

VERTEBRATE SURVEY
OF THE BAYSIDE TRAIL
1975

VERTEBRATE SURVEY
of the
BAYSIDE TRAIL AREA:

Cabrillo National Monument

by

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Fall 1975

submitted to

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Introduction

The purpose of this survey was to determine what vertebrates can be found in the inclusive area of the Bayside Trail, Cabrillo National Monument. In addition, habits, diets, cycles, and habitats were researched. To be as comprehensive as possible, all vertebrates of this particular community, whether or not found, were included in the supplemental research. The fundamental objective of this survey is to acquaint the trail guide with vertebrates that make their habitat in the Bayside Trail area. Coupled with previous studies concerning plant communities and military installations, this survey should help round out the visitor's orientation to the Bayside Trail.

However, for the purposes of time, accuracy and space, this survey will not include birds nor insects. A study of these, probably the most visible of the vertebrates, should be undertaken as soon as possible.

Background and Classification: Bayside Trail

According to the Cabrillo National Monument, "Natural Resources Management Plan", the Bayside Trail area covers 57 acres of land transferred from the Navy. It varies in elevation from 63 to 432 feet. Continuing from the "Natural Resources Management Plan",

The normal daily maximum temperature for January, the coldest month of the year is 63°F; the average minimum for the same month is 55°F. For August, the hottest month, the normal maximum is 78°F; the normal minimum is 66°F.

Normal rainfall is 10 inches with 75% occurring from November through March. Prevailing winds from the west blow almost all afternoon between 8 and 15 knots per hour.

The temperature and rainfall, along with other environmental factors, determine the criteria of the plant and animal communities. For this reason, many investigators have classified environments and their communities from different viewpoints. Further.

No two species have exactly the same distribution or niche, and no two communities have exactly the same species composition. The dynamic nature of the environment is also responsible for changes from one moment to the next, renders any single system of characterization difficult.¹

Therefore, the varied classifications of communities of the Bayside Trail area will be presented.

C. Hart Merriam proposed a classification system of animal and plant distribution based on temperature gradients. These division of communities were called Life Zones. The Bayside Trail area would be classified as Upper Sonoran and/or Lower Sonoran. The community characteristics and indicator species are as follows:

Upper Sonoran

Here plants and animals exist through long dry summer and fall. Plants have small vertically placed leaves, thick bark,

dense wood, or small flowers and seeds. Typical ground cover may be open grassy land with scattered trees or thick brush such as chaparral. The average altitude is 1000 to 4000 feet. Rainfall is approximately 10 to 20 inches per year.

Characteristic Species:

Sycamore (Plantanus racemosa), Pinyon pine (Pinus mono-phylla), Digger pine (Pinus sabiniana), Poison oak (Rhus diversiloba), White sage (Salvia), California poppy (Eschscholtzia californica), Scrub oak (Quercus dumosa), Toyon (Heteromeles arbutifolia); Tree salamander (Aneides lugubris), redlegged frog (Rana aurora), alligator lizard (Gerrhonotus multicarinatus), California king snake (Lampropeltis getulus); California quail (Lophortyx californicus), Scub jay (Aphelocoma coerulescens), Bush tit (Psaltiriparus minimus); Raccoon (Procyon lotor), Grey fox (Urocyon cinereoargenteus), Cacomistle (Bassariscus asurus), Black-tailed jackrabbit (Lepus californicus), Brush rabbit (Sylvilagus bachmani).

Lower Sonoran

The plants are adapted to a hot, dry climate. They may have condensed bodies, reduced or fleshy leaves, a resinous or wooly covering or a very short life cycle. Trees are found only near streams. Animals are mostly nocturnal or crepuscular. Found from below sea level to 3000 feet.

Characteristic Species:

Joshua tree (Yucca brevifolia), Fan palm (Washingtonia filifera), Palo verde (Cercidium), Screw-bean mesquite (Prosopis juliflora), Ocotillo (Fouquieria splendens), Cresote bush (Larrea divaricata), Cholla (Opuntia sp.); Red-spotted toad (Bufo punctatus); Sand lizard (Uma sp.), Desert tortoise (Gopherus agassizi), Sidewinder (Crotalus cerastes), Gambel's quail (Lophortyx gambelli), Gila Woodpecker (Centurus uropygialis); Kit fox (Vulpes macrotis), Woodrat (Neotoma lepida), Kangaroo Rat (Dipodomys deserti), Round-tailed ground squirrel (Citellus tereticaudus)

Other classifications would include:

Coastal Sage Scrub

Usually dry rocky or gravelly slopes, South Coast Ranges to Baja California, below 3000 feet and below Chaparral. Annual rainfall 10 to 20 inches. Plants half-shrubs, 1 to 5 feet tall or somewhat woodier and larger, forming a more open community than Chaparral.

