ANIMAL LIFE

Baldwin Hills Project

January, 1975

Revised

February, 1978

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ANIMAL LIFE

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ANIMAL LIFE

INTRODUCTION

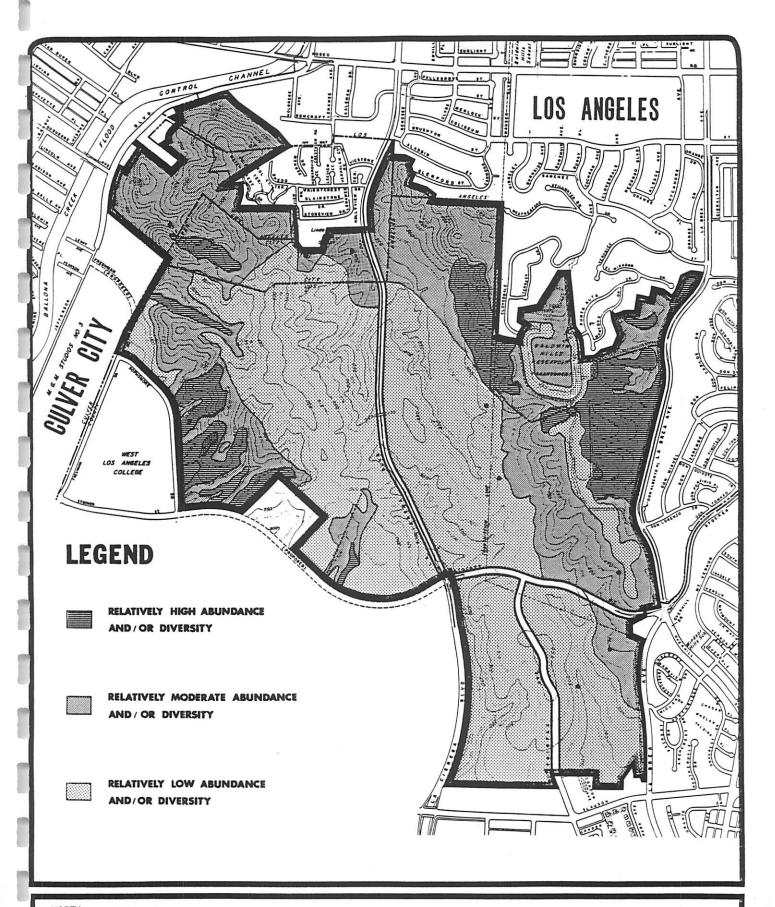
Short term biotic surveys of Baldwin Hills were made by biologists from the Los Angeles County Nature Centers between January 22 and 26, and again between August 4 and 7, 1975. Three subsequent survey periods were initiated in order to further knowledge of fauna: mammals (March and April, 1977); birds (February-June, 1977); and amphibians and reptiles (February-April, 1977). Snap and live trapping were used to determine the presence of rodents. of small observations and/or paw prints, scats, loose skeletal material, skeletal material in owl pellets, hair burrows (gophers) and smell (skunk). In order to gather desired avifaunal data, two census routes and four survey stations were established. served within the selected habitats as well as those flying overhead were identified and enumerated with the aid of 7x50 binoculars while walking the route. Tracks and scats were helpful in indicating the presence of some species of amphibians and reptiles. cific search techniques included turning rocks, boards and debris on the surface for more secretive species or animals at rest (map VIII-1 and VIII-2).

TERRESTRIAL FAUNA

Three wildlife groups: mammals, avian (birds), amphibians and reptiles were observed or reported to occur in the Baldwin Hills area.

Mammals

During the course of the 1977 investigation, a total of 3,134 trap nights produced only four species and 81 individuals. These



