APPENDIX G

PROFILES OF FOCUS MANAGEMENT SPECIES

Appendix G

Profiles of Focus Management Species

Plants

Nevin's Barberry

Berberis nevinii (A. Gray)

Formerly *Mahonia nevinii*

Federally Endangered, California Endangered, CNPS 1B.1 (Rare, threatened, or endangered in California and elsewhere, seriously endangered in California)

Description

A 1.5- to 3.7-meter (5- to 12-foot) shrub with red-brown, stiff-branched stems bearing attractive, blue-green, spiny, pinnate leaves. The shrub is covered with 5-centimeter (2-inch), loose-flowered, yellow flower spikes in spring. These are followed by hundreds of red to reddish-yellow berries.

Nevin's barberry shrubs are long-lived (more than 50 years) with low reproductive rates likely due to sporadic production of fertile seed. This species flowers from March through April. It is a fire-adapted species, where mature individuals may survive and re-sprout following fire.

Taxonomic Remarks

Nevin's barberry belongs to the Berberidaceae (Barberry Family).

Distribution (including population information and trends if available)

Nevin's barberry's historical distribution likely consisted of fewer than 30 scattered occurrences in Los Angeles, San Bernardino, and Riverside Counties and possibly San Diego County. Currently, a vigorous population occurs near the peninsula on the south side of Vail Lake in Riverside County; also on the slopes immediately downstream of the dam. It may occur in nearby San Diego County in the little explored foothills of the Agua Tibia Wilderness Area close to the Dripping Springs Trail. Database records include a few plants in San Diego County on County Road S-6 approximately 2.6 kilometers (1.6 miles) north of its Junction with Highway 76 southwest of Palomar Mountain (where likely not native).

Habitat

Nevin's barberry (*Berberis nevinii*) occurs in varied topography from nearly flat sandy washes, terraces, benches, and canyon floors to gravelly wash margins, steeply-sloped banks of drainages, steep rocky slopes, ridges, and mountain summits. Native occurrences are strongly associated with alluvial soils or soils derived from non-marine sedimentary based substrates, especially sandy arkose (sandstone derived from granitic material). It occurs in association with the following plant communities: alluvial scrub, cismontane (e.g., chamise) chaparral, coastal sage scrub, oak woodland, and/or riparian scrub or woodland.

Threats

Nevin's barberry is threatened by alteration of fire regimes, development and road maintenance. It is also possibly threatened by illegal dumping, fire suppression, and off-road vehicle use.

USFWS. 2009. Berberis nevinii (Nevin's Barberry) 5-Year Review. Carlsbad, CA. August 2009.

Reiser, C.H. 1994. Rare Plants, San Diego County: Nevin's Barberry. Imperial Beach, CA.

Orcutt's Brodiaea

Brodiaea orcuttii ((Greene) Baker)

Formerly *Hookera orcuttii*

CNPS 1B.1 (Rare, threatened, or endangered in California and elsewhere, seriously endangered in California)

Description

Orcutt's brodiaea is a perennial herb with underground unbranched stems. The flower is violet and bell-shaped with petals 12 to 19 millimeters (.38 to .75 inches) long, spreading outward, and with a tube 3 to 5 millimeters (.13 to .25 inches)) long. The stalks of the flowers are 2 to 8 centimeters (.75 to 3.1 inches) long. The fruit is an egg-shaped capsule with black seeds. The flowers lack the staminodes characteristic of most brodiaeas. The Orcutt's brodiaea blooms from April to July, when the vernal area begins to dry up.

Taxonomic Remarks

Orcutt's brodiaea is in the Themidaceae family also known as the Liliaceae family.

Distribution

Orcutt's brodiaea is regularly seen around the vernal pools at Otay Mesa, near Miramar Mounds Preserve, and growing in the pool areas just north of Miramar Road and west of Eastgate Mall. It is occasional within the primary drainage in Proctor Valley growing among *Iva hayesiana*. A few montane locations include scattered vernal meadows near Cuyamaca Lake and along a fast-flowing creek on Otay Mountain. Recent widespread destruction of vernal pools has dramatically reduced historical populations on Otay Mesa; it is still found north of the state prison and east of Brown Field. A very large population consisting of at least several thousand plants occurs west of the entrance to the San Marcos landfill in mesic grasslands. A number of these old collections sites are likely to be extirpated as *Brodiaea orcuttii* is typically found in flat terrain near spring ponds where cattle frequently wallow and human associated impacts may be severe.

Habitat

This plant inhabits grasslands near floodplains, streams, vernal pools and seeps, usually in clay soils. It also is found in the chaparral and yellow pine forest.

Threats

Orcutt's brodiaea is threatened by development, foot traffic, grazing, non-native plants, military activities, vehicles, road construction, road maintenance, and dumping.

BLM. 2010. Special Status Species: Orcutt's Brodiaea. Accessed July 23, 2012. <*www.blm.gov/ca/st/en/prog/ssp/plants/brodiaea_orcuttii.html*>

Calflora: Information on California plants for education, research and conservation, based on data contributed by dozens of public and private institutions and individuals, including the Consortium of Calif. Herbaria. [web application]. 2012. Berkeley, California: The Calflora Database [a non-profit organization]. Accessed July 24, 2012. <*http://www.calflora.org*>/

Vail Lake Ceanothus

Ceanothus ophiochilus (Boyd, Ross & Arnseth)

Federally Threatened, California Endangered, CNPS 1B.1 (Rare, threatened, or endangered in California and elsewhere, seriously endangered in California)

Description

Vail Lake ceanothus is a 1.2- to 1.5-meter (4- to 5-foot) tall rounded shrub. Leaves are small and evergreen, and the flowers are pale blue, occasionally pink. Vail Lake ceanothus flowers from mid-February to March and the seed capsules mature from about May to mid-June. These plants are known to hybridize with other species from the same genus.

Taxonomic Remarks

Vail Lake ceanothus belongs to the buckthorn family (Rhamnaceae).

Distribution (including population information and trends if available)

A sizeable colony is found on the eastern slopes of Oak Mountain, approximately 1.6 kilometers (1 mile) west of Vail Lake in Riverside County. From a distance this shrub bears a superficial similarity to chamise, with which it grows sympatrically, which may in part account for its recent discovery. A second site where this shrub is found in several dense concentrations is south of Highway 79 and south of Woodchuck Campground within the Agua Tibia Wilderness near the San Diego County line. Additional sites may occur nearby in the rugged and little explored Agua Tibia Wilderness Area of San Diego County.

Habitat

This narrow endemic plant is restricted to three known occurrences in chamise-chaparral habitat on ridgetops and north- to northeast-facing slopes at elevations of 579 to 1,067 meters (1,900 to 3,500 feet) in southwestern Riverside County, California. The species is associated with harsh, phosphorus-deficient soils derived from metavolcanic and ultra-basic parent materials, deeply weathered gabbro, and pyroxenite-rich outcrops.

Threats

Vail Lake ceanothus is threatened by urban development and the grading of roads and fuel breaks, as well as fire having a potential to reduce population sizes.

Reiser, C.H. 1994. Rare Plants in San Diego County: Vail Lake Ceanothus. Imperial Beach, CA.

USFWS. 2008. Vail Lake Ceanothus 5-Year Review. Carlsbad, CA. July 2008.

Salt Marsh Bird's-beak

Chloropyron maritimum maritimum (A. Heller/Benth.)