Characteristic Species:

Sagebrush (Artemisia californica); Chia (Salvia apiana); Buckwheat (Eriogonum fasciculatum); Sumac (Rhus integrifolia); Encelia (Encelia californica); Haplopappus (Haplopappus squarrosus).

As depicted by the many systems of classifications, there is overlap and simplification between divisions. The Bayside Trail does not fall into one classification, but has characteristics in many. This coupled with introduced plant and animal species, makes the Bayside Trail area a location for a variety of plant and animal communities.

Results of the Study

Throughout this study, it must be remembered that the method of survey and the subsequent results are neither valid nor scientific.

The identification of vertebrates on the Bayside Trail was determined by several means. The main source was tracking. On six different dates tracking pits were constructed and baited with a combination of peanut butter and oatmeal. The tracks were identified by means of a tracking field book, available in the library at Cabrillo National Monument.

Other sources included visual identification, sightings, and plaster casts made by the staff at Cabrillo. Valid field identification was made possible by the use of a "Key to Vertebrates and Natural History of Southern California", by Dr. Don Hunsaker II.

The most visible vertebrates found, outside of birds and insects, were the Desert cottontail (Sylvilagus auduboni), Brush rabbit (Sylvilagus bachmani), California ground squirrel (Otospermophilus beecheyi), Western fence lizard (Sceloporus occidentalis), and the Side-blotched lizard (Uta stansburiana).

Evidence of other vertebrates included the Gray fox (Urocyon cinereoargenteus), Mule deer (Odocoileus heminus), Western rattlesnake (Crotalis viridis), California mouse (Peromyscus californicus), Common dog (Canis familiaris), Common garter snake (Thamnophis sirtalis), and the House cat

(Felis domestica).

Results of the Tracking Pits

Four tracking pits were constructed by finding a relatively clear area free of brush and debris. Areas were selected on the basis of sightings and evidence of vertebrate activity. The clear area was then smoothed and leveled of all detail and baited to attract animals to the tracking pit. The areas were then numbered, see enclosed map for locations and number assignments. The results were as follows:

October 15:

Pit #3-Ground squirrel, rabbit, mouse , birds

October 17:

Pit #3-Ground squirrel, rat or mouse, possible rabbit, birds

October 22:

Pit #3-Ground squirrel, rabbit, small cat, birds

Pit #2-Dog, fox, squirrel, rabbit, birds

October 28:

Pit #4-(Oatmeal only partially eaten), Squirrel, rabbit, birds

November 5:

Pit #2-Squirrel, mouse, birds

Pit #3-Dog, mouse, squirrel, possible rabbit, no birds

Pit #1-Fox, squirrel, mouse

November 12:

Pit #4-Squirrel, rabbit, birds

Pit #3-Mouse, dog, possible fox, birds

Pit #2- Small Cat, rabbit, mouse

Pit #1-Mostly birds, mouse, possible squirrel

Tracking Pit #3 was setup the most because of an obvious over abundance of tracks and signs of vertebrate populations.

This tracking area was located in the steep canyon below the Cabrillo statue. Near a pile of debris, this area was traveled extensively by squirrels, rabbits, mice and the predator species of dog, fox and small cats (probably wild house cats.)

Tracking Pit #2 had the best opportunity for vertebrate identification. Located at the base of a long steep canyon, it extended the total width of the surveyed area. At the bottom of this canyon the area is densely grown over with lemonade berry bushes. But between the ground and the bottom of these bushes is a space of eighteen to twenty-four inches high. Probably caused by water drainage and subsequent erosion, the bottom of this canyon is a virtual freeway for vertebrates. Other small paths and trail formed by vertebrates connect to this canyon and lead to all parts of the Bayside Trail area. This particular canyon is labeled "A" on the enclosed map.