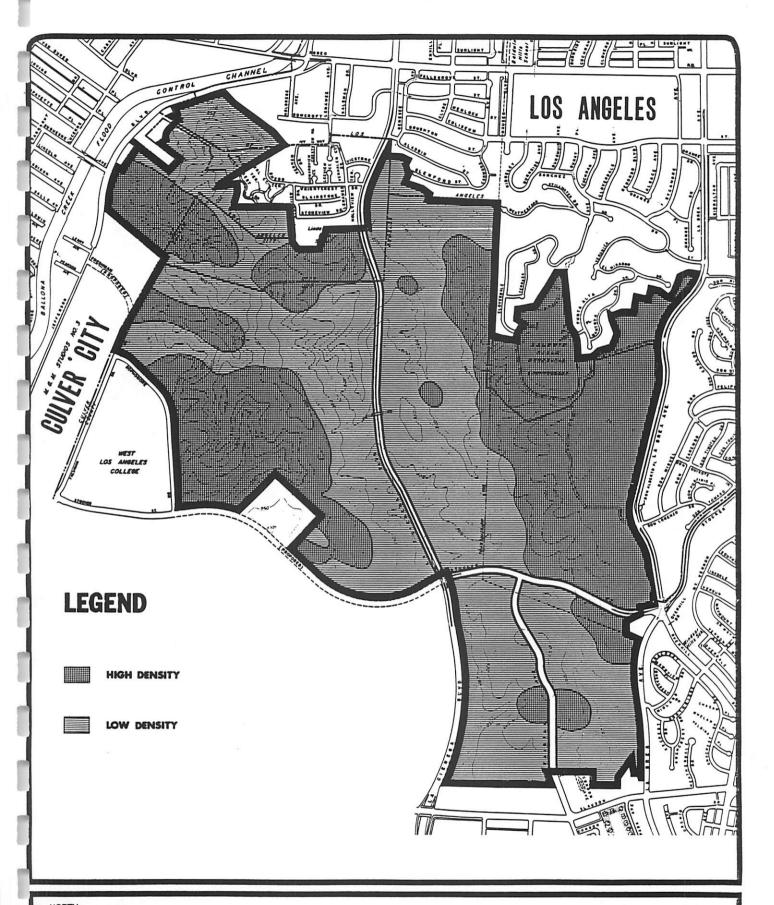




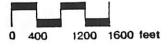
MAMMALS, REPTILES, & AMPHIBIANS

BALDWIN HILLS PROJECT

MAP VIII-1







BIRD DISTRIBUTION

BALDWIN HILLS PROJECT

MAP VIII-2

include the western harvest mouse (Reithrodontomys megalotis longicandus), the desert woodrat (Neotoma lepida intermedia), the California vole (Microtus californicus sanctidiegi), and the deer mouse (Peromyscus maniculatus gambelii). Additional species not trapped but known to occur on or near the property include the Botta pocket gopher (Thomomys bottae), the black rat (Rattus rattus), and the house mouse (Mus musculus). Mammals other than rodents that are common at this time include the desert cottontail (Sylvilagus audubonii), the black-tailed jackrabbits (Lepus californicus), the feral dog (Canis familiaris), and the feral cat (Felis catus).

Avian

During the period of February 8 through June 9, 1977, 68 species of birds were identified within the Baldwin Hills study area. Historical records and observations contributed by area residents added another 9 species for a checklist total of 77 species. Land birds account for the vast majority of the total with 71 species. Species regarded as residents represent 35% (27 species) of the total, 12% (9 species) as summer visitors, 25% (19 species) as winter visitors, and 28% (22 species) as migrant species passing through the area during migration.

Amphibians and Reptiles

Six species of amphibians and reptiles were recorded from the Baldwin Hills during the surveys. These include the garden slender salamander (Batrachoseps pacificus major), the western fence lizard (Sceloporus occidentalis), the side-blotched lizard

<u>Uta stansburiana</u>), the southern alligator lizard (<u>Gerrhonotus</u> <u>multicarinatus</u>), the common kingsnake (<u>Lampropeltis getulus</u>), and the gopher snake (<u>Pituophis melanoleucus</u>).

Communities

Mammals

Western Harvest Mouse (Reithrodontomys megalotis longicaudus): The western harvest mouse was the most abundant rodent (table VIII-1) taken from all sites during this investigation, comprising 69.1 percent of the total rodents. It was most common throughout the study areas, being absent from only oil well pads, oiled roads and other completely denuded areas. Overall, the Western Harvest Mouse was most abundant in areas having the least recent disturbance (slightly disturbed coastal sage plant community). sity of the western harvest mouse during our March-April survey of the aforementioned community was 22.3 per hectare (9 per acre). The density was slightly less in a greatly disturbed area, 20 per hectare (8 per acre). Density of this species may be expected to fluctuate seasonally and/or annually (M'Closkey, 1972, et al.). The western harvest mouse is found abundant in disturbed or urban situations where suitable habitat is available (Hall, 1959, et al.). It shows some preferences toward coastal sage scrub with varying amounts of grasses (M'Closkey, 1972). The species often builds its grass nest in vegetation above ground (M'Closkey, 1972). Meserve, 1976, et al. lists food habits of the western harvest mouse in a coastal sage scrub community (Irvine Ranch) over a 13 month period. In general he lists Arthropods especially lepidopterous larvae, shrubs, grass seeds and forbs as important foods.

TABLE VIII - 1

RELATIVE ABUNDANCE OF RODENTS

The number of rodents is calculated per 100 trap nights for all trapping records combined for each of three habitats.

