introduced Argentine ant has led to a decline of this species over

much of its range). It was not observed during the current or previous survey (1975) and is not represented in museum collections from the Baldwin Hills. The potential of this species occurring presently in the Baldwin Hills is low.

Western Fence Lizard (*Sceloporus occidentalis*)

This species is one of the most common lizards in southern California. It has a wide distribution in a variety of habitats, including coastal sage scrub, chaparral, riparian and oak woodland; also occurs in suburban areas (backyards and parks). This species was observed during the current survey. It was also observed during a previous survey (1975) and is represented in museum collections (LACM).

Side-blotched Lizard (*Uta stansburiana*)

This species is one of the most common lizards in southern California. It has a wide distribution in a variety of habitats, including coastal sage scrub, chaparral, riparian and oak woodland (prefers open habitat with rocks and other surface debris). This species was observed during the current survey. It was also observed during a previous survey (1975) and is represented in museum collections (LACM).

Coastal Western Whiptail (*Cnemidophorus tigris stejnegeri*)

This species occurs in 'open' coastal sage scrub, chaparral, and oak woodland. It was not observed during this or a previous survey (1975) and is not represented in museum collections from the Baldwin Hills. The potential of this species occurring presently in the Baldwin Hills is low.

Ringneck Snake (*Diadophis punctatus*)

This predominantly fossorial species occurs in coastal sage scrub, alluvial scrub, chaparral, oak woodland, and riparian habitats. It prefers open, moist, relatively rocky areas and is often found under surface debris (e.g., rotting logs, rocks, bark, and human refuse). It was not observed during this or a previous survey (1975) and is not represented in museum collections from the Baldwin Hills. The potential of this species occurring presently in the Baldwin Hills is low.

Night Snake (*Hypsiglena torquata*)

This species has a wide distribution, occurring in open as well as rocky areas within coastal sage scrub, chaparral, oak woodland, and riparian areas. Often found under surface debris (e.g., rocks and human refuse). It was not observed during this or a previous survey (1975) and is not represented in museum collections from the Baldwin Hills. This species may occur in areas where native vegetation still exists.

Common Kingsnake (*Lampropeltis getula*)

This species has a wide distribution, occurring in a wide variety of habitat types (e.g., coastal sage scrub, chaparral, riparian and oak woodland) in association with rocks and other surface debris. Occurs in rural and suburban

areas. This species was not observed during the current survey, but was reported from within the study area by KHSRA personnel. It was observed during a previous survey (1975), but is not represented in museum collections from the Baldwin Hills. The potential for this species to occur in the Baldwin Hills is high.

Coachwhip or Red Racer (*Masticophis flagellum*)

This species has a widespread distribution, preferring open areas within coastal sage scrub and chaparral. Although not documented during this or a previous survey (1975), it has been reported from within the study area by KHSRA personnel. The potential for this species to occur in the Baldwin Hills is high.

California Whipsnake or Striped Racer (*Masticophis lateralis*)

This species occurs in coastal sage scrub, chaparral, riparian areas and oak woodlands. It occasionally climbs into vegetation in search of prey. Although it was not observed during this or a previous survey (1975) and is not represented in museum collections from the Baldwin Hills, it may occur in areas where native vegetation is present.

Gopher Snake (*Pituophis catenifer*)

This species has a wide distribution, occurring in coastal sage scrub, chaparral, oak woodland, and grasslands. It is most abundant in riparian habitats with sparse, grassy vegetation; also occurs in rural and suburban areas. This species was detected (shed skin) during the current survey. It was observed during a previous survey (1975) and is represented in museum collections from the Baldwin Hills (LACM).

Western Blind Snake (*Leptotyphlops humilis*)

This fossorial species has a wide distribution occurring in cismontane habitats where moist, alluvial soils predominate; it seldom occurs in strictly sandy habitats. It is occasionally found under surface debris (e.g., leaf litter, rocks and human refuse) and often on paved roads at night. It was not observed during this or a previous survey (1975) and is not represented in museum collections from the Baldwin Hills. Its fossorial behavior make this species hard to observe/detect, but it has a high potential of occurring in the Hills.