Formerly *Cordylanthus maritimus* subsp. *Maritimus*

Federally Endangered, California Endangered, CNPS 1B.2 (Rare, threatened, or endangered in California and elsewhere, fairly endangered in California)

Description

The salt marsh bird's-beak k is an annual and lives for one year and then dies. Its leaves are alternate, narrow and up to 2.5 centimeters (1 inch) long. They are pointed at the end and bluish green and hairy. It has white flowers that grow on 10- to 30-centimeter (4- to 12-inch) high stems.

Salt marsh bird's-beak is a hemiparasitic (deriving some of their physiological needs from a host plant) halophyte (a plant tolerating or thriving in alkaline soils). It uses pickleweed and salt grass to extend its growing season. Its flowering period is between May and October. Each flower may produce 10-40 seeds.

Source: *http://www.calflora.net/bloomingplants/saltmarshbirdsbeak.html*

Taxonomic Remarks

At the time of listing the genus *Cordylanthus* was placed in the *Scrophulariaceae* (figwort family), however, based on molecular systematic studies, it was transferred to the *Orobanchaceae* (Broomrape family).

Distribution (including population information and trends if available)

Salt marsh bird's-beak is currently known to persist in seven coastal salt marshes: San Diego County at Tijuana Estuary, Naval Radar Receiving Facility (NRRF), and Sweetwater Marsh Unit of San Diego Bay NWR; Orange County at Upper Newport Bay (State) Ecological Reserve; Ventura County at Naval Base Ventura County, Point Mugu; Santa Barbara County at Carpinteria Salt Marsh; and San Luis Obispo County at Morro Bay. Historically it extended in coastal salt marshes from northern Baja California, Mexico to Morro Bay in San Luis Obispo County, California, and inland at salt marshes near Artesia in Los Angeles County, in San Bernardino Valley in San Bernardino County, and near Oak Grove in San Diego County.

Habitat

This plant occurs in coastal salt marshes from northern Baja California, Mexico to San Luis Obispo County, California. The marsh soils are predominantly clay and silt. Coastal salt marsh habitat is commonly divided into three or more zones based either on physical features, including tidal patterns, or based on the kinds of plants occurring in the different zones, salt marsh bird's-beak is found from the higher areas, identified as the middle littoral zone.

Threats

This species is threatened by vehicles, road construction, hydrological alterations, recreational activities, foot traffic, non-native plants, and loss of salt marsh habitat.

USFWS. 2009. Salt Marsh Bird's-beak 5-Year Review. Carlsbad, CA. August 2009.

Long-spined Spineflower

Chorizanthe polygonoides var. *longispina* ((Goodman) Munz)

CNPS 1B.2 (Rare, threatened, or endangered in California and elsewhere, fairly endangered in California)

Description

The long-spined spineflower is an annual herb. It is typically green to reddish in color and grows prostrate along the ground. Stems can reach 15 centimeters (5.9 inches) in length. The long-spined spineflower blooms from April to July. It can be distinguished from other spine flowers with the pattern on the spines on its bracts.

Taxonomic Remarks

The long-spined spineflower belongs to the buckwheat family (Polygonaceae).

Distribution (including population information and trends if available)

Long-spined spineflower is well distributed around the vernal pool complex on Kearny Mesa and MCAS Miramar. It is found in a similar habitat, at a much higher elevation, on the western periphery of Cuyamaca Lake. A small population was noted near mima mounds on Carmel Mountain. Another small colony was seen on Point Loma near the road to the tidepools and the active lighthouse. It grows with the miniscule population of *Chorizanthe orcuttiana* at Oak Crest Park in Encinitas. Herbarium specimens examined for San Diego County include sites at Barber Mountain, Oak Grove Valley, Corte Madera, and east of Kearny Villa Road near the old water tank.

Habitat

This small annual is typically found on clay lenses which are largely devoid of shrubs. It can be occasionally seen on the periphery of vernal pool habitat and even on the periphery of montane meadows near vernal seeps. At Cuyamaca Lake it grows on Boomer stony loams, while on Kearny Mesa it occurs on Redding gravelly loams.

Threats

The long-spined spineflower is mostly threatened by habitat loss; much of its habitat has already been lost due to development. It is also threatened by non-native grasses and recreational activities, and is possibly threatened by vehicles and grazing.

C.H. Reiser. 1994. Rare Plants in San Diego County: Long-spined Spineflower. Imperial Beach, CA.

California Native Plant Society (CNPS). 2012. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA. Accessed July 23, 2012. <*http://www.rareplants.cnps.org/detail/1625.html*>

Mojave Tarplant

Deinandra mohavensis ((Keck) B.G. Baldwin)

Formerly *Hemizonia mohavensis*

California Endangered, CNPS 1B.3 (Rare, threatened, or endangered in California and elsewhere, not very endangered in California)

Description

The Mojave tarplant is a tall annual sunflower found in open moist sites in arid regions near the margins of the desert. Like other species of its genus, this plant is characterized by the possession of both ray and disk flowers, a single row of chaffy bracts between the ray and disk flowers.

Mojave tarplant is self-fertile in nature flowering is reported in late July, continuing through the fall and sometimes into winter if cold weather does not kill the plants. Peak flowering is from August through October. Flowering, once begun, is continuous for as long as the plants are alive and fruit maturity and dispersal is likewise continuous.

Taxonomic Remarks

Mojave tarplant belongs to the sunflower family (Asteraceae).

Distribution

The Mojave tarplant is endemic to California and is restricted to several moist drainages on the arid slopes of the Peninsular Range in Riverside and San Diego Counties. It is locally common, but only in a few restricted habitat patches. Populations fluctuate in response to environmental conditions, probably especially rainfall. In fall of 1995, the populations in the Palomar Mountains of northern San Diego County, Cutca Valley and Long Creek were estimated at 10,000 individuals.

Habitat

The Mojave tarplant occurs mostly in clay or silty soils that are saturated with water in winter and spring. Plants are found along grassy swales, intermittent creeks, and at seeps. Occasional dwarfed plants are found in drier sites near occupied wet areas. This species seems to prefer areas where a fairly substantial water supply is available at depth through the summer, but are dry at the surface. The most suitable habitat patches are found on gentle slopes and low gradient stretches of streams in generally mountainous terrain. All populations occur between 850 to 1600 meters (2800 and 5250 feet) elevation, but most are located between 915 and 1225 meters (3000 and 4000 feet).

Threats

The Mojave tarplant is threatened by destruction and modification of habitat as a result of construction and modification of floodplains.

Andrew C. Sanders. 1997. Mojave Tarplant. Herbarium, Department of Botany and Plant Sciences. University of California, Riverside, CA 92521-0124

Slender-horned Spineflower

Dodecahema leptoceras ((Gray) Rev. & Hardham)

Formerly *Centrostegia leptoceras*

Federally Endangered, California Endangered, CNPS 1B.1 (Rare, threatened, or endangered in California and elsewhere, seriously endangered in California)

Description

Slender-horned spineflower is an annual plant that has a distinctive basal rosette of leaves ranging from 3 to 8 centimeters (1.2 to 3.1 inches) in diameter. The leaves frequently become reddish at maturity. The flower stalks are branched and erect 3 to 10 centimeters (1.2 to 4 inches) tall. The flowers are white to pink, 1.2 to 2 millimeters (0.05 to 0.08 inches) long, each producing a dry single-seeded fruit.

Slender-horned spineflower flowers from April to June, and is found in drought prone habitats where germination is likely related to rainfall. Individual plants are difficult to detect because they are small and occur in relatively small, isolated patches across often extensive floodplain habitat. Additionally, plant densities may be low during drought conditions.

