

MAMMALS
OF
LOS ANGELES COUNTY,
CALIFORNIA



By

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LOS ANGELES COUNTY MUSEUM

SCIENCE No. 21

ZOOLOGY No. 9

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Since the publication of the first edition of this booklet (No. 9 in the Los Angeles County Museum Science Series) by George Willett in 1944, our knowledge of the forms of mammals present within the county has increased sufficiently to warrant a revision of the paper, rather than a reprinting. Several changes in the list have been made, with some forms being added, and several names for forms appearing in Willett's paper being changed to conform to current usage.

In accordance with the suggestion of the committee on nomenclature of the American Society of Mammalogists, common names are applied only to the species, with all the subspecies (races) within each species being given the same common name. The scientific names are given for the races found within Los Angeles County, but only the species characters are described; the subspecies are restricted only through their geographic distribution. It is hoped that with the information found here, the field observer may be able to identify all the species of mammals found within the county. It must be remembered, however, that many wild mammals are nocturnal in habit and thus seldom seen by the casual observer.

The classification found in this paper follows that of Gerrit S. Miller, Jr., and Remington Kellogg in their *Catalog of North American Recent Mammals*, Bulletin number 205 of the United States National Museum, Washington, D. C., published in 1955. Other valuable references used in the formulation of this paper are Joseph Grinnell's *Review of the Recent Mammal Fauna of California*, published by the University of California, 1933; W. H. Burt and R. P. Grossenheider's *Field Guide to the Mammals*, published by Houghton Mifflin Company, Boston, 1952; and Lloyd Ingles' *Mammals of California and the Adjacent Waters*, published by the Stanford University Press, 1954.

The measurements used in this publication are: Total length, from the tip of the nose to the tip of the tail vertebrae; length of tail, from the base of the tail to the tip of the tail vertebrae (neither of these measurements include the hair at the tip of the tail); length of the hind foot, from the heel to the tip of the longest claw; and the length of the ear in the freshly killed animal from the notch on the lower margin of the inside of the ear (pinna) to the tip.

All the subspecies discussed in this paper are represented in the research collections or in the displays at the Los Angeles County Museum with the exception of the Guadalupe Fur Seal (*Arctocephalus philippii townsendi*) and some of the Cetacea. Students and other interested individuals are invited to make free use of this source of information.

The Cetacean illustrations, prepared by Diana Bovee, are those of the first edition of this booklet; the drawing of the Pacific White-sided Dolphin was made by the author. All other illustrations are the work of William D. Berry.



Virginia Opossum

POUCHED MAMMALS (Order *Marsupialia*)

OPOSSUMS (Family *Didelphidae*)

VIRGINIA OPOSSUM (*Didelphis marsupialis virginiana*). An animal about 30 inches in length including its *naked* 12-inch tail. It is recognized by its coarse, grizzled-gray and dark-brown coat and whitish face. The ears are naked. The Virginia opossum is the only representative of the order Marsupialia native to the United States. This order is characterized by the premature birth of the young which must mature in the abdominal pouch of the mother. The opossum is not a native of the southwest, but was introduced into this area from the southeastern United States sometime during the early part of the twentieth century. It has become generally distributed on the Pacific slope.

INSECT EATERS (Order *Insectivora*)

MOLES (Family *Talpidae*)

BROAD-FOOTED MOLE (*Scapanus latimanus occultus*). Length about 6 inches; long, pointed nose, minute eyes and ears hidden in the velvety fur; greatly broadened forefeet used in digging; color dark brown above mixed with gray below. Locally common on the Pacific slope, from near sea level to 8000 feet in the mountains. In some localities it does considerable damage to lawns and gardens.

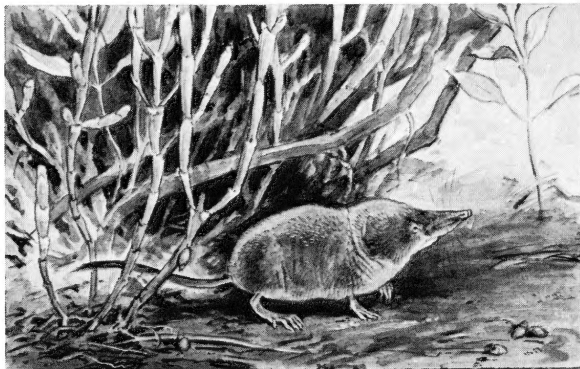
SHREWS (Family *Soricidae*)

Very small mammals with nose long and pointed, eyes and ears small but *plainly visible*, hair not velvety, forefeet not enlarged.

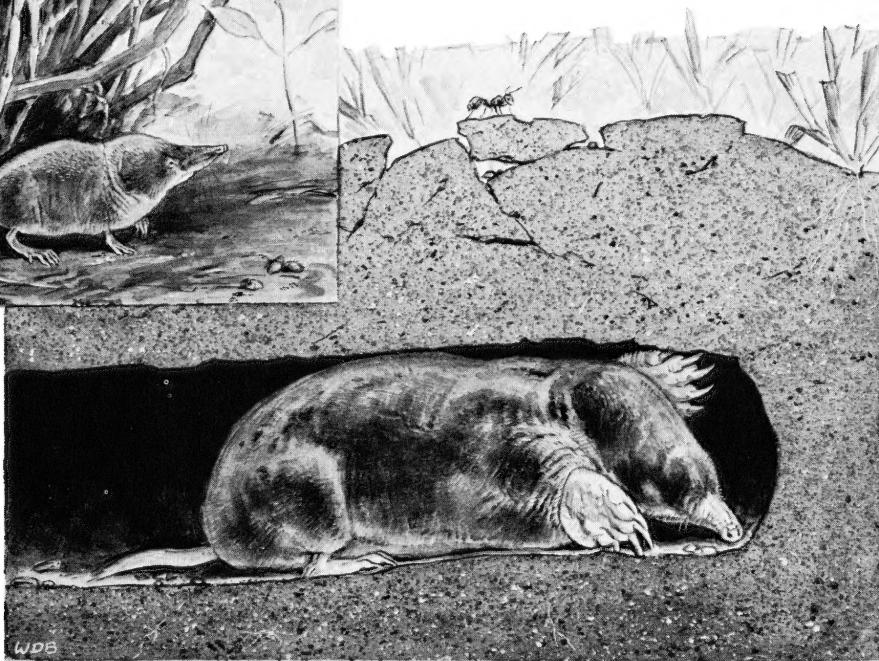
VAGRANT SHREW (*Sorex vagrans parvidens*). Length from 4 to 4.75 inches, with tail more than 1.66 inches. Almost identical to the Ornate Shrew, with differences in the skull being the only consistent means of distinction, although this race of the Vagrant Shrew is slightly larger. Distributed in the San Gabriel Mountains.