SD = Slightly disturbed habitat (827 trap nights)

MD = Moderately disturbed habitat (1,440 trap nights)

GD = Greatly disturbed habitat (867 trap nights)

+ = Observations or other records of occurrence of a species

Species	Habitats		
Reithrodontomys megalotis	<u>SD</u> 2.4	MD 1.7	GD 1.4
Neotoma lepida	1.3	.42	
Microtus californicus	.46	.21	+
Rattus sp.	+		
Peromyscus maniculatus		.07	
Thomomys bottae	+	+	+

Meserve, 1976, states "this species appears to be flexible in its feeding strategy because although typically considered a grassland species (Fisler, 1965) it showed food habit changes consistent with habitation of a scrub community." Principal plants were wild buckheat (Eriogonum fasciculatum), California sagebrush (Artemisia californica) and deerweed (Lotus scoparius).

Predators include snakes, raptors (owls and hawks) and carnivorous mammals.

Desert Woodrat (Neotoma lepida intermedia):

The desert woodrat was the second most abundant species (table VIII-1) captured at the Baldwin Hills sites during the surveys. It comprised 20.9 percent of the total rodents. This species was not numerous in the slightly and moderately disturbed coastal sage scrub communities, and was lacking in greatly disturbed areas. Density estimates for the slightly disturbed areas are 2.9 per hectare (1.2 per acre). With one exception desert woodrats were not captured further than 10 meters (33 feet) from a prickly-pear cactus (Opuntia littoralis) patch. It has previously been observed that this species is often found in largest numbers in association with cactus patches where it occurs in the chapparal and coastal sage scrub plant communities (Lee, 1963; MacMillen, 1964; M'Closkey, 1972; Meserve, 1974). This is not to say desert woodrats will only be found at the site in association with prickly pear cactus; this species has been shown to inhabit a relatively wide range of habitats, and should be considered more generalized in habitat preference (Meserve, 1974, et al.), and are among the most adaptable rodents in the world (Cameron and Rainey, 1972).

It has been documented to use prickly-pear cactus as a food source (MacMillen, 1964; M'Closkey 1972, Cameron and Rainey, 1972, et al.). It has also been found that desert woodrats is capable of using coast prickly-pear (Opuntia occidentalis) as a sole water source (MacMillen, 1964). He shows local specialization on resources, perhaps based on water content or adaptation to toxic substances. Meserve, 1974, lists coast live oak (Quercus agrifolia), scrub oak (Quercus dumosa), deerweed, (Salvia apiana), California sagebrush, wild buckwheat, coast prickly-pear, grasses, and insects as food sources in his investigation of a coastal sage scrub community (Irvine Ranch). Predators include snakes, raptors (owls and hawks) and carnivorous mammals.

California Vole (Microtus californicus sanctidiegi)R. Kellogg: The California vole was the third most abundant rodent taken during the surveys comprising 8.6 percent of the total rodents. This species was not abundant in any area and was lacking in greatly disdisturbed areas. Density estimate at the present for the slightly disturbed areas is 0.64 per hectare (0.26 per acre). California voles were most numerous in the slightly disturbed areas in assocassociation with giant rye grass (Elymus condensatus) on north facing slopes. It was also taken in California sagebrush in slightly and moderately disturbed areas, always with some underunderstory of grasses. Pequegnat (1951) found California voles to be the characteristic rodent of the grasslands, but it was also found in sagebrush and chaparral areas in the Santa Ana Mountains. Vaughan (1954) also found meadow mice in patches of grassland in the San Gabriel Mountains. M'Closkey (1972) and Meserve (1976)

captured meadow mice in small numbers in their investigations of rodents in a coastal sage scrub community on the Irvine Ranch. though M'Closkey (1972) caught only one California vole in 6,625 trap nights, vole remains were found in 70 percent of the whitetailed kite pellets found on and in his study area. He theorized that the kites were hunting in surrounding grassland, feeding on voles, then perching and dropping their pellets over his study It has been our observation in short term assessments at Santa Fe Dam County Park, Whittier Narrows Wildlife Sanctuary and Vasquez Rocks County Park (Los Angeles Co.) that although we only captured small numbers of this species, evidence of their presence in larger numbers was present (owl pellets and runways). words, trap success may not reflect the actual numbers of voles in a scrub community. This may be in part due to the bait used (rolled oats) in many investigations. Krebs' (1966) observations indicate that the California vole is resistant to removal by trapping. Batzli and Pitelka (1971) list annual grasses wild oat (Avena fatua), ryegrass (Lolium multiflorum and brome (Bromus rigidus) among the most important species in the diet of California vole, near San Francisco Bay. They also included other annual grasses, perennial grasses, and forbs as being eaten by California vole. Predators include raptors (hawks and owls), carnivorous mammals, snakes (Bailey, 1924; M'Closkey, 1972; et al.).