Taxonomic Remarks

Slender-horned spineflower is in the Polygonaceae (buckwheat family).

Distribution

Slender-horned spineflower is endemic to southwestern California, from northern Los Angeles County east to San Bernardino County and south to southwest Riverside County in the foothills of the Transverse and Peninsular ranges at elevations ranging from 200 to 700 meters (656 to 2,296 feet).

Habitat

The habitat that supports most occurrences of *Dodecahema leptoceras* has generally been categorized as alluvial fan scrub. This shrub habitat is found on sandy and gravelly soils in sandy wash systems where intermittent, scouring flood events occur. The plants are typically found in alluvial fan scrub on benches and terraces away from active channels in areas receiving little surface disturbance from flooding, but subject to sheet or overland flows. The association of the species with older alluvial benches and terraces indicates the need or tolerance of infrequent flood events to maintain suitable habitat conditions. A few occurrences of this species are found on low alluvial benches or braids within active channels.

Threats

Population loss has occurred due to urbanization and stream channelization. It is currently threatened by alteration of fire regimes, development, sand and gravel mining, flood control, foot traffic, proposed reservoir construction, recreational activities, vehicles, and non-native plants.

USFWS. 2010. Dodecahema leptoceras (Slender-horned Spineflower) 5-Year Review. Carlsbad, CA. October 2010.

Variegated Dudleya

Dudleya variegata ((Wats.) Moran)

CNPS 1B.2 (Rare, threatened, or endangered in California and elsewhere, fairly endangered in California)

Variegated Dudleya

Credit: California Native Plant Society

Description

The variegated dudleya is a perennial, fleshy, hairless herb. The stems are unbranched stems and surrounded by dry leaves. Leaves are clusters of 5 to 8 leaves appearing to radiate from the ground, and are blue-green in color. Inflorescence is a cyme with 2 to 3 branches with yellow petals. This plant blooms during the period from May to June.

Taxonomic Remarks

The variegated dudleya belongs to the Hasseanthus group (Perennial from a corm) of dudleyas in the Orpine family (Crassulaceae).

Distribution

Variegated dudleya is found scattered across Otay Mesa (e.g., near Wruck Canyon; between Johnson and O'Neal Canyons), generally in clay soils at the edges of the northern bluffs or near vernal pools. Small populations occur in Otay Valley, on Dictionary Hill, Miramar Mounds, and on NBC at SSTC-S. Another small colony occurs west of Rolling Ridge Road and immediately south of Proctor Valley Road near Chula Vista. There are also variegated dudleya occurrences found on the ridges in east MCAS Miramar and Sycamore landfill areas of San Diego County.

Habitat

Variegated dudleya occurs in openings in sage scrub and chaparral, isolated rocky substrates in open grasslands, and a proximity to vernal pools and mima mound topography characterize habitats utilized by this small, corm-like sprouting perennial with succulent leaves. Stockpen gravelly clay loams are utilized on Otay Mesa while Redding gravelly loams are mapped for the Miramar Mounds area. Usually this plant grows in small grasslands, spike moss or succulent dominated areas quite devoid of shrub cover, even though Chamise, Scrub Oak, or sage scrub elements may occur nearby.

Threats

Variegated dudleya is declining in San Diego County. Widespread grading on Otay Mesa has recently eliminated populations and outlying colonies.

BLM. 2010. Special Status Plants: Variegated Dudleya. Accessed July 23, 2012 <*http://www.blm.gov/ca/st/en/prog/ssp/plants/dudleya_variegata.html*>

C.H. Reiser. 1994. Rare Plants in San Diego County: Variegated Dudleya. Imperial Beach, CA. 1994.

Nuttall's Lotus

Acmispon prostratus

Formerly *Hosackia prostrata*

CNPS 1B.1 (Rare, threatened, or endangered in California and elsewhere, seriously endangered in California)

Nuttall's Lotus

Credit: Sanelijo

Description

The Nuttall's lotus is an annual plant in the Fabaceae family. It has ascending stems, with pinnate, well spaced leaves. Its inflorescence usually has 3 to 8 flowers, and they produce 2 seeds. The Nuttall's lotus blooms from March to July. The inflorescence bears 3 to 8 red and yellow flowers each about a centimeter (.4 inches) in length. The fruit is a slender, curved legume pod containing usually 2 small beanlike seeds.

Taxonomic Remarks

Nuttall's lotus belongs to the legume family (*Fabaceae*).

Distribution

Nuttall's lotus is known to occur at Camp Pendleton, Oceanside (mouth of the San Luis Rey River), Carlsbad (Batiquitos Lagoon), Encinitas (San Elijo Lagoon), the San Diego River Flood Control Channel, Mission Bay, the D Street Fill and Marisma de Nacion, Border Field State Park, and on NBC at NASNI, NAB Coronado and SSTC-N, and SSTC-S.

Habitat

Nuttall's lotus grows on gravelly or sandy soils near the coast, in sand dunes, coastal sage scrub, and coastal strand and also in mudflats in littoral zone.

Threats

This plant is threatened by development, non-native plants, and land management activities. It could also possibly be threatened by foot traffic, vehicles, and illegal dumping.

San Diego Management & Monitoring Program. 2010. Nuttall's Lotus (*Lotus nuttallianus*). Accessed July 23, 2012 <*http://www.sdmmp.com/Species/Nuttalls_Lotus.aspx*>

Coast Woolly-heads

Nemacaulis denudata var. *denudata* (Nutt.)

CNPS 1B.2 (Rare, threatened, or endangered in California and elsewhere, fairly endangered in California)

Description

Coast Woolly-heads

Coast woolly-heads is an annual herb that is 4 to 40 centimeters tall. Its leaves are basal and linear to oblanceolate. Its flowers are greenish white to dark red and generally visible in surrounding wool. This plant's flowering period occurs from April to September.

Taxonomic Remarks

The coast woolly-heads belongs to the buckwheat family (*Polygonaceae*).

Distribution (including population information and trends if available)

Small populations occur in the dunes north of the mouth of the Santa Margarita River, on a miniscule sandy embankment just west of the Pacific Coast Highway on the periphery of Peñasquitos Lagoon, on the Silver Strand to the west of Emory Cove near Imperial Beach, and on the back dunes at Border Field State Park. Coast woolly-heads is located along the beach and sand verbena-beach bursage in the southern portion of the NASNI, and throughout the installation in sandy ruderal habitat. As it is extremely abundant where it occurs, each population was mapped, and an estimation of the number of individuals was made for each.

Habitat

This annual herb inhabits coastal dune systems from Los Angeles County southward to Baja California, Mexico. Coast woolly-heads is associated with species such as beach evening primrose, sand verbena, and beach-bur.

Threats

This species is threatened by the loss of coastal dunes in southern California, due to extensive recreational beach use.

C.H. Reiser. 1994. Rare Plants in San Diego County: Coast Woolly-heads. Imperial Beach, CA. 1994

Brand's Phacelia

Phacelia stellaris (Brand)

Formerly *Phacelia douglasii* ssp. *cryptantha*

Federal Candidate, CNPS 1B.1 (Rare, threatened, or endangered in California and elsewhere, seriously endangered in California)

Description

Brand's phacelia plants are spreading to erect, 6 to 25 centimeters (2.5 to 10 inches) tall. The leaves are basal, deeply lobed, and 5 to 70 millimeters (0.2 to 3 inches) long. Brand's phacelia flowers from March through June but may flower as early as December depending upon precipitation. It produces a short, stiff, hairy flower that is widely bell-shaped and light blue to purplish in color. The ovoid fruit is approximately 4.5 to 6 millimeters (.18 to .24 inches) in length. There are approximately eight to 20 pitted seeds per fruit, each seed is approximately 0.5 to 1 millimeters (.02 to .04 inches) in size.