Tracking Pit #1 lies near the boundary of navy land. It was the last tracking area to be constructed and produced the clearest track of the Gray fox. Nearby, an old, dusty track resembling a mule deer was found. This is the same area that Ranger Brett Jones made a plaster cast of a track later to be identified as mule deer.

Tracking Pit #4 was the least productive of the tracking areas. It was located in the eucalyptus grove and was nearest

to the well traveled road. In this vicinity, many squirrels and Brush Rabbit tracks were identified. Most probably, the activities of man kept the vertebrates away from feeding of the baited oatmeal and peanut butter.

Results of the Field Observations

The majority of the field observations were conducted in the morning. During this time, the larger animals were found around the visitor center, parking lot and lighthouse. Animals such as rabbits and squirrels were sighted from the old generator station and above to the lighthouse.

All along the trail, lizards were also sighted. One could walk almost right up to it and readily identify the lizard. Of all the lizard sightings, only two species were found, the Western Fence and the Side-blotched lizard.

Desert Cottontail rabbits were sighted primarily in the parking lot area of the visitor center, extending toward the lighthouse and the entrance. Distinguished from the Brush rabbit by the big distinctive white tail (hairs white to the roots), they scamper rapidly away to freeze in a near by bush.

The Brush rabbits were sighted primarily near the various old military facilities and the eucalyptus groves. They have smaller grayer tails and tend to run and hide than to freeze. The Brush rabbit makes definite paths for travel.

Bayside Trail Vertebrates: what was & what might be found.

The following list of vertebrates can be divided into four categories: visually identified, signs of vertebrates found, vertebrates that correspond to the plant communities and are found nearby, and vertebrates that might be found. This last category of probable vertebrates will not be discussed, only mentioned in the list.

I. Visually Identified Vertebrates

Desert Cottontail (Sylvilagus auduboni)
Brush Rabbit (Sylvilagus bachmani)
California Ground Squirrel (Otospermophilus beecheyi)
Common Garter Snake (Thamnophis sirtalis)
Dog (Canis familiaris)
House Cat (Felis domestica)
Western Rattlesnake (Crotalis viridis)
Western Fence Lizard (Sceloporus occidentalis)
Side-blotched Lizard (Uta stansburiana)

II. Vertebrate Signs Found

Mule Deer (Odocoileus heminus)
Gray Fox (Urocyon cinerivergatus)
Mouse (probably belong to the genus Peromyscus)

III. Vertebrates Found in the Area

Coyote (Canis latrans)
Dusky-Footed Woodrat (Neotoma fuscipes)
California Kingsnake (Lampropeltis getulus)
Gopher Snake (Pituophis melanoleucus)
Black Rat (Rattus rattus)

IV. Probable Vertebrates

Ring-tailed Cat (Bassariscus astutus)
Western Whiptail Lizard (Cnemidophorus tigris)
Cactus Mouse (Peromyscus eremicus)
Opassum (Didelphis marsupialis)
Round-Tailed Ground Squirrel (Citellus tereticaudus)
Bobcat (Lynx rufus)

Common Name: Desert Cottontail Rabbit

Scientific Name: *Sylvilagus auduboni*

Range: Primarily southwest United States ranging north to Montana and west to Pacific Ocean.

Home Range: One to five acres if in a good habitat. Ten to fifteen acres if in poorer areas.

Habitat: Valleys and arid Southwest

Diet: Great quantities of leaves, stems, flowers, sedges, and herbs. Favorites- goldenrod, bluegrass, timothy, chickweed, red clover, sorrel, alfalfa, soybeans, wheat, rye, and truck crops. In extreme hunger will eat some animal food such as moth pupae, snails, and even carrion. Like the hares, they eat their own droppings to get the nourishment missed the first time. Main feeding hours- three to four hours after sunrise and late afternoon to an hour after sunset.

Coloration: Pale grayish lightly washed with a faint yellow. Tail is white and slightly curled.

Size: Overall Length- twelve to fifteen inches
Length of Ears- three to four inches
Weight- one and two-fifths pounds to two and three-quarter pounds

Reproduction: Rabbits like hares, engage in a wild and wooly courtship with very athletic displays.