Deer Mouse (<u>Peromyscus maniculatus gambelii</u> (Baird):
Only one deer mouse was captured during the course of the investigation in a moderately disturbed area on Site No. 3. This species is often considered one of the most abundant rodents in areas

where it occurs, Hall (1946) and Manville (1949). Grinnell (1933) thought the deer mouse to be the most abundant mammal in California. The deer mouse reached its highest numbers in the sage belt of the San Gabriel Mountains (Vaughan, 1954) and seemed to prefer the sage belt in the Santa Ana Mountains (Pequegnat, 1951).

M'Closkey (1972) found a decrease in the deer mouse population from July through December in a coastal sage scrub community (Irvine Ranch), but had no explanation for the decrease. The only explanation we have for the small number of this species is that it may have been at a population low at the times of the surveys. Meserve (1976) found the diet of this species apparently more generalized than other species of rodents in the scrub community. He lists nunumerous shrubs, forbs, grasses and fungi as foods utilized by this species. Predators include snakes, raptors (owls and hawks) and mammals.

Botta Pocket gopher (Thomomys bottae):

The botta pocket gopher was not trapped during our investigations but burrows were common in all sites (1,2, and 3) and in all three habitat classifications (slightly disturbed, moderately disturbed and greatly disturbed). Burrows appeared to be most numerous in slightly and moderately disturbed areas, but this observation was not quantified. Skeletal material was found in owl pellets at Sites No. 1 and 2. Main foods are roots and soft parts of most plant species. Predators include snakes, raptors (owls and hawks) and small carnivorous mammals. Long-tailed weasels, skunks and owls are the most likely warm-blooded predators of this species at the sites.

Old World Rats and Mice:

The black rat (<u>Rattus rattus</u>), Norway rat (<u>R. norvegicus</u>) and house mouse (<u>Mus musculus</u>) have all been reported to occur on or near the property. During our investigation only one skull of the black rat was found (owl pellet) on Site No. 2. Old world rats and mice often live in close association with human occupancy and can be expected to occur around dwellings in the Baldwin Hills area.

Avian

Thirty-four species are considered to be breeding within the Baldwin Hills. Red-tailed hawk, California quail, morning dove, Anna's hummingbird, cliff swallow, scrub jay, cactus wren, mockingbird, loggerhead shrike, starling, house sparrow, house finch, brown towhee, and song sparrow are confirmed breeders as evidenced by the discovery of a nest, juvenile birds incapable of flight, or of an adult feeding young. The remaining 20 species are regarded as suspected breeders because no direct evidence has been found. Since these species are present during the breeding season in what appears to be favorable habitat, additional field work during the breeding season would probably provide evidence to justify their inclusion on the confirmed breeder list.

Amphibians and Reptiles

Western Fence Lizard (Sceloporus occidentalis):

The western fence lizard was the most abundant reptile observed in the Baldwin Hills, occurring in most habitat types. Fence lizards were particularly common on the ground and on branches of Calif-California sagebrush and coyote brush (Baccharis pilularis var. consanguinea), most abundant in the heavy cover of coastal sage scrub along the western third of Site No. 2. Ten to twelve fence lizards, on the average, were seen along the 390 meter (1,280 feet) transect line during mammal trapping surveys in this area. They were also found under piles of boards in several areas of Sites No. 1 and 2. They were least abundant in the heavily disturbed areas with little or no plant cover (i.e. roadways and cleared oil pads).

This species and the following two lizards feed on insects and other small arthropods both on the ground and in shrubs. The western fence lizard was found during all three survey periods, January, August, and from February through April. They are probably active on warm days during all months of the year.

Side-blotched Lizard (Uta stansburiana):

These small lizards were commonly seen on the ground at all three sites in the hills. They were most often observed near clearings as on firebreaks or along roadways at the edge of brushy areas. Throughout their range they are typically found in such dry open areas and often favor rocky outcroppings and roadcuts. Thus, some of the partially cleared areas in the Baldwin Hills are suitable habitat for the side-blotched lizard, provided there is some plant

cover and associated insect food nearby.

In the Baldwin Hills, this lizard and the western fence lizard probably are preyed upon by such lizard-eating birds as the American kestrel (Falco sparverius) and the loggerhead shrike (Lanius ludovicianus) and by other carnivores such as the coyote, longtailed weasel and striped skunk.

Southern Alligator Lizard (Gerrhonotus multicarinatus):

This lizard was observed on numerous occasions in several areas in the hills. One was found under concrete blocks on a slope at the northwest corner of Site No. 1 during our January survey. In the coastal sage scrub community of Site II, individuals of this species were observed on March 8, 23 and 24, 1977. Three shed skins from alligator lizards were found in three widespread areas of Site No. 2 on March 9 1977, suggesting that this species is quite common in the Baldwin Hills. Preferred habitat seemed to be in dense shrubs of California sagebrush or grassy patches with shade on north-facing slopes.