Brand's Star Phacelia

Credit: CalFlora

Taxonomic Remarks

The Brand's phacelia is part of the Hydrophyllaceae family.

Distribution (including population information and trends if available)

Phacelia stellaris historically occurred in the United States in Los Angeles, Riverside, and San Diego Counties, California, and in coastal northern Baja California, Mexico. It is now only found in San Diego and Riverside Counties. Two occurrences of Brand's phacelia are found on lands administered by NBC in San Diego County. Approximately 5,000 plants were found in several disturbed areas considered to be ruderal habitat in the southwestern portion of the NAS North Island in 2005. *Phacelia stellaris* in San Diego County occurs within a few hundred yards of SSTC–N on the bayside of Silver Strand State Beach adjacent to Highway 75, roughly from Attu Avenue south to Coronado Bay Road. Plants primarily occur along the east side of a road that runs through the Silver Strand State Beach park area. The native substrate here, which is intact and similar to wetland, supports the healthiest populations of *P. stellaris* at Silver Strand State Beach. NBC supports 100,000s of these plants during a year with favorable precipitation.

Habitat

Brand's phacelia occurs in open habitats on sandy soils, coastal dunes and washes, coastal scrub, or river floodplains. Commonly associated native species along the coast include: *Abronia umbellata* (pink sand verbena), *Lotus nuttallianus* (Nuttall's lotus), *Nemacaulis denudata* var. *denudata* (coast woolly-heads), *Agave shawii* (Shaw's agave), *Camissonia lewisii* (Lewis' evening primrose), *Dudleya attenuata orcuttii* (Orcutt's dudleya).

Threats

The most significant threats, nearly range wide, are invasive nonnative plants, substrate impacts, a lack of effective management, and sea level rise. Habitat at two of the occurrences (western Riverside and Lichty Mesa) has been and continues to be impacted by development or agricultural activities. In San Diego County, the Border Fence Project has had direct impacts to the species and increased military training threatens another occurrence (SSTC–N).

USFWS. 2011. Species Assessment Form for the Phacelia stellaris.

Estuary Seablite

Suaeda esteroa (W. Ferren & S. Whitmore)

CNPS 1B.2 (Rare, threatened, or endangered in California and elsewhere, fairly endangered in California)

Description

Estuary seablite is a perennial herb or subshrub, and yellow-green in color. Its stems are erect, straw colored and branched. The seeds are black to reddish brown, flat, 1.2 to 2 millimeters (.05 to .08 inches) in length. This plant's blooming period occurs from May through January.

Taxonomic Remarks

Estuary seablite belongs to the goosefoot family (*Chenopodiaceae*).

Distribution (including population information and trends if available)

Estuary seablite is found around the vestigial salt marshes of San Diego Bay, such as at the edge of the South Levee Road of the E Street Marsh in Chula Vista. It also occurs within the Federal Wildlife Refuge at Imperial Beach east of Seacoast Drive; as well as along the slough north of 10th Street on San Diego Bay. It is occasionally found on Back Bay at Newport Beach in Orange County.

Habitat

Estuary seablite often occurs in the periphery of coastal salt marsh, often growing with *Salicornia subterminalis*. Soils at such locales are usually mapped as tidal flats. Often times, only a narrow band of terrain on the very periphery of the salt marsh is utilized by this plant.

Threats

As it typically grows on the periphery of salt marshes, it is usually endangered by high recreational use or "creeping" development which tends to build up to the very edges of the marsh, leaving no buffer.

C.H. Reiser. 1994. Rare Plants in San Diego County: Estuary Seablite. Imperial Beach, CA. 1994

Invertebrates

San Diego Fairy Shrimp

Branchinecta sandiegonensis (Fugate)

Federally Endangered

Description

The San Diego fairy shrimp is a small aquatic crustacean in the order Anostraca, first described in 1993 by Michael Fugate based on collections from Del Mar Mesa in San Diego County. Male San Diego fairy shrimp are distinguished from other *Branchinecta* species males by differences in the distal (i.e., located far from the point of attachment) tip of the second antennae. The females carry their cysts (i.e., eggs) in an oval or elongate ventral (i.e., located toward the underside) brood sac. Females are distinguishable from other *Branchinecta* species females by the shape and length of the brood sac, length of the ovary, and presence of paired dorsolateral (i.e., located on the sides, toward the back) spines on five of the abdominal segments.

San Diego Fairy Shrimp

Credit: U.S. Fish and Wildlife Service

San Diego fairy shrimp feed on algae, diatoms, and particulate organic matter. San Diego fairy shrimp are usually observed from January to March when seasonal rainfall fills vernal pools and initiates cyst hatching (vernal pools typically contain water in the winter and then are dry in the summer). Individuals hatch and mature within seven to 14 days of rainfall filling a pool depending on water temperature. This hatching period may be extended in years with early or late rainfall.

Taxonomic Remarks

The San Diego fairy shrimp is a member of the Branchinectidae family.

Distribution

In 1997, San Diego fairy shrimp were known to inhabit a minimum of 25 vernal pool complexes in coastal areas of San Diego, Orange, and Santa Barbara counties, and northwestern Baja California, Mexico. Currently, 137 complexes occupied by fairy shrimp have been identified. Some of the pools in San Diego County are found in Camp Pendleton, San Marcos, Carlsbad, Ramona, Santa Fe Valley, Poway, Del Mar Mesa, Kearny Mesa, Chollas Heights, Sweetwater Reservoir, Marron Valley, Otay Mesa, Tijuana Slough National Wildlife Refuge, and Imperial Beach.

Habitat

San Diego fairy shrimp typically occur in groups of vernal pools referred to as vernal pool complexes. San Diego fairy shrimp are restricted to dilute vernal pools, having relatively low sodium (Na^+) concentrations (below 60 millimoles per liter), low alkalinity (below 1000 milligrams per liter), and neutral pH (near 7). A number of other flora and fauna species are known to inhabit vernal pool complexes in southern California. Vegetation communities associated with adjacent upland habitats that

surround the vernal pools in southern California are valley needlegrass grassland, annual grasslands, coastal sage scrub, maritime succulent scrub, and chaparral.

Threats

The San Diego fairy shrimp is predominately threatened by habitat loss. In 1997, the shrimp was imperiled because the habitat on which the species is dependent, vernal pools, and the watersheds that sustain vernal pools, was being damaged or destroyed by a variety of human-caused activities, primarily urban development and agricultural conversion. It is estimated that 90 to 97 percent of its historical habitat in San Diego County has been destroyed.

USFWS. 2008. San Diego Fairy Shrimp (*Branchinecta sandiegonensis*) 5-Year Review: Summary and Evaluation. Carlsbad, CA. 2008.