Breeding- Between March and September

Gestation Period- 26 to 30 days

Litter Size- one to nine with four or five being the usual count

Litters per Year- four to six

Newborn are four to five inches long and weigh an ounce. They open their eyes in six to eight days and are weaned in twenty. Most rabbits never reach their second birthday.

Notes: Hares are the European rabbit, the parent stock of most of the various domestic breeds. It differs slightly in its proportions from the other species and is a burrowing animal.

The Desert Cottontail and the Brush Rabbit will stamp their hind when angry or excited.

All rabbits have a split upper lip, ears, hind legs

Notes: continued

and feet smaller in proportion to body size than the hares and jackrabbits.

Rabbits do not hibernate and seldom hole up even in bad weather. Normally rabbits hop along slowly, stopping often to sit up on their hind legs and scan the area for potential danger. When frightened they run in a zigzag course and then freeze. To escape notice, a rabbit is capable of remaining perfectly still for fifteen minutes or more. They swim will when forced to.

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Common Name: Brush Rabbit

Scientific Name: Sylvilagus bachmani

Range: Coastal Oregon, California, and Baja California

Home Range: Same as Desert Cottontail

Habitat: Requires heavy brush cover

Diet: Same as Desert Cottontail

Coloration: Brush colored, distinctly brown

Size: Overall Length- eleven to thirteen inches

Length of Ears- two to two and two-fifths inches

Weight- One and one-quarter pounds to one and four-fifths pounds

Reproduction: Same as Desert Cottontail

Notes: The Brush Rabbit has definite and worn paths of travel. Very well adapted to its habitat.

Tracks- The soles of the feet are not bare as is rodents, but are covered with hair which accounts for the lack of definition in their footprints.

Common Name: California Ground Squirrel

Scientific Name: Otospermophilus beecheyi

Range: South Washington State to lower California

Home Range: one and one-half acres

Habitat: Varied. Primarily forests, grasslands and chaparral country.

Diet: Depends on animals for as much as fifty percent of diet, that is, insects, earthworms, lizards, eggs, young birds, and mice. Also feeds on seeds, nuts, roots, foliage, grasses, legumes, bulbs, and garden crops.

Coloration: mottled brown and has a round-like tail, not bushy.

Size: Overall length- fifteen to twenty inches
Weight- one to one and one-half pounds

Reproduction: Breeding occurs shortly after coming out of their deep winter sleep.

Gestation Period- twenty seven to twenty eight days

Litter Size- Between one and fourteen with an average between eight and ten.

The young are born blind, toothless, and completely helpless, weighing no more than a tenth of an ounce. The Ground Squirrel is weaned and out of the nest by the sixth week.

Notes: Constructs complex underground burrows, one animal creating several each year. The burrow has several entrances with no mounds showing. The Ground Squirrel carefully carries excavated dirt away in their cheek pouches. During the day, several entrances to a burrow will be open. At night, all are plugged with grass or brush. The two-inch opening leads into a tunnel that drops from a half a foot to four feet almost straight down. The tunnel turns at right angles and can meander twenty feet or more in several directions. There is an underground drainage system, storage chambers, a lined nesting chamber and escape hatches.

Predators: to mention a few, coyotes, foxes, domestic cats, dogs, hawks, owls and snakes.

Ground Squirrels are very shy, they are never out when the sun is not up. They even stay below on very

Notes: continued

cloudy days. Best time for observation is mid-morning to late afternoon.

They are true hibernators. Will curl up in the fall for a deep sleep where the body temperature drops from a high of 106 degrees to 37, the heart beat slows from 350 beats per minute to a low of 5, and respiration drops from 50 breaths per minute to 4. During this sleep, the ground squirrel can lose as much as one-third to one-half of its body weight.

They are basically solitary in their ways but colonial in that they build their burrows close to one another.

Once this species over ran grain fields and orchards causing an annual loss of \$ 20,000,000 to California's farmers. It also carries tularemia and bubonic plague.

Common Name: Common Garter Snake

Scientific Name: *Thamnophis sirtalis*

Range: Sea level to 8,000 feet. Genus ranges from coast to coast, across southern Canada and the United States and southward to Costa Rica. Subspecies ranges throughout northern California and south to San Diego County.

Habitat: Ponds, marshes, roadside ditches, streams, springs. Usually found near water which flows freely.