ORNATE SHREW (*Sorex ornatus*). Length less than 4.33 inches with tail less than 1.66 inches. Brown above and gray to whitish below. The ears of this and the Vagrant Shrew are hidden in the fur, only slightly visible. Three races occur in Los Angeles County: *S. o. ornatus* inhabiting most of the county, from near sea level to about 9000 feet; found in marshy ground, stream beds and even in the dry slopes beneath the chaparral; *S. o. salicornicus* found in the coastal marshes; *S. o. willetti* found on Santa Catalina Island.

DESERT SHREW (*Notiosorex crawfordi*). The smallest mammal in Los Angeles County, only about 3.6 inches long; color gray, slightly lighter below; ears project conspicuously from fur. Confined to hot, arid regions; sometimes found under yucca, agave and cactus, around beehives, and in association with woodrat houses.



Vagrant Shrew



Broad-Footed Mole



California Myotis

BATS (Order *Chiroptera*)

PLAINNOSE BATS (Family *Vespertilionidae*)

Membranes extending to end of tail, or nearly so; ears not connected at base; nose without upright, leaf-like projection. These bats may be found below 5000 feet throughout the county unless otherwise noted.

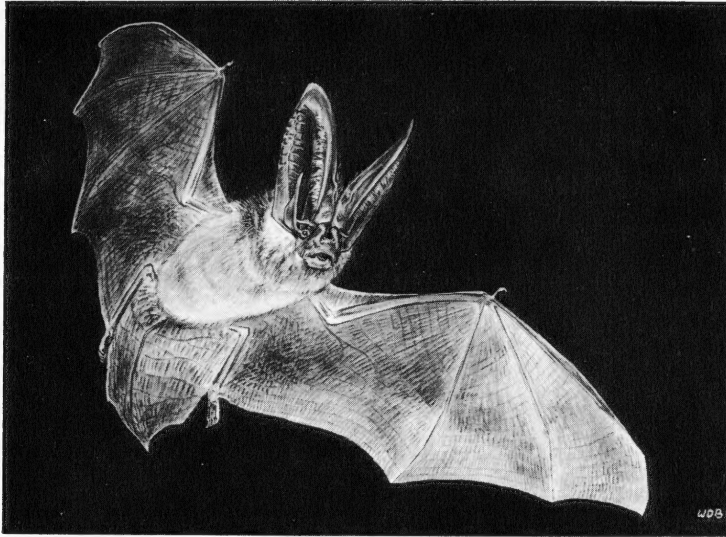
YUMA MYOTIS (*Myotis yumanensis sociabilis*). Members of the genus *Myotis* are recognized by their relatively small size (total length less than 4.1 inches), relatively small ears (less than one inch in length), and relatively naked upper surface of the interfemoral membrane. *M. y. sociabilis* is dull brown in coloration, with fur not shiny or burnished; ears when laid forward do not extend beyond nose; total length about 3.25 inches.

FRINGED MYOTIS (*Myotis thysanodes thysanodes*). Ears extend beyond nose when laid forward; free border of interfemoral membrane with conspicuous fringe of stiff hairs; total length about 3.5 inches. Found in Mojave desert.

LONG-EARED MYOTIS (*Myotis evotis evotis*). Ears nearly one inch in length; free border of interfemoral membrane with very few scattered stiff hairs; total length about 3.5 inches. Occurs up to 8000 feet in San Gabriel Mountains.

LONG-LEGGED MYOTIS (*Myotis volans interior*). Underside of wing furred out to elbow; relatively large in size with large wings, total length 3.75 to 4 inches. Found up to 8000 feet in San Gabriel Mountains.

SMALL-FOOTED MYOTIS (*Myotis subulatus melanorhinus*). Feet small and delicate in structure; hair with long shiny tips; small in size, total length about 3.25 inches.



Townsend's Big-Eared Bat

CALIFORNIA MYOTIS (*Myotis californicus californicus*). Feet small; hair dull tipped; similar in appearance to *M. subulatus*, but with hair dull rather than shiny; total length about 3.25 inches.

WESTERN PIPISTREL (*Pipistrellus hesperus*). Buffy-grayish in color, with blackish ears, feet, nose, and membranes; only 34 teeth as contrasted with 38 in *Myotis*; size small, total length about 3 inches. Two races are found in Los Angeles County: *P. h. hesperus* in the desert regions and *P. h. merriami* in the interior mountain ranges.

BIG BROWN BAT (*Eptesicus fuscus bernardinus*). Brown on back and grayish-brown below, darker between nose and eyes; a large bat, total length about 4.5 inches. May be seen up to 8000 feet in the mountains.

RED BAT (*Lasiurus borealis teliotus*). Color reddish; upper surface of interfemoral membrane heavily furred; ears round and naked; total length less than 4.5 inches. Found among broad-leafed trees.

HOARY BAT (*Lasiurus cinereus cinereus*). Hair yellowish-brown tipped with white; upper surface of interfemoral membrane heavily haired; ears round and partially haired; margin of ear dark; total length about 5.5 inches. Occurs in regions with broad-leafed trees.

SPOTTED BAT (*Euderma maculata*). Ears considerably more than one inch in length, light in color; fur on back blackish with three white spots, one on each shoulder and one at the base of the tail; total length about 4.25 inches. This bat is very rare. Anyone finding one should send it, with complete information concerning its capture, to the Department of Ornithology and Mammalogy, Los Angeles County Museum, Exposition Park, Los Angeles 7, California.