Quino Checkerspot Butterfly

Euphydryas editha quino (Behr)

Federally Endangered

Description

Adult Quino checkerspot butterflies have a wingspan of approximately 4 centimeters (1.5 inches). The dorsal (top) sides of the wings have a red, black, and cream colored checkered pattern; the ventral (bottom) sides are dominated by a checkered red and cream pattern. The abdomen of the Quino has red stripes across the top. The Quino checkerspot tends to be darker and redder than other subspecies. The Quino life cycle includes four distinct life stages: egg, larva (caterpillar), pupa (chrysalis), and adult, with the larval stage divided into five to seven instars (periods between molts, or shedding skin). There is usually one generation of adults per year, although larvae may remain in diapause (summer dormancy) for multiple years prior to maturation. Adults emerge in the early to mid-spring, mate and lay eggs. The eggs hatch about a week and a half later and the larvae begin feeding.

Quino Checkerspot Butterfly

Credit: U.S. Fish and Wildlife Service

Taxonomic Remarks

The taxon now commonly called the Quino has undergone several nomenclatural changes. It was originally described as *Melitaea quino*. The Quino checkerspot butterfly is in the Nymphalidae (brush-foot) family.

Distribution

The Quino's historical range included much of southern California: southwestern Ventura, southwestern San Bernardino, Los Angeles, Western Riverside, and San Diego Counties. The current range for Quino includes multiple areas in southern Riverside County, south into Mexico. Observations in San Diego County include the Otay Valley, West Otay Mountain, Otay Lakes, Proctor Valley, Dulzura, and Honey Springs. The Otay core habitat-based population distribution also includes the Marron Valley, West Otay Valley, Jamul Butte, and Rancho San Diego/Jamul occurrence complexes. Multiple new Quino observation locations have been reported in south-central San Diego County since 2002 east of the community of Campo. As many as 50 individuals are estimated to have been observed in one day near Jacumba Peak.

Habitat

Quino checkerspot habitat is characterized by patchy shrub or small tree landscapes with openings of several meters between large plants, or a landscape of open swales alternating with dense patches of shrubs; such habitats are often collectively termed "scrublands." Known species of larval host plant, including dot-seed plantain (*Plantago erecta*), wooly plantain (*Plantago patagonica*), purple owl's-clover (*Castilleja exserta*), Coulter's snapdragon (*Antirrhinum coulterianum*), bird's-beak (*Cordylanthus rigidus*) and Chinese houses (*Collinsia* spp.).

Threats

The Quino checkerspot butterfly is imperiled primarily because habitat is being damaged, fragmented, and destroyed by human activities. Urban development, grazing, and invasion of nonnative plants were the predominant threats at that time.

USFWS. 2009. Quino Checkerspot Butterfly 5-Year Review. Carlsbad, CA. August 2009.

Fish

Arroyo Chub

Gila orcutti (Eigenmann and Eigenmann)

California Species of Special Concern

Description

The arroyo chub has a gray-olive green back; white bellies, big eyes, and small mouth differ from the average cyprinids. The average size for an adult chub is around 7 to 10 centimeters (3 to 4 inches). Arroyo chub feed on plants such as algae and water fern (Azolla), and on invertebrates such as insects and mollusks. They reach a size of 80 to 90 millimeters (3 to 3.5 inches) by their fourth year and rarely live longer than this. Females can reproduce at age one. Spawning takes place in pools and edge habitat from February to August with a peak in June and July. Fertilized eggs stick to plants or bottom substrate and hatch in about four days. Fry stay on the substrate for a few days, then rise to the surface and stay among plants or other cover for three to four months.

Taxonomic Remarks

The Arroyo chub is a member of the Cyprinidae family.

Distribution

Arroyo chub are native to the streams and rivers of the Los Angeles plain in southern California, including the Los Angeles, San Gabriel, San Luis Rey, Santa Ana, and Santa Margarita Rivers, and Malibu and San Juan Creeks. They have been extirpated from much of their native range, but have been introduced to streams along the coast as far north as Chorro Creek in San Luis Obispo County.

Habitat

Arroyo chub are adapted to survive in cool to warm (10 to 24^{o}C) streams that fluctuate between large winter storm flows, and low summer flows, and the low dissolved oxygen and wide temperature fluctuations associated with this flow regime. They are most common in slow flowing or backwater areas with sand or mud substrate, but may also inhabit areas with velocities in excess of 80 cm/s over coarse substrate.

Threats

Potential threats to the species include degradation, fragmentation and destruction of habitat, predation, competition, and water quality threats, including temperature, salinity, and pollution.

California Fish Species. Accessed July 25 2012 <*http://calfish.ucdavis.edu/species/?uid=5&ds=241*>

Reptiles and Amphibians

Arroyo Toad

Anaxyrus californicus (Camp)

Federally Endangered

Description

The Arroyo toad is relatively small compared to other toads (snout-vent length is 5.1 to 7.6 centimeters [2 to 3 inches]). Its coloration ranges from light olive green or gray to light brown. It can be distinguished from other toads by the presence of non-paired, symmetrical, dorsal (back) splotches, and the pale coloration of the anterior portion of the oval glands just behind the eyes. It has a prominent, white, "v-shaped" stripe that crosses the top of the head between the eyes. The belly is white or buff and often lacks dark blotches or spots. Compared to other toads, arroyo toads generally hop high and fast rather than walk. The arroyo toad breeding season typically occurs from February to July in streams with persistent water. Eggs are deposited and tadpoles develop in shallow pools with minimal current and little or no emergent vegetation. The eggs hatch in four to five days and the tadpoles are essentially immobile for an additional five to six days. Arroyo toad tadpoles feed on loose organic material, such as interstitial algae, bacteria, and diatoms. They do not forage on macroscopic vegetation. Toadlets and juvenile arroyo toads feed on ants almost exclusively but by the time they reach 1.7 to 2.3 centimeters (0.7 to 0.9 inches) in length, they feed on beetles in addition to ants. Adult arroyo toads probably consume a wide variety of insects and arthropods including ants, beetles, spiders, larvae, and caterpillars.

Taxonomic Remarks

At the time of listing, the arroyo toad was considered a subspecies of the southwestern toad (*Bufo microscaphus*). In 2006, the arroyo toad (*Bufo californicus*) was renamed *Anaxyrus californicus.* The arroyo toad is a member of the Bufonidae family.

Distribution

Historically, arroyo Toads occurred from the upper Salinas River system on Fort Hunter Liggett Military Reservation, Monterey County, at the northern end of its range, south through the Santa Ynez, Santa Clara, and Los Angeles River Basins; the coastal drainages of Orange, Riverside, and San Diego Counties; to the Arroyo San Simeon system in Baja California, Mexico. The arroyo toad also now occurs on the desert slopes of the San Gabriel Mountains (in Little Rock Creek in Los Angeles County) and the San Bernardino Mountains (in the Mojave River and in its tributaries, Little Horsethief Creek and Deep Creek, in San Bernardino County). Arroyo toads now survive primarily in the headwaters of streams as small, isolated populations, having been extirpated from much of their historic habitat.

Habitat

The breeding habitat of the arroyo toad is restricted to shallow, slow-moving stream habitats, and riparian habitats that are disturbed naturally on a regular basis, primarily by flooding. Arroyo toads tend to be located at the lower end of the upstream sections of stream segments where the coarsest sediments are lacking due to low water power, but where flow rates are great enough to keep silt and clay suspended.

Outside of the breeding season, arroyo toads are essentially terrestrial and use a variety of upland habitats for foraging, burrowing, and dispersal that include but are not limited to sycamore cottonwood woodlands, oak woodlands, coastal sage scrub, chaparral, and grassland. Additionally, arroyo toads may seek temporary shelter under rocks or debris and have been found in mammal burrows on occasion.