This lizard, more secretive and less easily observed than the western fence and side-blotched lizards, may actually be more common in the hills than these records indicate.

Common Kingsnake (Lampropeltis getulus):

This snake was observed on three occasions during the survey periods. One was seen during the August 4-7, 1975 survey. One individual was observed on March 8, 1977, moving through a large

patch of black mustard (<u>Brassica nigra</u>) at the top of a south-facing slope in the coastal sage scrub area at Site No. 2. A third kingsnake was seen on April 19 1977 on a grassy slope at the north-east end of Site No. 2. These sightings, while few in number, seem to indicate a moderate population of the Common Kingsnake in the hills. This snake is fairly tolerant of habitat disturbance and may be found in open fields of low annual secondary growth and in piles of debris (boards, cardboard, etc.), as well as in the more stable shrub-covered hillsides. The kingsnakes found were in habitats with relatively high populations of rodents, especially harvest mice and these rodents undoubtedly form the bulk of the food for these snakes.

Gopher Snake (Pituophis melanoleucus):

One of these common shakes was observed along a road below a grassy slope in the northeast corner of Site No. 2 on April 19 1977. Perhaps the most common snake in Southern California, the Gopher Snake should be found throughout the Baldwin Hills in most habitats. Tracks of snakes were observed in two places on a dirt road at the west side of Site No. 2, and these may have been of this species. Additional search along roads in the hills at night and early morning hours would probably reveal this species as the most common snake in the Baldwin Hills.

In terms of density, gopher snakes are probably most abundant in and adjacent to the coastal sage scrub community of Site No. 2 and on slopes with grasses and black mustard cover. Both types of habitat support rodent populations which are heavily used by the

gopher snake. Primary food for gopher snakes in the Baldwin Hills is probably harvest mice, meadow mice (Microtus californicus), pocket gophers, small rabbits and occasionally birds and their eggs and lizards.

<u>Historical Influences - Pristine Fauna</u>

<u>Mammals</u>

Native species of rodents that may have conceivably occurred at the site before its degradation include: four Cicetids, <u>Peromyscus</u> <u>eremicus</u>, <u>P. californicus</u>, <u>P. boylii</u>, and <u>Neotoma</u> <u>fuscipes</u>; four heteromyids, <u>Dipodomys agilis</u>, <u>Perognathus</u> <u>fallax</u>, <u>Perognathus longimembris</u>, <u>Perognathus californicus</u>; and one Sciurid, <u>Spermophilus beecheyi</u> (table VIII-2).

Avian

No information was available.

Amphibians and Reptiles

The Baldwin Hills as a whole appear to support a relatively low diversity of amphibians and reptiles at this time, with only six species (one amphibian, five reptiles) being found on the site during the surveys. The disturbances to the native plant communities in the past by oil production activities appears to be the primary factor in reducing the diversity of species. It is estimated that as many as twenty-eight species of amphibians and reptiles (six amphibians, twenty-two reptiles) may have occurred in the area in the past (table VIII-3). Subtracting the six known forms we are left with twenty-two species of hypothetical occurrence in the

Status: 1 = sighting with positive identification

2 = identified by sign such as scats, paw prints, hair

BLI III 2 CHE SIS F M ALE

3 = personal communication of reported sightings at/or near property
(Andrew Starrett, Calif. State Univ., Northridge and LACM)

4 = reported to occur at site by oil company employees and nearby residents

5 = hypothetical occurrence at site, within range Hall and Kelson, 1959 and/or Ingles, 1965

+ = introduced

SCIENTIFIC NAME	00101011 11F1		SITE			
OCCUPATION NAMES	COMMON NAME	I	II	III		
Didelphis virginiana	Opossum	2	3	3		
Sorex ornatus	Ornate Shrew	5	5	5		
Notiosorex crawfordi	Crawford's Desert Shrew	5	5	5		
Scapanus latimanus	Broad-footed Mole	5	5	5		
Macrotus waterhousei	California Leaf-nosed Bat	5	5	5		
Myotis lucifugus	Little Brown Myotis	5	5	5		
Myotis yumanensis	Yuma Myotis	5	5	5		
Myotis evotis	Long-eared Myotis	5	5	5		
Myotis thysanodes	Fringed Myotis	5	5	5		
Myotis volans	Long-legged Myotis	5	5	5		
Myotis californicus	California Myotis	5	5	5		
Myotis subulatus	Small-footed Myotis	5	5	5		
Pipistrellus hesperus	Western Pipistrell	5	5	5		

TABLE VIII-2 - CHECKLIST OF MAMMALS (Continued)