TOWNSEND'S BIG-EARED BAT (*Corynorhinus townsendii*). Ears well over one inch in length, and almost united across the forehead; conspicuous wart-like lumps on the nose between



Brazilian Free-Tailed Bat

the nostrils and the eyes; hair uniform in color from base to tip; membranes light brown; total length about 4 inches. Two races occur within the county: *C. t. pallescens* is mainly a desert resident in the eastern half of the county, and *C. t. intermedius* is found in the western part of the county including Santa Catalina Island.

PALLID BAT (*Antrozous pallidus pacificus*). Ears over one inch in length, wide apart at the base; hair with buffy-white basal portion and dark tips; membranes dark brown; total length about 4.75 inches. Found at altitudes below 4000 feet.

LEAF-NOSED BATS (Family *Phyllostomidae*)

Membranes extending nearly to tip of tail. Ears connected at base. Nose with upright, leaf-like projection.

CALIFORNIA LEAF-NOSED BAT (*Macrotus californicus*). Ears large, about one inch in length; only about one-fifth of tail free beyond membrane; leaf-like projection from nose. More common on Colorado Desert, but has been taken at Chatsworth.

FREE-TAILED BATS (Family *Molossidae*)

Much of tail extending beyond membrane. Ears wide and very close together.

BRAZILIAN FREE-TAILED BAT (*Tadarida brasiliensis mexicana*). Ears not connected at base; leading edge of ear with tiny but conspicuous bumps; sooty-brown in color, hair nearly uniform in color to base; total length about 4 inches. Distributed generally throughout county below 4000 feet.

CALIFORNIA MASTIFF BAT (*Eumops perotis californicus*). Ears connected across muzzle; leading edge of ears smooth, without bumps; sooty-brown in color, with hairs lighter at base; the largest United States bat, total length about 6.5 inches. Found along Pacific base of San Gabriel Mountains and coastal region.



Ring-Tailed "Cat"

FLESH EATERS (Order *Carnivora*)

BEARS (Family *Ursidae*)

BLACK BEAR (*Ursus americanus californiensis*). Eleven Black Bears were introduced from Yosemite Park into the San Gabriel Mountains in 1933, and appear to be maintaining their numbers in the higher parts of the mountains. Color cinnamon brown to black; total length up to 5 feet, height up to about 40 inches at the shoulders.

RACCOONS and RING-TAILED "CATS" (Family *Procyonidae*)

Tail bushy, ringed with alternate dark and light stripes

RACCOON (*Procyon lotor psora*). Color yellowish-gray, mixed with black; tail about one-third of total length, with five to seven dark rings which are complete on the underside; conspicuous black mask around eyes, connected across the nose; total length about 3 feet. Found along streams and heavy undergrowth in foothill and mountain regions.

RING-TAILED "CAT" (*Bassariscus astutus octavus*). Color grayish-brown above, buffy-white below; tail about one-half the total length, with dark stripes incomplete below; eyes ringed with black, but not in form of mask connected across the nose; smaller and more slender than the Raccoon, with shorter, softer hair; total length about 32 inches. Foothills and mountain canyons, up to about 5000 feet.

WEASELS, SKUNKS, etc.
(Family *Mustelidae*)

LONG-TAILED WEASEL (*Mustela frenata latirostra*). Color brown above, with head darker; orange-buff below; chin, middle of forehead, and band in front of ears whitish; tail with black tip; very slender, with relatively long neck; hair short, tail not bushy; total length about 15 to 18 inches. Pacific slope, from coast to foothills.

BADGER (*Taxidea taxus*). Upper parts with long, silvery hair; a single white stripe on head, extending a varying distance along back; under-surface buffy, usually with center white; feet and legs normally blackish; total length 24 to 29 inches; tail relatively short, 5 to 7 inches. The species is represented by two races in Los Angeles County: *T. t. berlandieri* in the desert areas, and *T. t. neglecta*, formerly found on plains and meadows throughout the county from near sea level to higher mountains, now scarce or absent from more settled districts.



Long-Tailed Weasel



Badger



Western Spotted Skunk



Striped Skunk

WESTERN SPOTTED SKUNK (*Spilogale gracilis microrhina*). Color black, with four or more rows of broken white stripes and spots above; tail black with white tip; white spot on forehead; length about 17 inches. From western parts of desert to sea coast, below 4500 feet.

STRIPED SKUNK (*Mephitis mephitis holzneri*). Color black, with two white stripes above connected anteriorly and continuing back onto sides of tail; tip of tail black; narrow white line down center of crown; longer and more robust than the Spotted Skunk, total length about 27 inches. Found in most of the county, below 6500 feet.

FOXES and COYOTES (Family *Canidae*)

KIT FOX (*Vulpes macrotis macrotis*). Very pale in color, upper parts pale grayish-buff, under parts white and buff; tail bushy, lacking dark stripe on upper side; small in size, total length about 30 inches, tail about 11.5 inches. Formerly ranged throughout the arid regions of the county, now found only in Antelope Valley.

GRAY FOX (*Urocyon cinereoargenteus californicus*). Color grizzled-gray and black above, lighter on the sides; ears, sides of neck, upper sides of legs, and sides of belly marked with reddish; chin and nose blackish; midline of belly white; tail bushy, with dark stripe along upper side and tip; total length about 38 inches, tail about 15 inches. Ranges on Pacific slope up to about 8000 feet.

ISLAND GRAY FOX (*Urocyon litoralis*). Similar to *Urocyon cinereoargenteus* but smaller, total length about 30 inches, tail about 11.5 inches. Subspecies: *U. l. catalinae* restricted to Santa Catalina Island, and *U. l. clementae* to San Clemente Island.

COYOTE (*Canis latrans*). Somewhat resembles a German shepherd dog; color grizzled-gray or buff above, whitish or buffy on the under parts; muzzle brownish or gray; larger than foxes, total length about 43 inches; tail relatively short, about 12 inches. Two races are found in the county: *C. l. ochropus* inhabits the region from the mountains to the coast, *C. l. mearnsi* is found in the deserts.



Grey Fox



Bobcat

CATS (Family *Felidae*)

MOUNTAIN LION (*Felis concolor californica*). A very large cat, from 5.5 to 7 feet in length, with a 25- to 30-inch tail; color uniform yellowish-brown above, with paler under parts; tail with blackish tip. Occurs in mountainous regions; much less plentiful than formerly.