Diet: Frogs, toads, salamanders, fish, tadpoles, and earthworms. But other items include leeches, small mammals and birds are eaten occasionally.

Coloration: Longitudinally striped. Have two very small white or yellow spots on top of their heads. Color of stripes vary within genus.

Size: eighteen to fifty-one inches.

Reproduction: Breeding- June to August
Litter Size- twenty or more
Young are born alive.

Notes: When alarmed, many species will flatten out their

Notes: continued

bodies, making their coloration patterns seem particularly vivid. When first captured they discharge musk from the base of the tail which has an unpleasant, sweetish odor. Many are docile, but others may strike and bite vigorously in self-defense.

Prey is overpowered, not by constriction, and swallowed whole.

Common Name: Western Rattlesnake

Scientific Name: *Crotalis viridis*

Range: Throughout California except in the desert. Sea level to 11,000 feet

Habitat: Varied. From brush covered coastal sand dunes to timberline; grassland, brushland, woodland, and forest; rock outcrops, talus, rocky hillsides, and ledges; dens in groups in rock crevices or caves in northern part of range and at higher altitude.

Diet: Small animals- squirrels, rabbits, rodents, lizards, birds, insects and occasionally other snakes.

Coloration: predominately soil colored- gray, greenish, brown or black; tail with dark and light rings.

Size: fifteen to sixty-two inches

Reproduction: Young are born alive and twelve are common.

Notes: The tongue of the Western Rattlesnake collects air particles and transfers to chamber below nostrils and thus can smell by "tasting" the air. Has a highly developed sense of heat detection. Is capable of sensing a warm blooded animal to a range of two or three feet, which allows hunting in complete darkness.

The ideal climate is a temperature of sixty to eighty degrees F.

Rattlesnakes like water and have no fear of swimming. Age cannot be shown through the rattles, for a new rattle is formed every time it sheds skin which is two to four times a year.

The snakes main use of its venom is to immobilize its prey by destroying the muscle tissue and circulatory system. The venom is highly complex containing poly-

Notes: continued

peptides, trace metals, acids and especially enzymes.

The rattlesnake can travel as fast as three miles per hour in bursts. They also strike at a slightly slower rate than a boxer can throw a punch. They are nearsighted and are excellent receivers of vibrations, up to one hundred feet for a passing man. Are almost totally deaf.

Common Name: Western Fence Lizard

Scientific Name: Sceloporus occidentalis

Range: Throughout California from sea level to 5,000

Habitat: Varied. Grassland and woodland especially where there are rock outcroppings, fallen trees, brush heaps, old lumber and buildings. Avoids dense woods. Is well adapted to human habitation.

Diet: Primarily small insects. Very vigorous hunter, and usually out competes most other lizards.

Size: two and a half to three and a half inches.

Coloration: Dusky brown or gray above with dark blotches blue patch on throat and on each side of belly- weak or absent in young; females usually lack throat patch and belly patches are usually less vivid and smaller than male. Adults reach large size and big males are nearly solid blue below.

Reproduction: very little information available

Notes: Good climber, but rarely ascends trees. Likes to bask in sunny open areas.

Common Name: Side-blotched Lizard

Scientific Name: Uta stansburiana

Range: Throughout California except in northern coastal region.

Habitat: Throughout desert, chaparral, desert and open woodland. Common along wash bottoms and on alluvial slopes.

Size: one and three-quarters to three and a half inches.

Coloration: Scales on upper surfaces mostly granular, dark blotch behind arm pit. Males in light phase speckled above with pale blue; female with blotches or stripes, without blue flecks.

Reproduction: very little information available

Diet: Insects, spiders, scorpions

Notes: Most abundant in drier parts of California, but few individuals live more than one or two years. Named for dark spot side, most conspicuous in males, which may function in species recognition.

Common Name: Gray Fox

Scientific Name: Urocyon cinerilorgenteus

Range: Southwest United States and along Pacific Coast

Habitat: Lightly timbered, brushlands of Southwest, chaparral and woodlands of Pacific Coast.

Diet: Mice, rabbits, rats, groundnesting birds, eggs, snakes, lizards, insects, fruit, and berries of all kinds, grasses, and clay and gravel in small quantities.

Size: Overall Length- thirty-two to forty-five inches
Weight- seven to eleven pounds

Coloration: Upper parts are grizzled gray, underparts are white to ashy gray. Tip of tail- dark gray to black.