SCIENTIFIC NAME	COMMON NAME	I	SITE	III
Eptesicus fuscus	Big Brown Bat	5	5	5
Lasiurus borealis	Red Bat	5	5	5
Lasiurus cinereus	Hoary Bat	5	5	5
Plecotus townsendii	Townsend's Big-eared Bat	5	5	5
Anthrozous pallidus	Pallid Bat	5	5	5
Tadarida brasiliensis	Brazilian Free-tailed Bat	5	5	5
Eumops perotis	Greater Mastiff Bat	5	. 5	5
Sylvilagus audubonii	Desert Cottontail	1	1	1
Lepus californicus	Black-tailed Jackrabbit	1	1	1
Canis latrans	Coyote	5	5	5
<u>Vulpes</u> <u>fulva</u>	Red Fox	+5	3	5
Urocyon cinereoargenteus	Grey Fox	5	4	5
Procyon lotor	Raccoon	5	5	5
Mustela frenata	Long-tailed Weasel	2	2	5
Spilogale putorius	Spotted Skunk	3	3	3
Mephitis mephitis	Striped Skunk	3	2	3
Felis catus	Cat	1	1	4
Canis familiaris	Dog	1	1	1.

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TABLE VIII - 3 - CHEC	KLIST OF AMPHIDIANS AND REFAILE	о ВАши	VIN ALLS	LAKE, MII	1
Status: 1 = sight	ted with positive identificatio	n		IBU 1	
2 - Teported by personner as the state				MTNS.	
3 = spec	ies which may be present based		RECORDED FROM EL SEGUNDO DUNES-5 MILES OTO SOUTHWEST	RECORDED FROM M SANTA MONICA MI TO NORTHWEST	
SCIENTIFIC NAME	COMMON NAME	STATUS	<u> </u>	公公 日	-
Batrachoseps attenuatus	California Slender Salamander	3	x	x	
Batrachoseps major	Garden Slender Salamander	1			
Ensatina eschscholtzi	Ensatina	3		X	
Scaphiopus hammondi	Western Spadefoot	3			
Bufo boreas	Western Toad	3	X	x	
Hyla regilla	Pacific Treefrog	3	x	X	
Coleonyx variegatus	Banded Gecko	3			
Phrynosoma coronatum	Coast Horned Lizard	3	x	X	
Sceloporus occidentalis	Western Fence Lizard	1	x	x	
Uta stansburiana	Side-blotched Lizard	1	X	X	
Eumeces skiltonianus	Western Skink	3	X	X	
Cnemidophorus tigris	Western Whiptail	3		x	
Gerrhonotus multicarinatus	Southern Alligator Lizard	· 1	X	x	

TABLE VIII - 3 d . - CHECKLIST OF AMPHIBIANS AND REPTILES (Continued)

TABLE VIII - 3	CHECKLIST OF AMPHIBIANS AND	REPTILES (M MALIBU MONICA MTNS. NORTHWES"
SCIENTIFIC NAME	COMMON NAME	STATUS	RECORDED FROM EL SEGUNDO DUNES-5 MILES TO SOUTHWEST	RECORDED FROM LAKE, SANTA M
Anniella pulchra	California Legless Lizard	3	x	x
Leptotyphlops humilis	Western Blind Snake	3		
Lichanura trivirgata	Rosy Boa	3	x	
Arizona elegans	Glossy Snake	′ 3		
Diadophis punctatus	Western Ring-necked Snake	3	x	X
Hypsiglena torquata	Spotted Night Snake	3		x
Lampropeltis getulus	Common Kingsnake	· 1	. X	x
Masticophis lateralis	Striped Racer	3		X
Masticophis flagellum	Coachwhip (Red Racer)	2	x	X
Coluber constrictor	Racer	3	x	x
Pituophis melanoleucus	Gopher Snake	1	x	X
Rhinocheilus lecontei	Long-nosed Snake	3		
Salvadora hexalepis	Western Patch-nosed Snake	3		
Tantilla planiceps	Western Black-headed Snake	3		x
Crotalus viridis	Western Rattlesnake	, 2	x	x

hills, several of which may still be found in the area but were overlooked in the survey (i.e. western toad, <u>Bufo boreas</u>; coast horned lizard, <u>Phrynosoma coronatum</u>; western skink, <u>Eumeces skiltonianus</u> and others).

Rare, Endangered and Threatened Species

Mammals

Of the species of mammals observed during the survey or reported by other individuals to occur in the area, none are considered rare or endangered in Los Angeles County.

Avian

Six birds observed or expected at the sites are on the Blue list of Threatened species, sharp-shinned hawk, Cooper's hawk, American kestral, barn owl, burrowing owl, and loggerhead shrike. One (white-tailed kite) is on the California Fish and Game Fully Protected list and 10 (turkey vulture, white-tailed kite, sharp-shinned hawk, Cooper's hawk, red-tailed hawk, American kestral, barn owl, screech owl, great-horned owl and burrowing owl) are limited in number because of their position in the food chain. Other birds that most likely occur in the area at some time of the year are listed in the Appendix.