BOBCAT (*Lynx rufus*). Much smaller in size than Mountain Lion, only about 33 inches in length; tail very short, about 6 inches; color yellowish-brown, spotted with darker brown; tail striped above. Two races of Bobcat are found in Los Angeles County: *L. r. californicus* occurs in the mountains and foothills, and *L. r. baileyi* inhabits the desert regions.

SEALS (Order *Pinnipedia*)

EARED SEALS (Family *Otariidae*)

External ears present; hind limbs can be rotated forward to support weight in locomotion.

CALIFORNIA SEA LION (*Zalophus californianus californianus*). Size relatively large, males up to 8 feet in length; no underfur, guard hairs brown; general color varying from yellowish-brown to black. This animal is our most common seal, frequently seen swimming off the coast or basking on rocks. It is also the animal which is usually used in trained "seal" acts.

STELLER SEA LION (*Eumetopias jubata*). Larger than the California Sea Lion, males reaching 10 feet in length. May possibly occur off our coast, although no breeding colonies are known south of San Miguel and Santa Rosa islands.

GUADALUPE FUR SEAL (*Arctocephalus philippii townsendi*). Very rare, thought for many years to be extinct. Rediscovered in 1949 on San Nicolas Island, and breeding colony now found on Guadalupe Island off Baja California. May occur in Los Angeles County waters. Smaller than sea lion, about 5 feet in length; underfur thick, with guard hairs with silvery sheen.

TRUE SEALS (Family *Phocidae*)

External ears lacking; hind limbs cannot be rotated forward but extend backwards like a tail.

HARBOR SEAL (*Phoca vitulina geronimensis*). Color spotted or blotched, grayish with white spots or yellowish with black or gray blotches; pelage coarse and hairy; total length about 5 feet. Found along sea coast and in harbors.

ELEPHANT SEAL (*Mirounga angustirostris*). Color dark grayish-brown or brown, may be blotched by molting, which is accomplished by sloughing off of rather large pieces of skin; males have inflatable proboscises, very large, old males up to 17 feet in length. Rare, but may occur in Los Angeles County waters.



California Sea Lion

Harbor Seal



GNAWING MAMMALS
(Order *Rodentia*)

SQUIRRELS (Family *Sciuridae*)

CALIFORNIA GROUND SQUIRREL (*Citellus beecheyi*). Upper parts brown, speckled with gray, buffy, and white; "cape" of silvery hair on shoulders extending backward and outward from the ear region as two stripes; tail bushy; total length about 17 inches. Three races are found in Los Angeles County: *C. b. beecheyi* inhabits the area from the seashore to about 8000 feet in the mountains, *C. b. fisheri* is found up to about 5000 feet on the desert slope of the San Gabriel Mountains, and *C. b. nesioticus* is restricted to Santa Catalina Island.

MOHAVE GROUND SQUIRREL (*Citellus mohavensis*). Back uniformly sandy-brown with white-tipped hairs; under parts white; terminal part of tail dark, with basal portion like the back; tail not bushy, round in cross section; total length about 8.75 inches. Antelope Valley east of Palmdale.

WHITE-TAILED ANTELOPE GROUND SQUIRREL (*Citellus leucurus leucurus*). Upper parts grizzled-brown or grayish, with prominent white stripe along each side, separated from the white underside by a dark stripe; tail flattened in cross section; total length about 8.75 inches. Found in desert regions. This small ground squirrel is often mistakenly thought to be a chipmunk because of its size and markings. However, it lacks the stripes on the sides of the face and the dark stripe running down the middle of the back, characteristic of all chipmunks.

California Ground Squirrel



Lodgepole Chipmunk

LOGDEPOLE CHIPMUNK (*Eutamias speciosus speciosus*). Chipmunks are frequently confused with the striped ground squirrels. They are, however, readily identified by the stripes on the sides of the face, a character never found in the ground squirrels. *E. s. speciosus* is a bright-colored chipmunk with the outer light stripes nearly white, contrasting noticeably with the inner pair; outer dark stripe more reddish in color than the others; upper surface of feet whitish; total length about 9 inches. Range between 6500 and 10,000 feet in the San Gabriel Mountains.

MERRIAM CHIPMUNK (*Eutamias merriami merriami*). Relatively dull-colored, light stripes all dull, with little contrast between inner and outer pairs; outer dark stripes almost same color as inner ones, but somewhat obscured; upper surface of feet brownish; total length about 9.75 inches. Altitudinal range usually below 6000 feet.

WESTERN GRAY SQUIRREL (*Sciurus griseus anthonyi*). General coloration gray, with only reddish hair (if any) on back of ears and underside; tail long and very bushy, with white tipped hairs; large, total length about 22 inches. Foothills to 9000 feet. (See cover illustration.)

FOX SQUIRREL (*Sciurus niger rufiventer*). Coloration variable, but general color tends toward orange mixed with gray, brown or black; under parts near orange; tail reddish, mottled with black, long and very bushy; total length about 21 inches. Not a native, introduced probably from Mississippi Valley region. Found among broad-leafed trees in the foothill region.