Reproduction: Mate when a year old.

Breeding- January and February

Gestation Period- fifty to fifty-three days

Litter Size- one to ten, four to six are average

Males will remain with females until late fall.

Notes: Appearance is distinctly doglike with pointed muzzle and erect-forward pointing ears. One particularity that distinguishes them from other canines: the pupils of the eyes are elliptical when contracted, while those of domestic and other wild dogs are round.

Enemies: bobcats, lynx, mountain lion, coyotes, golden eagles, man, and domestic dogs.

Hunting Behavior: Wriggling along very close to the ground with a sudden rush and a quick snap of the jaws. Generally, the fox is a "rusher and pouncer". Like the coyote, he will play dead and suddenly come to life and seize a curious spectator.

A nocturnal animal and hunts in the late morning and early evening if he is hungry enough. A good tree climber.

The den is usually in loose, sandy soil frequently on the south side of a hill. Natural rock shelters, hollow logs, and sometimes even hollow trees are used as nesting shelters.

In the southwest, Gray and Kit foxes often occupy the same general areas.

Common Name: Mouse- a variety of species

Scientific Name: genus Peromyscus

Range: Certain species make homes in arid regions of the southwest, others have adapted themselves to all habitats, from the plains to the mountain top and from Central America into much of Canada.

Diet: Both plant and animal material is eaten, however, primarily seed eaters.

Coloration: Upper parts from pale grayish buff to deep reddish brown, overlaid in varying degree of dusky; underparts usually white; tail clothed with short hairs, sharply bicolored- dark above and light below.

Reproduction: Breeding- all months, but less often in

Reproduction: continued

autumn and winter. Gestation period is from twenty-one to twenty-seven days. Young are able to breed at six to seven weeks after birth

Notes: Do not cut runways through the grass as do the field mice, but live among logs and bushes. They will climb up on tree trunks and into bushes. Nests vary in size from a few inches to nearly a foot in diameter. Nests built in burrows, logs, holes in trees and bushes.

These animals, especially the females in the breeding season, occupy definite territories. Further, there is evidence of a pronounced homing instinct.

Common Name: Coyote

Scientific Name: Canis latrans

Range: All states west of the Mississippi River

Home Range: From a few square miles to over twenty-five.

Habitat and Diet: Can adapt to almost any surface environment on the continent and thrives on almost any food he can swallow.

Size: Length- forty-two to forty-eight inches, tail is sixteen inches.

Weight- thirty-five to forty pounds

Coloration: Hair is coarse, grizzled and runs from buff gray to black. The tip of the tail is almost always darker and generally black.

Reproduction: Coyotes mate for life at two years old.

Breeding- Between January and May

Gestation Period- Between sixty and sixty-three days

Litter Size- Between three and nineteen, six to seven are average.

Weaned at eight weeks.

Notes: Name from the Aztec word "coytle" while his Latin name means "barking dog". According to an Indian legend, the coyote will be the last animal on earth.

Notes: continued

The coyote lives in a family unit of father, mother and cubs of that year. They are nocturnal.

Common Name: Dusky-footed Woodrat

Scientific Name: *Neotoma fuscipes*

Range: Western central California, western Oregon and Baja California.

Home Range: Thirty to forty yard radius from nest.

Diet: Vegetable matter- fruits, berries, seeds, bark of twigs, herbs, grasses and pulp of cactus joints.

Size: Six to eight inches

Coloration: Upperparts are a deep dull brown; belly is white or grayish; tail is long and nearly uniformly dark; top of hind feet have clearly defined dusky areas.

Reproduction: Species breeds when less than a year old.

Gestation Period- thirty-three days

Size of Litter- two to four

Number of litters depend on environmental conditions, may range from a year to breeding all year round.

Notes: Life span- three to four years. Mainly nocturnal and colonial. Builds bulky houses usually at the base of large shrubs. Voice is a squeal and a shrill chatter, chirps at mating time. Thumps with one or both feet or vibrates the end of its tail to communicate warning. Collects attractive objects such as coins, watches, spoons and other shiny metal objects.