Threats

Habitat destruction and alteration were considered to be the most serious threats to the arroyo toad. Historically, because arroyo toad habitats are favored sites for dams and reservoirs, roads, agriculture, urbanization, and recreational facilities, such as campgrounds and off-highway vehicle parks, many arroyo toad populations were reduced in size or extirpated due to extensive habitat loss that occurred from about 1920 to 1980.

USFWS. 2009. Arroyo Toad completed 5-Yr Review. Ventura, CA. August 2009.

Silvery Legless Lizard

Anniella pulchra pulchra (Gray)

California Species of Special Concern

Description

Silvery legless lizards are often mistaken for snakes because of their complete lack of limbs and elongated bodies. However, they lack external ear openings and have unreduced eyes with moveable lids. Snout to vent length is 90 to 170 millimeters (3.5 to 6.75 inches) and total length is around 200 millimeters (7.75 inches). Generally females are slightly larger; males are smaller by up to 10% of female size. Newborn lizards start out as a silvery drab color on their dorsal side and various shades of yellow on the ventral side. Adults vary in color from brown, to dark brown, to completely black. Markings include one generally well defined line along the top of the backside and several other lateral sides. The breeding season is thought to be between the spring months and July and young are commonly born between September and November, suggesting a gestation period of four months. Silvery legless lizards typically mature at two to three years of age for males and females (respectively). Maturation seems to be linked to size: 90 millimeters (3.5 inches) snout to vent length in males and 121 millimeters (4.75 inches) snout to vent length in females are the sizes at which sexual maturity is reached. Females are ovoviviparous and give live birth to litters of one to four young, most often two.

Taxonomic Remarks

The Silvery legless lizard is a member of the Anniellidae family.

Distribution

This lizard has a spotty distribution in California and northwestern Baja California (Mexico), extending from near Antioch, California, south in the Coast Ranges, Transverse Mountains, and Peninsular Ranges, and along the coast of southern California, to Arroyo Pabellon, northwestern Baja California, and inland in Baja California to at least La Rumarosa north of the Sierra Juarez.

Habitat

Silvery legless lizards require loose sand for burrowing (sand, loam, or humus), moisture, warmth, and plant cover. As a result, they are most commonly found within 100 kilometers (62 miles) of the coast in dunes which harbor bush lupine (*Lupinus arboreus*), mock heather (*Eriogonum parvilfolium*), mock aster (*Ericameria ericoides*), and other native coastal shrubs. These shrubs are ideal because they provide plenty of leaf litter, which helps keep temperatures in the sand relatively low and moisture content relatively high on hot days, and have extensive root systems, which attract plenty of insects for prey.

Threats

The species is threatened by habitat loss from urbanization and agricultural development as well as excessive human recreational use and invasive alien plants (e.g., ice plant) in the coastal dune populations. Other activities that have detrimentally affected populations include sand mining, golf course construction, and off-road vehicle use.

Lee, S. 2008. "Anniella pulchra" (On-line), Animal Diversity Web. Accessed July 24, 2012 at *<http://animaldiversity.ummz.umich.edu/site/accounts/information/Anniella_pulchra.html>*

Orange-throated whiptail

Aspidoscelis hyperythra (Stejneger)

Formerly *Cnemidophorus hyperythrus*

California Species of Special Concern

Description

The orange-throated whiptail is a **s**lim-bodied lizard with a long slender tail, a thin snout, and large symmetrical head plates. The back is unspotted and black, dark brown, or grayish with six or fewer pale yellow or whitish stripes. The throat and often the chest are orange, turning brighter orange during breeding season. The belly is pale blue-gray or whitish with large, smooth, rectangular scales in eight lengthwise rows. Scales on the back are small and granular, and scales on the tail are keeled. The tail is blue in juveniles, fading to gray in adults. It can reach up to two times the length of the body. The orange-throated whiptail is diurnal; it lays its eggs from June to July, hatching in about two months. They prey on small invertebrates, especially spiders, scorpions, centipedes, and termites, and small lizards.

Taxonomic Remarks

The orange-throated whiptail is a member of the Teiidae family, and was formerly in the genus *Cnemidophorus.*

Distribution

The orange-throated whiptail ranges from the Santa Ana River in Orange County, and near Colton in San Bernardino County, west of the Peninsular ranges, south throughout the Baja Peninsula. It occurs from sea level to approximately 610 meters (2,000 feet).

Habitat

This species inhabits semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral.

Threats

Populations of this lizard are fragmented; it inhabits only about 25 percent of its former range. Much of the habitat it needs for survival has been destroyed by development.

California herps. Accessed July 25, 2012
<http://www.californiaherps.com/lizards/pages/a.h.beldingi.html>

Green Sea Turtle

Chelonia mydas (Linnaeus)

Federally Threatened

Description

The top half of their shell is smooth and a gray, green, brown and/or black color. The under shell, which is called the plastron and is yellowish white. Males have a larger tail than females, slightly longer, narrower top shells than females and enlarged curved claws on the front flippers for gripping the female when mating.

Green Sea Turtle

Credit: Green Nature

Green sea turtles eat seaweed and algae, but they also eat sea creatures like jellyfish, comb jellies, crayfish, and crabs. Female green sea turtles may nest every two to three years. The female green sea turtle lays 70-130 eggs - each one about the size of a ping-pong ball. About two months later the eggs hatch and the young turtles head straight for sea.

Taxonomic Remarks

Controversy rages about splitting *Chelonia mydas* into subspecies based on the many size differences between populations in different parts of the world. The population found in the eastern Pacific is often called the black sea turtle, and is sometimes described as a separate species (*Chelonia agassizi*). Individuals from the East Pacific are smaller than their counterparts in the western Caribbean in a wide range of external measurements, and are particularly dark in color, a trait that has shown to be genetically influenced.

Distribution

Green sea turtles are found in the Pacific, Atlantic and Indian oceans (Worldwide in seas where temperature does not fall below 20°C).

Habitat

Green sea turtles live in waters all over the world. The only time they emerge from the water is when they are nesting. When it is time to mate they migrate from several hundred to over a thousand miles across the ocean to where they hatched. Female green turtles use the same beaches to nest as their mothers and grandmothers.

Threats

The green sea turtle breeding populations in Florida and on the Pacific coast of Mexico are endangered; all other populations are threatened. Populations have been completely eliminated in some areas but are still reasonably abundant in other areas. The turtles have been overexploited for their meat, hides and eggs, and the predictability of their nesting habits has made them easy victims. They are also victims of incidental capture in fishing gear and are subject to the disease fibropapillomatosis.

Western Pond Turtle

Actinemys marmorata (Baird and Girard)

California Species of Special Concern

Description

The western pond turtle is a small to medium-sized drab dark brown, olive brown, or blackish turtle with a low unkeeled carapace and usually with a pattern of lines or spots radiating from the centers of the scutes. The plastron lacks hinges, and has six pairs of shelds which can be cream or yellowish in color with large dark brown markings, or unmarked. The legs have black speckling and may show cream to yellowish coloring. The head usually has a black network or spots may show cream to yellowish coloring. The throat and neck are uniformly light in color. Animals south of the Transverse Ranges tend to be lighter, from yellowish brown to light brown. The western pond turtle is primarily diurnal and completely aquatic. It is active from around February to November and may be active during warm periods in winter. It hibernates underwater, often in the muddy bottom of a pool and estivates during summer droughts by burying itself in soft bottom mud. It primarily eats aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, crayfish, carrion, and occasionally frogs and fish.