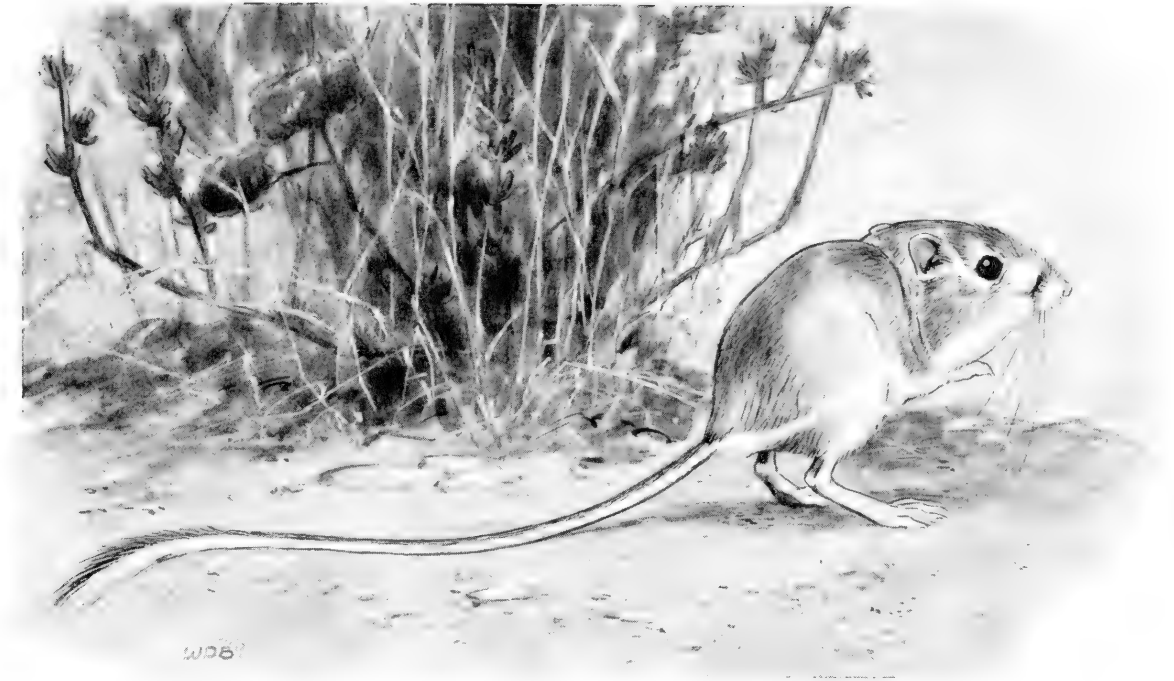
NORTHERN FLYING SQUIRREL (*Glaucomys sabrinus californicus*). Coloration brown or brownish-gray above, whitish below; hair very soft; loose fold of skin between wrists and ankles which is used for gliding flight when the legs are spread; tail flat and broad, very densely haired; total length about 11.5 inches. Found in higher mountains in old dead trees.

POCKET GOPHERS (Family *Geomysidae*)

BOTTA'S POCKET GOPHER (*Thomomys bottae*). Stocky build with short legs; elongate claws on forefeet used for digging; short, sparsely-haired tail; fur-lined external cheek pouches; long, yellow, chisel-like front teeth (incisors) never covered by lips; total length between 8 and 10.5 inches. These small mammals are very rarely seen as they spend most of their lives in their extensive, underground burrow systems. Their presence is indicated by characteristic rounded mounds of earth about the closed entrances to the burrow system. Each burrow system, which is normally occupied by a single individual, has many mounds, and every mound closes a separate entrance to this system. Four races represent this species in Los Angeles County: *T. b. bottae* is found along the coastal region, as far inland as central Los Angeles; *T. b. pallescens* inhabits the southern slope of the San Gabriel Mountains up to about 5000 feet, coming into contact with the last named race to the south and west; *T. b. neglectus* occupies both slopes of the San Gabriels above about 4500 feet; and *T. b. mohavensis* ranges on the desert slope below the 4500 foot level.



Botta's Pocket Gopher



Agile Kangaroo Rat

KANGAROO RATS, POCKET MICE (Family *Heteromyidae*)

Heteromyids differ from the true mice and rats primarily by the fur-lined food pouches outside the mouth and the elongate hind limbs. Kangaroo rats are distinguished from pocket mice by their proportionately broader and flatter heads, larger hind feet, and relatively longer tails. The largest pocket mice are slightly smaller than the smallest kangaroo rats. All members of this family are nocturnal and are frequently seen crossing roads at night in the beams of auto headlamps.

PANAMINT KANGAROO RAT (*Dipodomys panamintinus mohavensis*). Light-colored, ochraceous buff, although frequently darker; tail with more white hair than black; tail tuft tending toward, but not completely black; total length about 11.5 inches; tail about 7.25 inches; hind foot with 5 toes (outer one greatly reduced in size). Found in the Mohave Desert.

AGILE KANGAROO RAT (*Dipodomys agilis*). Almost identical to *D. panamintinus*, but somewhat darker in color, particularly on the tail, which has a much darker tuft; five toes on hind foot. Two races are found within the county: *D. a. agilis* occurs on the Pacific slope from near sea level to about 7500 feet; *D. a. perplexus* occupies the northern slope of the San Gabriels between the elevations of 4500 and 7500 feet.

MERRIAM KANGAROO RAT (*Dipodomys merriami merriami*). Similar in color to *D. panamintinus* but smaller, total length about 10 inches, tail length about 6 inches; only four toes on hind foot. Found in the desert.

DESERT KANGAROO RAT (*Dipodomys deserti deserti*). Coloration very light; tip of tail white; our largest kangaroo rat, total length about 14 inches; only four toes on hind foot. Locally common on desert, particularly in sand-hill regions.

LITTLE POCKET MOUSE (*Perognathus longimembris*). There are two types of pocket mice, the silky-haired and the spiny forms. The silky-haired forms are generally smaller in size, the hair is softer, and the soles of the feet are partially haired. The spiny forms have coarse hair, frequently with stiff spines on the rump and flanks, and have naked soles on the hind feet. *P. longimembris* is a silky-haired type; color light-pinkish; ears brown, not whitish; size small, total length about 5 inches, hind foot 0.8 inch or less. Three races are found within the county: *P. l. longimembris* in the northern part of the county in Antelope Valley west to Gorman; *P. l. brevinasus* in the interior valleys to the coastal slope, northwest as far as San Fernando; and *P. l. pacificus*, formerly found along the coast north as far as Playa del Rey. The present status of this latter race is doubtful, as most of its natural habitat within the county has been destroyed by man.

SAN JOAQUIN POCKET MOUSE (*Perognathus inornatus neglectus*). A silky-haired type; similar to the Little Pocket Mouse, but with white spot at base of ear, and of somewhat larger size; total length slightly more than 6 inches. Found only in extreme northwestern part of Los Angeles County.



Little Pocket Mouse



California Pocket Mouse

WHITE-EARED POCKET MOUSE (*Perognathus alticolus inexpectatus*). The largest of the silky-haired types in this county, total length about 7.5 inches; ear covered with short whitish hairs, both inside and out; color darker than other silky forms. Northwestern part of county, up to 6000 feet altitude.