Common Name: Mule Deer

Scientific Name: Odocoileus hemionus

Range: Central Mexico north through Manitoba and west to the coast, except in northwest California, western Washington, Oregon, and British Columbia where the blacktail is

Diet: Largely twigs and brush, while grass is eaten but not favored. Gets along well without water except for that obtained from succulent plants. Eats moss but favors nuts, acorns, and evergreen oak.

Habitat: Widely found throughout San Diego County in the mountains and along the coast plus known to be dwelling in the larger canyons of the city. The mountain populations migrate from their summer ranges in autumn to more favorable wintering areas and then return the following spring. The average home range comprised an area of about one-half to three-quarters of a mile.

Size: Length about 6 feet, including a 8 inch tail. Shoulder height to 42 inches. Weight to 450 pounds. Doe smaller with average length of 4 feet.

Color: Winter-brownish gray with black above; throat, inside legs, patch on buttocks, and face white, tail white except for black bunch on tip. May to August, red replaces brownish-gray. Female duller, fawn yellowish with white spots.

Reproduction: Breeds in November, buck wins harem of does. one to three fawns born May to June; kept hidden 6 to 8 weeks, nursed by doe, fawns follow doe during summer and winter, young does may follow her for two years. Young mule deer may bear young at two years. Life span about 16 years.

Common Name: California Kingsnake

Scientific Name: Lampropeltis zonata

Range: Baja to Washington state. Generally found at elevations below 8,000 feet. The California Mountain Kingsnake, a subspecies, is found exclusively between 4,000 and 8,000 feet.

Diet: Lizards, mice and snakes. Rumor to seek out and destroy rattlesnakes. This is only partly true. The California Kingsnake will, given the opportunity, feed on the rattlesnake but not exclusively so.

Habitat: General distribution in large canyons and throughout the mountains. Occupies the Upper Sonoran and transitional zones.

Size: Adults range from 10 to 37 inches. Two feet is considered large.

Color: Coloration varies among subspecies. Primarily, pattern of rings red-black-white.

Reproduction: Oviparous. Males 530mm-919mm, females 583mm-917mm. Breeding occurs in the spring. Longevity- 13 years 6 months.

Common Name: Gopher Snake

Scientific Name: Pituophis melanoleucus

Range: Very wide distribution, almost all over the U.S.

Diet: Gophers, ground squirrels, field mice, and bird eggs.

Habitat: all kinds of habitats-prairie grass, desert mesquite, pine forests, cultivated farms. A diurnal or crepuscular snake

Size: Body between 27 and 37 rows of keeled scales at midbody. Length- $3\frac{1}{2}$ to 5 feet.

Color: Color varies with subspecies. Primarily, yellow or cream top color. Belly white or yellowish frequently spotted with black. Also occurring in brown or reddish with brown dorsal blotches, usually dark line across head in front of eyes and from behind eye to angle of jaw.

Reproduction: Breeding occurs in the spring. Number of young vary upon the environmental conditions.

Notes: Often mistaken for rattlesnake. Has similiar markings and when alarmed, hisses loudly, flattens and broadens head and vibrates tail. Highest hiss in snakesdom created by special modification of the glottal region of the trachea. Scientific name of Pituophis meaning phlegm serpent, which refers to hiss. The Gopher Snake may appear dangerous but is actually harmless and beneficial. It is a good climber and burrower.

Common Name: Black Rat

Scientific Name: Rattus rattus

Range: Rattus rattus is found virtually everywhere. A prominent dweller of the urban areas, the black rat can out compete all other species of rats and mice.

Diet: Just about anything from vegetable matter to meat. The black rat is primarily a scavenger.

Habitat: Extremely varied and diversified.

Size: Body more than 250mm, tail 110mm

Color: Upper parts tawny to black, underparts gray to white, tail sparsely haired and scaled, not bi-colored.

Reproduction: High reproductive potential. Gestation period--22 days. Litter size 6-22. Young may breed at 3 months. 3-7 litters per year.

Notes: The black rat was probably introduced from ships from early explorers. Weight-115-350 grams. The black rat traditionally has had a very mean disposition and tends to fight rather than run.