Taxonomic Remarks

This turtle was formerly named *Clemmys marmorata*. This turtle is a member of the Emydidae family.

Distribution

This turtle is found along the entire western part of California, including the coast ranges and the central valley, north into Washington and British Columbia (west of the crest of the Cascades and Sierras) and south into northern Baja California (where it has disappeared throughout most of its former range.) (It may now be extinct in western Washington and British Columbia.) Isolated populations occur at Susanville.

Habitat

The western pond turtle is found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, and either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. When basking, they prefer logs, rocks, cattail mats, and exposed banks. They even may enter brackish water and even seawater. They are found at elevations from sea level to over 1,800 meters (5,900 feet).

Threats

The western pond turtle is in decline in most of its range (from 75 to 80 percent), it was once very abundant in the southern San Joaquin Valley, with population estimates of over 3.33 million, it is now almost extinct there. A persistent threat is the human utilization and hunting of this species for consumption and selling in the pet industry.

<http://www.californiaherps.com/turtles/pages/a.marmorata.html#description>

Coast Horned Lizard

Phrynosoma blainvillii (Gray)

Formerly *Anota coronatum*

California Species of Special Concern

Description

The coast horned lizard is a flat-bodied lizard with a wide oval-shaped body, scattered enlarged pointed scales on the upper body and tail, and a large crown of horns or spines on the head. The two center horns are the longest. The sides of the body have two rows of pointed fringe scales. It is reddish, brown, yellow, or gray in color, with dark blotches on the back and large dark spots on the sides of the neck. The belly is cream, beige, or yellow, usually with dark spots, and the belly scales are smooth. The coast horned lizard is diurnal and active during periods of warm weather, retreating underground and becoming inactive during extended periods of low temperatures or extreme heat. It lays its eggs from May to June, hatching from August to September. It eats mainly ants, especially harvester ants, but also consumes other small invertebrates such as spiders, beetles, termites, flies, bees, and grasshoppers.

Taxonomic Remarks

The coast horned lizard was first described as *Agama coronate* by De Blainville (1835) based on a specimen collected by P.E. Botta. It was soon ascribed to *Phrynosoma blainvillii* by John Edward Gray in 1839. It is a member of the Phrynosomatidae family.

Distribution

Historically the coast horned lizard was found along the Pacific coast from the Baja California border west of the deserts and the Sierra Nevada, north to the Bay Area and inland as far north as Shasta Reservoir, and south into Baja California, currently its range is more fragmented.

Habitat

The coast horned lizard inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains from sea level to 2,438 meters (8,000 feet) in elevation. It is found in grasslands, coniferous forests, woodlands, and chaparral, with open areas and patches of loose soil. This lizard is often found in lowlands along sandy washes with scattered shrubs and along dirt roads, and frequently found near ant hills.

Threats

The coast horned lizard is predominately threatened by habitat destruction from human development and agriculture, and the spread of nonnative ants, such as Argentine ants (*Ridomyrmex humilis*) which displaces the native ant food source. Before commercial collecting was banned in 1981, this lizard was extensively exploited by the pet trade and the curio trade.

<http://www.californiaherps.com/lizards/pages/p.coronatum.html#description>

Coronado Island Skink

Plestiodon skiltonianus interparietalis (Tanner)

Formerly *Eumeces skiltonianus interparietalis*

California Species of Special Concern

Description

The Coronado Island skink is a small skink with a slim body, small head, thick neck, small legs, and a smooth, shiny body with cycloid scales. It is striped with three dark brown and light cream stripes. The underside is pale or gray. The tail is gray or dull blue on older adults, and bright blue on juveniles. Younger adults often retain some of the bright blue coloring. The stripes on juveniles are more highly contrasted than on adults. During the breeding season, adults develop reddish orange coloring on the side of head, chin, on the tail, and sometimes the sides. This skink is diurnal, but secretive and not typically seen active. It is occasionally seen foraging in leaf litter. More commonly found underneath bark and surface objects, especially rocks, where it lives in extensive burrows. It preys on insects, and other small invertebrates, especially spiders and sow bugs. It lays two to 10 eggs in June and July which hatch in late July and August, the females will guard their eggs until they hatch.

Taxonomic Remarks

The Coronado Island skink is a member of the Scincidae family.

Distribution

This subspecies is found in inland Southern California south through the north Pacific coast region of northern Baja California. The species *Plestiodon skiltonianus interparietalis* ranges north along the coastal ranges, throughout Northern California north of the Central Valley, into British Columbia, and in the northern Sierra Nevada and foothills. It is also found in the southern Sierra Nevada on the Kern Plateau, the Greenhorn and Piute mountains, and east of the Sierra Nevada in isolated locations. It ranges east into Idaho, Nevada, Utah, and north central Arizona.

Habitat

The Coronado Island skink inhabits grasslands, woodlands, pine forests, and chaparral, especially in open sunny areas such as clearings and the edges of creeks and rivers. It prefers rocky areas near streams with lots of vegetation, but is also found in areas away from water.

Threats

This species is mainly threatened by habitat loss.

California Herps. Coronado Skink Description. Accessed July 24, 2012
<*http://www.californiaherps.com/lizards/pages/p.s.interparietalis.html#description*>

Coast Patch-nosed Snake

Salvadora hexalepis virgultea (Bogert)

California Species of Special Concern

Description

The coast patch-nosed snake is a fast, moderately-sized slender striped snake with smooth scales, large eyes, and a large scale over the tip of the snout. It is well-camouflaged, it is gray to brown with a broad yellow or tan stripe down the middle of the back (but narrower than the other subspecies), and dark brown sides (with no light stripes). The top of the head is brown. The underside is cream, sometimes shading to pale orange at the tail end. Not much is known about the coast patch-nosed snake, it is active during daylight, even in times of extreme heat. It is terrestrial, but may climb shrubs in pursuit of prey; it also burrows into loose soil.

Taxonomic Remarks

The coast patch-nosed snake is a member of the Colubridae family.

Distribution

The coast patch-nosed snake occurs in California from the northern Carrizo Plains in San Luis Obispo County, south through the coastal zone, south and west of the deserts, into coastal northern Baja California.

Habitat

The coast patch-nosed snake inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains. It occurs at elevations from below sea level to around 2,130 meters (7,000 feet).

Threats

This snake is considered threatened along the southern coast area due to land changes from heavy grazing, development and loss of former habitat, though its natural history and abundance have never been well-known or extensively studied.

<http://www.californiaherps.com/snakes/pages/s.h.virgultea.html#scientificname>

Western Spadefoot Toad

Spea hammondii (Baird)

California Species of Special Concern

Description

The western spadefoot toad is a stout-bodied toad, greenish, brown, cream, or gray above, often with four irregular light stripes and dark blotches on the back, and reddish spots at tips of skin tubercles. It is unmarked and whitish below. The eyes are pale gold with vertical pupils. There is no bump between the eyes. A glossy black spade shaped like a wedge or teardrop is present on each hind foot. The spades assist in digging soil. The toad's reproduction is aquatic and fertilization is external. Breeding takes place after heavy rainfall and the formation of temporary shallow rain pools, typically from January to May, peaking in February and March, but this spadefoot is an opportunistic breeder, physiologically capable of breeding at any time if conditions are favorable.

Taxonomic Remarks

For many years *S. hammondii* was grouped with spadefoots from Arizona through New Mexico into western Texas and Oklahoma, with the California subspecies called *Scaphiopus hammondii hammondii*.