DESERT POCKET MOUSE (*Perognathus penicillatus stephensi*). Very light-colored, pinkish-buff above, white below; tail with last one inch with prominent tuft of hair; no enlarged spines on rump; total length about 7 inches. Found in Mohave Desert.

CALIFORNIA POCKET MOUSE (*Perognathus californicus*). Color dark above, brown with blackish hairs mixed in; tail tuft about 0.5 inch in length; prominent spines on rump and flanks; large, total length about 8 inches. This species is represented by two races in Los Angeles County: *P. c. dispar* found on the chaparral-covered hills on the coastal slope, and *P. c. bernardinus* inhabiting the mountains up to at least 6800 feet.



Western Harvest Mouse



Southern Grasshopper Mouse

NATIVE RATS and MICE (Family *Cricetidae*)

Tail more or less hairy; young more gray than adults. This is the most diverse group of mammals found in North America, with more than 800 forms known on this continent. Although the classification of this group has been largely based upon skull and teeth differences, most of the forms are distinguishable by external appearance as well.

SOUTHERN GRASSHOPPER MOUSE (*Onychomys torridus*). Body stocky; tail relatively short and thick; hair very soft in texture; total length about 5.5 inches; tail about 2 inches. Two races occur in Los Angeles County: *O. t. ramona* inhabits the Pacific slope in sandy localities from near sea level to about 3000 feet; *O. t. pulcher* is found in the desert.

WESTERN HARVEST MOUSE (*Reithrodontomys megalotis*). Small, total length about 5.5 inches; tail long, about 2.75 inches; ears rather large; coloration brown above, whitish below, with hairs gray at base; upper front incisor teeth with distinct longitudinal grooves on face. This species is represented by four races within the county: *R. m. megalotis* is found on the deserts; *R. m. longicaudus* inhabits the Pacific slope from the lowlands to about 6000 feet; *R. m. limicola* occupies the coastal salt marshes; and *R. m. catalinae* is found on Santa Catalina Island.

CALIFORNIA MOUSE (*Peromyscus californicus insignis*). Size very large for a mouse, total length about 9.5 inches, tail about 5.5 inches, hind foot 1 inch or more; brown mixed with black above, white below; bases of hairs gray. Found in chaparral-covered slopes of coast district from near sea level occasionally up to 8000 feet.

CACTUS MOUSE (*Peromyscus eremicus*). Size smaller than above form, total length about 7.5 inches; tail relatively long (4.5 inches), sparsely haired and not distinctly bi-colored; brown mixed with black above, grayish-white below; adults with small reddish-brown spot on breast. Two races are found in Los Angeles County: *P. e. eremicus* inhabits the desert slope to about 4000 feet; and *P. e. fraterculus* is found in sandy ground near the coast up to about 3500 feet.

DEER MOUSE (*Peromyscus maniculatus*). Size relatively small, total length about 6.5 inches; tail relatively and actually shorter than in other forms of this genus in the county, about 3 to 3.5 inches; tail distinctly bicolored, without tuft of hair at the tip. This species is represented by four races within the county: *P. m. gambelii* is found throughout the western half of the county from near sea level to mountain tops, in all sorts of habitat situations; *P. m. sonoriensis* occurs on the desert side of the San Gabriel Mountains; and *P. m. catalinae* and *P. m. clementis* are restricted to Santa Catalina and San Clemente islands respectively.

BRUSH MOUSE (*Peromyscus boylii rowleyi*). Head and body very similar to *P. maniculatus* in size and color but tail relatively and actually longer, about 4.25 inches; tail tip with longer hairs forming a small but distinct terminal tuft; tail bicolored, with dark upper and light lower stripes about same width. Dry slopes of hills and mountains up to about 7000 feet.

PINYON MOUSE (*Peromyscus truei*). Ears very large, equal to or longer than the hind foot; total length about 8 inches; tail length about 4 inches; tail bicolored. Two races occur in Los Angeles County: *P. t. montipinoris* in the western half of the San Gabriel Mountains in pinyon, juniper and manzanita; *P. t. chloris* in the eastern half of the San Gabriels in similar habitat.



Deer Mouse



Dusky-footed Wood Rat

DESERT WOODRAT (*Neotoma lepida*). Small for a woodrat, total length about 11 inches; tail about 75 per cent of length of head and body well-haired; color buffy with blackish hairs mixed in on back, sides more pinkish, white below; feet uniformly white on upper surfaces. Two races are found in Los Angeles County: *N. l. lepida* occupies the desert and adjoining hills and *N. l. intermedia* occurs on the coastal slope.

DUSKY-FOOTED WOODRAT (*Neotoma fuscipes*). Considerably larger than *N. lepida*, total length about 15 inches; tail well-haired, about same length as head and body; color browner (less buffy) above, feet whitish, with dusky patches of hair on upper surfaces. Two races occur in the county: *N. f. simplex* inhabits brushy regions of the desert slope, and *N. f. macrotis* is found on the Pacific slope, from near sea level to about 6000 feet.

CALIFORNIA VOLE (*Microtus californicus*). Body robust; ears rounded and partially hidden in the hair; fur long and lax; color brown, mixed with black above, gray below; tail short, about 2.5 inches; total length about 7.5 inches. Two races are found within the county: *M. c. stephensi* inhabits the coastal marshes and *M. c. sanctidiegi* inhabits grassy areas from near sea level to about 9000 feet in the mountains.

OLD WORLD RATS and MICE (Family *Muridae*)

Tail long, very sparsely haired, with scales apparent. All introduced from Old World.

BLACK RAT (*Rattus rattus*). Tail longer than head and body; total length about 16 inches, tail about 8.5 inches; color various. Two races are found within the county: *R. r. rattus*, which is black in color, and *R. r. alexandrinus*, which is brown in color, are both found throughout the Pacific slope, mostly in inhabited sections.

NORWAY RAT (*Rattus norvegicus*). A larger animal, total length about 17 inches; tail shorter than head and body; reddish-brown in color. Found throughout inhabited regions.

HOUSE MOUSE (*Mus musculus*). Small in size, about 6.5 inches in length; color brownish above, gray or grayish-brown below; no great contrast between upper and lower parts; incisor teeth with obvious notch in the worn surface when viewed from the side. Generally distributed in and around settled areas.