Amphibians and Reptiles

None of the amphibians or reptiles observed in the Baldwin Hills during the survey are considered rare or endangered on the official Federal of State lists. Two species projected as possibly occurring at the site, the coast horned lizard (the subspecies

blainvillei) and the California legless lizard (Anniella pulchra) are listed as "threatened" due to habitat destruction, in the Society for the Study of Amphibians and Reptiles' Endangered and Threatened Amphibians and Reptiles in the United States (Ashton, 1976). In addition, four species, the coast horned lizard, California legless lizard, rosy boa (Lichanura trivirgata), and common kingsnake, projected as possibly occurring at the site, are protected by California Department of Fish and Game Bag Limits.

RECOMMENDATIONS

- 1. An effort should be made to conserve the best stands of the Coastal Sage Scrub Community presently at the sites.
- 2. Corridors should be established where they do not curently exist between islands of native vegetation.
- 3. The diversity of plant species should be increased at selected sites.
- 4. Should some of the area be restored, plantings should be planned so as to have the optimal amount of edge available for wildlife.

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APPENDIX A ANNOTATED CHECKLIST OF THE BIRDS OF THE BALDWIN HILLS

Names and order conform to the fifth edition of the A.O.U. Checklist of North American Birds and 32nd Supplement.

Seasonal Status Abbreviations

R = Resident

SV = Summer Visitor WV = Winter Visitor

M = Migrant

Abundance Abbreviations and Definitions

a = abundant: many should be seen on each excursion at the right season in the proper habitat.

c = common: should be seen regularly in the normal habitat at the proper season of

the year.

u = uncommon: of regular occurrence in small numbers, at the proper time of the year, but not likely to be observed on every field trip.

occ = occasional: to be looked for in the proper habitat at the right season every year, but not regularly observed annally.

r = rare: recorded a few times only, and

very unlikely to be seen.

f = former: past records are very old and the proper habitat is now absent.

Site Abbreviations

I = observed within Site I II = observed within Site II III = observed within Site III

- Turkey Vulture = M:occ, II small group observed migrating overhead on March 15, 1977
- White-tailed Kite = WV:r, II one observed on Nov. 29, 1947 by Ralph Mall (Aud. Field Notes 2:24), reported by Andrew Starrett on unknown dates
- Sharp-shinned Hawk = WV:u, I, II observed a few times only in I. Usually seen in canyons along Route A
- Cooper's Hawk = WV:r reported by Andrew Starrett as observed on unknown dates
- Red-tailed Hawk = R:c,I,II,III common on site I & II. Breeds in Eucalyptus grove in site I and probably breeds along route A
- Rough-legged Hawk = WV:occ reported by Andrew Starrett as observed on unknown dates
- American Kestrel = R:c, I,II,III undoubtedly breeds. Observed throughout the study area
- California Quail = R:u, I,II confirmed breeder in site II.
- Sandhill Crane = WV:f In 1875, it was described that "Immense flocks of Sandhill Cranes, now rare, covered the hills near Ballona Creek" explained to me as being the Baldwin Hills.
- Killdeer = WV:u, II found near the relay towers and at temporary
 pools near the motorcycle area.
- Whimbrel = M:r reported by Ralph Mall in April 1947 and again in 1948 (Aud. Field Notes 1:164, 2:189). No recent observations.
- Long-billed Dowitcher M:r, II found at a temporary pond on Aug. 4, 1975
- California Gull = M:u, I,II,III seen overhead upon several occasions.
- Ring-billed Gull = M:u, I,II,III seen overhead with California Gulls on foggy mornings.
- Rock Dove = R:c, I,II,III undoubtedly breeds. Found near man-made structures or overhead. Often on relay towers in site II.
- Morning Dove = R:a I,II,III confirmed breeder

- Spotted Dove = R:u, I,II found near residential areas bordering sites I and II. Probably breeds in the residential areas.
- Barn Owl = R:u reported by Andrew Starrett as observed on unknown dates.
- Screech Owl = R:r reported by Andrew Starrett as observed on unknown dates.
- Great Horned Owl = R:u, I,II pellets found near relay towers in site II. One individual observed in the Eucalyptus grove in site I.
- Lesser Nighthawk = SV:u, II probably uses all sites for feeding.
 Arrives in late May.
- Vaux's Swift = M:u, II observed with flocks of White-throated Swifts in March, 1977.
- White-throated Swift = M:c, I,II,III
- Black-chinned Hummingbird = SV:c, II undoubtedly breeds. Found along route A.
- Costa's Hummingbird = SV:u, II observed displaying territorial behavior along route A.
- Anna's Hummingbird = R:a, I,II,III breeds in all three sites.
- Rufous Hummingbird = M:u, I two observed in early March, 1977.
- Allen's Hummingbird = M:u, I, II several observed during March and April, 1977.
- Common (Red-shafted)Flicker = R:u, I, II found in the canyon bottoms along route A and the Eucalyptus grove in site I. Very little nesting habitat available.
- Downy Woodpecker = WV:r one observed in the canyon bottoms along route A.
- Western Kingbird = SV:u, I,II
- Ash-throated Flycatcher = SV:u, II observed along route A.
- Say's Phoebe = WV;u, I, II several observed throughout the winter.
- Western Flycatcher = M:u, II several observed during migration along route A in late April, 1977.