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Vertebrates on the Bayside Trail

The following species of vertebrates have either been sighted and identified or evidence such as tracks have been discovered. With a quick and watchful eye, you may be able to sight some of the following animals:

X California Ground Squirrel (Otospermophilus beecheyi): One of the most visible mammals, this squirrel can be seen on rocks, walls, and in clearings. They dig their own burrows and sometimes live in colonies. Also, they are ~~very~~ ^{which} fond of the sea fig ~~that~~ ^{which} grows on monument grounds. ~~Length-~~ ^{Length-} about 16 inches ~~in body length~~. a dark patch of fur extending from the head down to the middle of the back. Shoulders and sides of head are light gray.

X Round-tailed Ground Squirrel (Citellus tereticaudus): A less visible species than the Calif. Ground Squirrel, it is basically shy and secretive. The ~~mouth of the~~ ^{entrance to the} burrows ~~is~~ ^{are} directly below some part of any large bush. ~~Length-~~ ^{Length-} about 10 inches. Its tail is long, nearly unicolorous which is round and not bushy (thus its name).
Ground Squirrel Tracks:



X Brush Rabbit (Sylvilagus bachmani): ~~Also~~ ^A a very visible ~~species~~ ^{animal} at Cabrillo, the brush rabbit is a Pacific Coast species. It lives in the chaparral and makes well defined runways at the edge of bush. Body is uniformly dark brown or brownish gray. They do not burrow, but makes a nest in the bush. The brush rabbit is also a food source for such predators as gray fox, house cats, red-tailed hawks, gopher snakes and rattlesnakes. All of which are are found on Point Loma.

X Desert Cottontail Rabbit (Sylvilagus auduboni): This species is most often sighted in the parking lot by the Visitor Center. It is a burrowing species that likes to live under permanent structures. The cottontail's senses of hearing and sight are highly developed; its sense of smell is poorly developed. It feeds on fallen fruit and the leaves of various plants. Unlike the brush rabbit, it has black-tipped ears, is overall grayish and has a broad white tail.
Common Rabbit Tracks:



Mouse Group (Family Cricetidae): Several species of mice inhabit the Bayside Trail area. Most are hard to find during the day being primarily nocturnal. They will eat a wide variety of seeds, parts of plants and a few insects. One

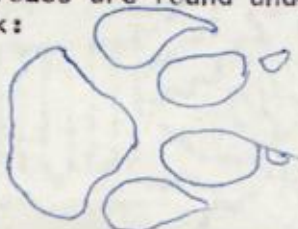
of their favorite foods is the pulp of the prickly pear cactus. Mice are a species for predators, having large litters several times a year.
Actual Size of Mouse Tracks:



Dusky-Footed Wood Rat (Neotoma fuscipes): Woodrats basically are a docile species. Living in houses built of sticks and located at the base of large bushes, the Dusky-Footed Wood Rat is colonial. Its territory extends about 20-25 feet each direction from its ~~house, home,~~

Gopher Snake (Pituophis melanaleucus): A predator, ~~species~~, the gopher snake keeps check on the rodent, squirrel and rabbit population at Cabrillo. A harmless reptile, it averages $4\frac{1}{2}$ feet long, has squarish blotches of black, brown or grayish, brown in color. Primarily nocturnal, the gopher snake is often mistaken for the Western Rattlesnake (Crotalus viridis), which is also found at Cabrillo.

✓ Gray Fox (Urocyon cinereoargenteus): You may catch a glimpse of an animal resembling a small shepard dog. This is the gray fox. It is steel gray with a dark stripe which runs down the back ~~along~~ ^{to} the top of the tail. Also a predator, its food source is gophers, rabbits, wood rats and ~~some species of~~ birds. The dens of gray foxes are found under large rocks or crevices in cliffs.
Its Track:



Mule Deer (Odocoileus hemionus): Even though no mule deer has been sighted, some ~~one~~ tracks have been discovered. It favors large twigs and brush, and has a fairly large territory. Its Track:



Western Fence Lizard (Sceloporus occidentalis): Probably best known and most visible on the Bayside Trail. Dusky brown or gray ~~above~~ with dark blotches, blue patch on throat and on each side of belly. Feeds on insects. Length- $2\frac{1}{2}$ to $3\frac{1}{2}$ inches.

Side-Blotched Lizard (Uta stansburiana): Abundant in the drier parts of California. Named for dark spot on each side behind the armpit, most visible in males, ~~which may function as species recognition~~. Food ^{mainly} insects, spiders and scorpions. Length- ^{is} one and three-quarters to three and one-half inches.