Black Rat

PIKAS, HARES, and RABBITS (Order *Lagomorpha*)

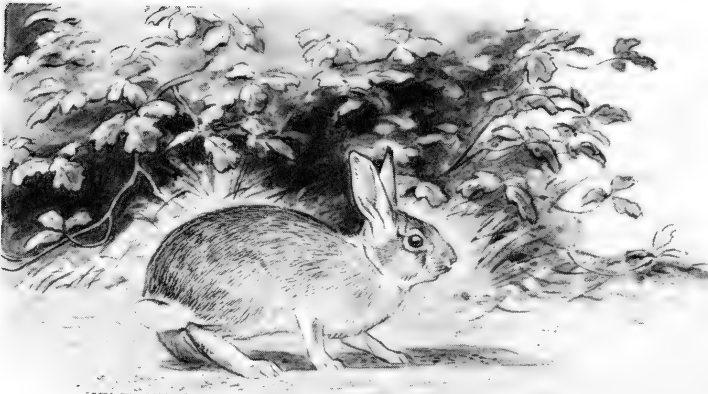
HARES and RABBITS (Family *Leporidae*)

Ears long, tail short, hind legs and feet long, 4 incisor teeth separated from the grinding teeth by a wide space.

BLACK-TAILED JACK RABBIT (*Lepus californicus*). Ears extremely long, about 4.5 inches; tips of ears and top side of tail black; hind feet 4 inches or more in length; total length about 22 inches. Two races occur within Los Angeles County: *L. c. deserticola*, found in the desert regions, and *L. c. bennetti*, inhabiting the Pacific slope to about 6000 feet.

DESERT COTTONTAIL (*Sylvilagus auduboni*). Ears relatively and actually smaller than in the jack rabbit, about 3 inches in length; tips of ears blackish, upper side of tail grizzled-brown; hairs on under parts and under side of tail white to the base; total length about 16 inches. This species is represented in the county by two races: *S. a. sanctidiegi* inhabits the Pacific slope below about 1500 feet, and *S. a. arizonae* occurs in brushy sections of the desert slope and the desert proper.

BRUSH RABBIT (*Sylvilagus bachmani cinerascens*). Ears about 2.5 inches in length; tips of ears and upper side of tail brownish or gray; hairs of under parts gray at the base; total length about 13 inches. Found on chaparral-covered hills of coastal slope from near sea level to above 6000 feet.



Desert Cottontail



Black-Tailed Jackrabbit



Mule Deer

EVEN-TOED UNGULATES (Order *Artiodactyla*)

DEER (Family *Cervidae*)

Bony antlers on head of males, shed annually.

MULE DEER (*Odocoileus hemionus californicus*). The only deer known from Los Angeles County. Inhabits the hill and mountain regions from near sea level (in Malibu region) up to about 9200 feet near Mount San Antonio (Old Baldy).

SHEEP (Family *Bovidae*)

True horns present, with bony core and outer sheath of horn, not shed.

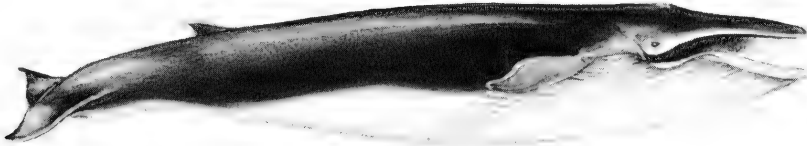
BIGHORN SHEEP (*Ovis canadensis nelsoni*). All adults with horns; males with heavy ones which spiral back, out, and up; females with smaller, less curved ones. Sheep are known to exist in the higher elevations in the San Gabriel Mountains.



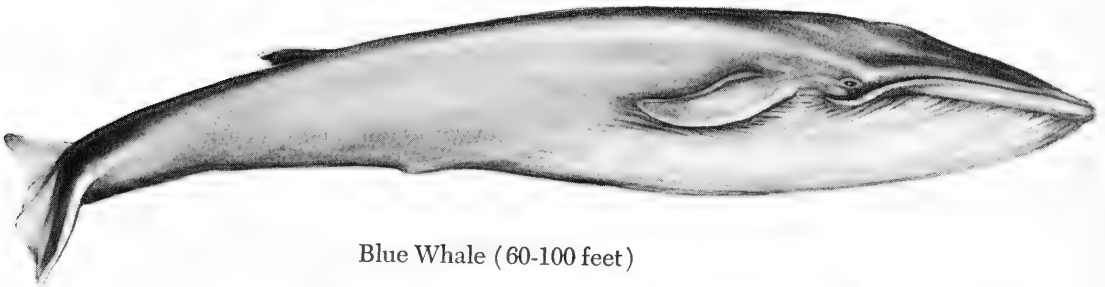
California Gray Whale (35-45 feet)



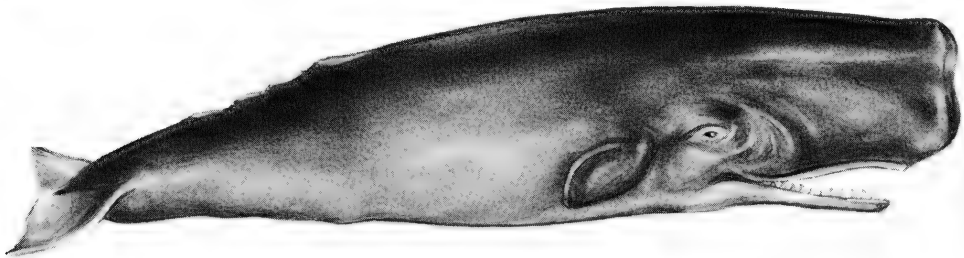
Piked Whale (20-30 feet)



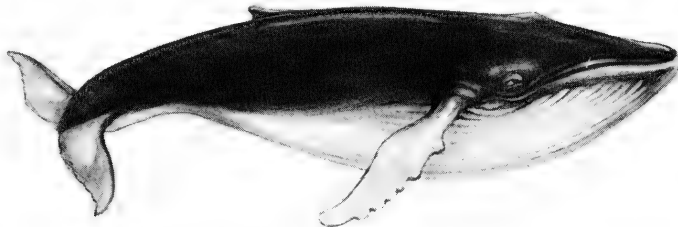
Finback Whale (60-70 feet)



Blue Whale (60-100 feet)



Sperm Whale (40-70 feet)



Humpback Whale (40-50 feet)

WHALES, DOLPHINS AND PORPOISES (Order *Cetacea*)

The Cetaceans are strictly marine in distribution in the North American region. All are fish-like in appearance except that the tail fin, called the fluke, is in a horizontal, rather than a vertical, plane. The occurrence of these mammals off the Los Angeles County coast is imperfectly known, but those forms listed might reasonably be expected.