Western Rattlesnake (*Crotalus viridis*)

This species occurs in a wide variety of habitats including coastal sage scrub and chaparral. Rock outcrops, talus slopes, and stony stream courses are preferred habitat components. The presence of this species was not verified during this or a previous survey (1975) and it is not represented in museum collections from the Baldwin Hills. It has not been reported in the Baldwin Hills for at least five years (KHSRA and Stocker Industries personnel, pers. com.). The potential of this species occurring in the Hills is low and has probably been extirpated due to pressures associated with urbanization.

NON-NATIVE SPECIES

Red-eared Slider (*Trachemys scripta elegans*)

This species is native to the Mississippi River valley; probably introduced into southern California via the pet trade. The species has a disjunct distribution associated with a variety of permanent water sources including golf course ponds, reservoirs, irrigation canals, and urban park lakes. This species is highly aquatic and does not venture far from water. It was present on an artificial pond in the Holy Cross Cemetery during the present survey and has been reported from the artificial water course by KHSRA personnel during this and previous surveys (1975).

Bullfrog (*Rana catesbeiana*)

This species is native to the eastern United States and was introduced into California in the early 1900s. This highly aquatic frog prefers to remain in or near permanent water including quiet ponds, slow moving streams, reservoirs and irrigation canals associated with cultivated areas, marshes, and lakes (may disperse overland for several kilometers). This predatory species is a major threat to the amphibian fauna of southern California (Moyle 1973). Although this species was not observed during this or a previous survey (1975), the potential for it to occur in the Hills, especially in the artificial water course, is high.

SENSITIVE SPECIES

Of the amphibian and reptile species listed in Table 1, none are listed as threatened or endangered by the U.S. Fish and Wildlife Service or by the California Department of Fish and Game (CDFG). Two species, which could potentially occur in the Baldwin Hills, the Coast Horned Lizard and Garden Slender Salamander are listed by CDFG as 'Species of Concern'.

Table 2. The Herpetofauna of the Ballona Region, Los Angeles County, California.

Garden Slender Salamander	<i>Batrachoseps pacificus major</i>
Western Toad	<i>Bufo boreas</i>
Pacific Treefrog	<i>Hyla regilla</i>
California Red-legged Frog	<i>Rana aurora*</i>
Western Pond Turtle	<i>Clemmys marmorata*</i>
California Legless Lizard	<i>Anniella pulchra</i>
Southern Alligator Lizard	<i>Elgaria multicarinata</i>
Coast Horned Lizard	<i>Phrynosoma coronatum*</i>
Western Fence Lizard	<i>Sceloporus occidentalis</i>
Side-blotched Lizard	<i>Uta stansburiana</i>
Western Racer	<i>Coluber mormon*</i>
Common Kingsnake	<i>Lampropeltis getula</i>
Coachwhip or Red Racer	<i>Masticophis flagellum*</i>
Gopher Snake	<i>Pituophis catenifer</i>
Two-striped Garter Snake	<i>Thamnophis hammondi*</i>
Common Garter Snake	<i>Thamnophis sirtalis*</i>
Western Rattlesnake	<i>Crotalus viridis*</i>

- = Historical record (may no longer occur in region; see Hayes and Guyer, 1981)

WILDLIFE CORRIDORS

The land use within and around the Baldwin Hills is primarily residential and commercial development. There are currently no natural connections between the Baldwin Hills and other natural areas (e.g., Ballona Region). Wildlife movement between the Baldwin Hills and these areas is extremely low. Little, if any, dispersal of amphibians and reptiles is expected. An artificial 'corridor' (i.e., flood control channel) does connect the Baldwin Hills with the Ballona Region. However, gene flow between the two regions, both recently and historically, has probably been quite low. The herpetofauna reported from the Ballona Region is listed in Table 2 (Hayes and Guyer 1981). The historical Ballona list includes six species not recorded in the Baldwin Hills; at least one, the California Legless Lizard still occurs at Ballona (Hayes and Guyer 1981).

CONSERVATION AND RESTORATION RECOMMENDATIONS

The status of the herpetofauna in the Baldwin Hills is directly linked to habitat loss and fragmentation in the region. Therefore, it is essential that the remaining open space supporting native vegetation be preserved. Habitat restoration is recommended, especially in degraded areas and those areas currently supporting non-native species. Conservation and restoration recommendations for the study area should apply to both public parklands and

adjacent Stocker Industries lands. Control of exotic predatory animals (e.g. feral cats, feral dogs, bullfrogs) within conservation areas could help to sustain herpetofauna diversity in the area.

LITERATURE CITED

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Reptile and Amphibian Sighting Locations