- Western Wood Pewee = M:occ, II one observed along route A in early April, 1977.
- Violet-green Swallow = M:c, I,II,III Arrived in late March. Many observed feeding over all three sites.
- Tree Swallow = M:u, I,II observed with Violet-green Swallows from late March to early April, 1977.
- Rough-winged Swallow = M:u, I,II several observed. May breed in the area.
- Barn Swallow = M:occ, II two observed over the motorcycle area in site II in late March, 1977.
- Cliff Swallow = SV:c, I,II,III breeds under the bridge over La Cienega Blvd. between sites I and II. May brred on the walls of the abandoned reservoir. Arrives in early March.
- Scrub Jay = R:c, I, II, III confirmed breeder along route A.
- Common Raven = R:u, II, III five individuals estimated for the area. It is unknown where they breed in the study area.
- Common Bushtit = R:c, I,II
- Bewick's Wren = R:u, I,II most often observed along route A.
- Cactus Wren = R:c, I,II confirmed breeder. Common wherever there are large stands of Prickly-pear Cactus.
- Mockingbird = R:c, I,II,III confirmed breeder.
- Robin = WV:occ, I;II three observed along route B and two near the residential area bordering the abandoned reservoir in February, 1977.
- Hermit Thrush = WV:u, I,II
- Swainson's Thrush = M:u, I,II several observed in early May, 1977.
- Ruby-crowned Kinglet = WV:occ, I,II several observed during February, 1977. None observed in December, 1975.
- Cedar Waxwing = WV:occ, I,II
- Loggerhead Shrike = R:c, I,II,III confirmed breeder in sites I and II. Observed throughout the study area.

- Starling = R:a, I,II,III many individuals observed throughout all three sites. Confirmed breeder.
- Warbling Vireo = M:u, II one observed in late April, 1977 along route A.
- Orange-crowned Warbler = M:u, I,II may also winter in the area.
- Yellow-rumped (Audubon's) Warbler = WV:u, I,II
- Black-throated Gray Warbler = M:u, II several observed along route A and in clumps of Coyote Brush in April and May, 1977.
- Townsend's Warbler = M:u, I,II -several observed in willows in the canyon bottoms along route A.
- Wilson's Warbler = M:c, I,II scattered individuals throughout site I and II.
- House Sparrow = R:a, I,II,III- confirmed breeder. Abundant around any man-made structure.
 - Western Meadowlark = R;u, I,II found in the large, open fields of Black Mustard.
 - Northern (Bullock's) Oriole = SV:u, II three observed along route A during June, 1977.
 - Brewer's Blackbird = WV:occ, II one small flock of eight observed in the motorcycle area during early February, 1977.
 - Brown-headed Cowbird = SVic, I, II, III arrived in mid-May.
- Black-headed Grosbeak = SV:c, I,II arrived in early April.
 Singing males on territory along route A in late May.
- House Finch = R:a, I,II,III confirmed breeder. Abundant throughout the study area.
 - American Goldfinch = R:u, I,II often observed feeding on Sweet-Fennel.
 - Lesser Goldfinch = R:u, I,II
 - Rufous-sided Towhee = R:c, I,II undoubtedly breeds.
 - Brown Towhee = R:a, I,II,III confirmed breeder. Abundant throughout the study area.

- Black-throated Sparrow = M:r observed by Howard Cogswell on December 27,1954 and described as being "far from typical habitat." (Aud. Field Notes 8:272)
- Dark-eyed (Oregon) Junco = WV:occ, II several individuals observed near the residential area adjacent to the abandoned reservoir in early February, 1977. Also observed there during December, 1975.
- White-crowned Sparrow = WV:a, I,II,III last observed during the 1977 survey period on April 19.
- Golden-crowned Sparrow = WV:u, II- several individuals observed along route A and near the residential area adjacent to the abandoned reservoir in February, March, and early April, 1977.
- Fox Sparrow = WV:occ, II observed in December, 1975, but not in 1977.
- Lincoln's Sparrow = WV:occ, I,II most of the individuals were observed in the willows in the canyon bottoms along route A.
- Song Sparrow = R:c, II only observed in the canyombottoms along route A. Confirmed Breeder.