GRAY WHALES (Family *Rhachianectidae*)

CALIFORNIA GRAY WHALE (*Rhachianectes glaucus*). Length 35 to 45 feet; head small and tapered; no dorsal fin; blow-holes double; color blotched grayish-black. Seen a few hundred yards offshore during migration southward December through February and northward March and April.

FINBACK WHALES (Family *Balaenopteridae*)

Dorsal fin present; blow-holes double.

FINBACK WHALE (*Balaenoptera physalus*). Length 60 to 70 feet; head flat with longitudinal furrows on throat and breast; small, curved dorsal fin in front of tail; body long and slender; color dark gray above, white below.

PIKED WHALE (*Balaenoptera acutorostrata*). Length 20 to 30 feet; upper jaw acutely narrowed at front; dorsal fin relatively high, with strongly curved tip; broad, white band across upper side of flipper.

BLUE WHALE (*Sibbaldus musculus*). The largest animal which is known to man, length from about 60 to more than 100 feet; small, longitudinal furrows on the throat and breast; color bluish-gray above, yellowish or whitish below; dorsal fin small and curved.

HUMPBACK WHALE (*Megaptera novaeangliae*). Length 40 to 50 feet; thick-bodied; dorsal fin small; flippers very long and narrow; lower jaw extending beyond upper; color black except on furrowed throat and breast.

SPERM WHALES (Family *Physeteridae*)

SPERM WHALE (*Physeter catadon*). Length 40 to 70 feet; head huge, deep and square; lower jaw narrow and toothed; blow-hole single; color bluish-gray above, lighter below.



Common Dolphin (7-8 feet)



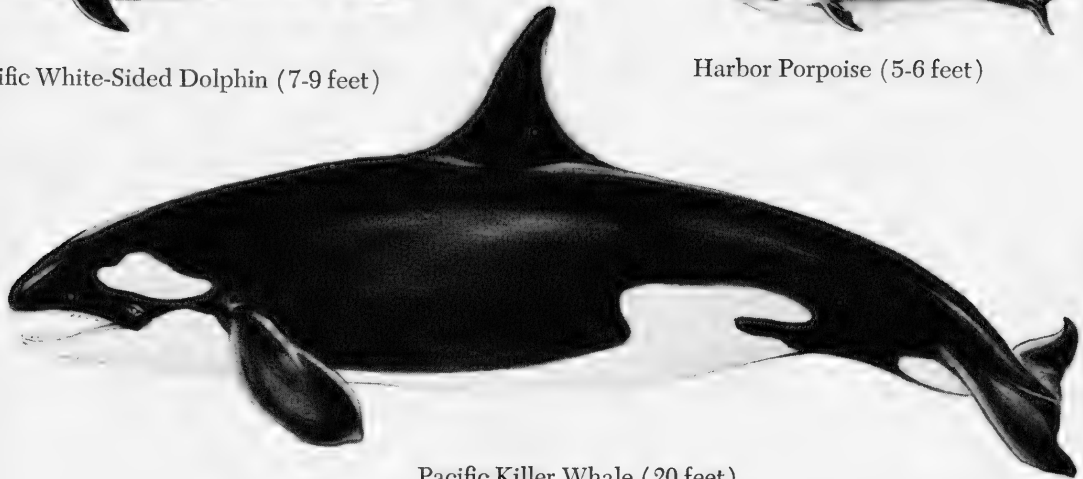
Right Whale Dolphin (8 feet)



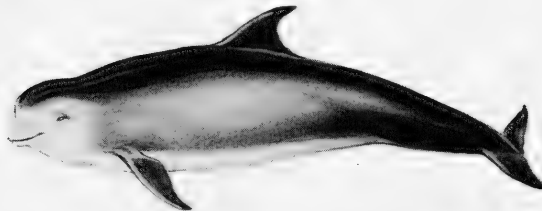
Pacific White-Sided Dolphin (7-9 feet)



Harbor Porpoise (5-6 feet)



Pacific Killer Whale (20 feet)



Grampus (9-13 feet)



Pacific Black Fish (14-18 feet)

PORPOISES AND DOLPHINS (Family *Delphinidae*)

Small to medium-sized cetaceans possessing teeth.

COMMON DOLPHIN (*Delphinus bairdii*). Length 7 to 8 feet; beak pointed; dorsal fin large; color variable, but with back and flippers black, sides yellowish, and belly white.

RIGHT WHALE DOLPHIN (*Lissodelphis borealis*). Length about 8 feet; beak pointed; no dorsal fin; color black except for white on breast and tip of lower jaw.

PACIFIC WHITE-SIDED DOLPHIN (*Lagenorhynchus obliquidens*). Length up to 9 feet; beak poorly defined, short, separated from forehead by a transverse groove; dark on back, with grayish stripes on sides, belly white; dorsal fin large and strongly curved, rear edge whitish.

PACIFIC KILLER WHALE (*Grampus rectipinna*). Length about 20 feet; dorsal fin very large; color black, except for large white markings ventrally and above eye.

GRAMPUS (*Gramphidelphis griseus*). Length 9 to 13 feet; nose blunt; dorsal fin high and slender; color mottled slate-gray with numerous irregular streaks.

PACIFIC BLACKFISH, "Pilot Whale" (*Globicephala scammoni*). Length 14 to 18 feet; nose blunt with forehead high and bulging; dorsal fin relatively short and forward; color slate-gray.

HARBOR PORPOISE (*Phocaena vomerina*). Length 5 to 6 feet; nose not pointed; color black above, lighter below, never in spots.

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