Distribution

The western spadefoot toad is endemic to California and northern Baja California. It ranges from near Redding south throughout the Great Valley and its associated foothills, through the South Coast Ranges into coastal southern California south of the Transverse mountains and west of the Peninsular mountains, into northwest Baja California.

Habitat

The western spadefoot toad prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rain pools which do not contain bullfrogs, fish, or crayfish are necessary for breeding. From near sea level up to 1,365 meters (4,500 feet) in San Diego County mountains.

Threats

This species has lost an extensive amount of habitat in the central valley due to urban and agricultural development of land that formerly supported the formation of temporary rain pools. It is estimated to be gone from almost 80 percent of its former habitat along the south coast. Formerly present in much of lowland southern California including the Los Angeles coastal plain. Also the introduction of mosquito fish has threatened some populations.

California herp.com Western Spadefoot Toad Species Description. Accessed July 24, 2012: *<http://www.californiaherps.com/frogs/pages/s.hammondii.html>*

Two-striped Garter Snake

Thamnophis hammondii (Kennicott)

California Species of Special Concern

Description

The two-striped garter snake is a medium-sized snake with a head barely wider than the neck and keeled dorsal scales. It varies in appearance; there are two basic pattern morphs, both have a drab olive, brown, or dark gray ground color, with no dorsal stripe, except for a spot on the neck. The striped morph has a yellowish to gray lateral stripe on each side, and a fairly uniform dorsal coloring, with only faint spotting. The unstriped morph lacks the lateral stripes and has two rows of small dark spots on each side. Light areas between the scales between these spots can create a checkered appearance. The underside is pale yellow or orange, unmarked, or with dark smudging. The two-striped garter snake is primarily aquatic and diurnal. It is also active at night and at dusk during hot weather in some areas. It can be active from January to November depending on weather conditions. Its breeding season has been observed in late March and early April, with live young born in late July and August. This garter snake preys on tadpoles, newt larvae, small frogs and toads, fish, and occasionally worms and fish eggs.

Taxonomic Remarks

The two-striped garter snake is a member of the Natricidae family and was formerly classified as a subspecies of *Thamnophis couchii*.

Distribution

The two-striped garter snake's range is continuous from near Salinas in Monterey County south along the coast mostly west of the south Coast Ranges, to southern California where it ranges east through the Transverse Ranges (and into the desert in Victorville) and south through the Peninsular Ranges into northern Baja California.

Habitat

This garter snake is generally found around pools, creeks, cattle tanks, and other water sources, as well as often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest. It is found at elevations from sea Level to 2,130 meters (6,988 feet).

Threats

The largest threat to the two-striped garter snake is the loss of its wetland habitat as a result of urbanization and agricultural modifications.

Californiaherp.com Accessed July 24, 2012:
<http://www.californiaherps.com/snakes/pages/t.hammondii.html#description>

Birds

Tri-colored Blackbird

Agelaius tricolor (Audobon)

California Species of Special Concern

Description

Source:
http://tricolor.ice.ucdavis.edu

The Tri-colored Blackbird is about 22 centimeters (8.75 inches) tall. Male Tri-colored Blackbirds are glossy black and have a red shoulder patch which is bordered in white while the females are blackish brown with light streaking on the upper breast.

Tri-colored Blackbirds are highly gregarious and nest in large, dense colonies from April-June. Breeding colonies are the largest recorded for any extant North American landbird (Shuford and Gardali 2008). Nests are typically constructed 1.5 meters (4.9 feet) above water in freshwater marshes. Characteristics indicative of high-quality breeding habitat include open accessible water; a protected nesting substrate, including either flooded or thorny vegetation; and a suitable foraging space providing adequate insect prey with 3 kilometers (1.9 miles) of the nesting colony (Shuford and Gardali 2008). Wintering Tri-colored Blackbirds form large, mixed species Blackbird flocks that forage in grasslands and agricultural fields and at dairies and feedlots. Though most Tri-colored Blackbirds leave their summer breeding areas in the winter, they still prefer to roost in marsh habitats. In San Diego County the majority of the population does not move great distances between winter and summer habitat.

Taxonomic Remarks

The Tri-colored Blackbird, a member of the family Icteridae, is endemic to the west coast of North America and primarily to the state of California.

Distribution

The Tri-colored Blackbird is primarily native to California where over 90% of the total population is located (Unitt 2004). The greatest numbers of Tri-colored Blackbirds can be found in the Central Valley and other locations west of the Sierra Nevada and Cascades. This species can also be found in western Nevada, Oregon, and Washington.

Wintering Tri-colored Blackbirds move extensively throughout their range compared to the breeding season. Large winter aggregations of this species occur in and around the Sacramento-San Joaquin River Delta and coastal areas, including Monterey and Marin counties. Small flocks may also be found from Sonoma County south to San Diego County (Shuford and Gardali 2008). Statewide surveys of Tri-colored Blackbirds in 1934 yielded over 700,000 birds. Recent surveys, however, indicated that populations have declined by over 50% (Kester 2007).

Habitat

This species breeds in freshwater marshes with tall emergent vegetation such as cattails (*Typha* spp.) or tules (*Scirpus* spp.), in upland habitats in thickets of non-native Himalayan blackberry (*Rubus discolor*), and silage and grain fields (Shuford and Gardali 2008). During the non-breeding season, Tri-colored Blackbirds are typically found in marshes, grasslands, and agricultural fields.

Threats

Elimination of marsh habitat as well as loss of foraging habitat to agriculture has contributed to significant declines in populations of Tri-colored Blackbirds. (Unitt, 2004).

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Grasshopper Sparrow

Ammodramus savannarum (Gmelin)

California Species of Special Concern

Description

The Grasshopper Sparrow is a small (11 to 13 centimeters [4.3 to 5.1 inches]) long), flat-headed grassland sparrow. The buff-cream breast of this species is unmarked to faintly streaked. The crown is blackish with narrow, buff streaks and a white-buff median crown stripe. It has a pale buff face with a complete eye-ring and a dark spot on rear auriculars. The Grasshopper Sparrow has a gray nape with fine reddish brown streaks that blend into an intricate pattern of chestnut-rust, black, and gray streaks on its back. The tail is short and rounded, with the rectrices pointed and with a bare shaft at the tip (Slater 2004).

The Grasshopper Sparrow occurs in California primarily as a summer resident from March to September; the breeding season extends from mid-March to August. The winter status of this species is obscure, though it is generally considered rare and appears with greatest frequency on the coastal slope of southern California. The Grasshopper Sparrow is at least partly migratory; the occasional birds seen in winter at breeding localities may not be the same individuals there in spring and summer (Slater 2004).

Taxonomic Remarks

The Grasshopper Sparrow is a member of the Emberizidae family.

Distribution

The Grasshopper Sparrow has a widespread distribution throughout most of the Americas, but it often breeds locally and is considered rare to uncommon in much of its range (Slater 2004). In San Diego County, the Grasshopper Sparrow is most restricted to native grassland. Camp Pendleton supports the largest area of this threatened contiguous habitat; Los Peñasquitos Canyon Preserve and Marine Corps Air Station Miramar/Mission Trails Regional Park are the two sites with the largest populations of Grasshopper Sparrows (Unitt 2004). In the southern part of the county Grasshopper Sparrow habitat is now narrowly wedged between the cities of San Diego and Chula Vista and the higher chaparral-covered mountains, McGinty and Otay. Even though the site is former agricultural land, much of which is now vegetated with exotic grasses only, Rancho Jamul, now acquired by the California Department of Fish and Wildlife, appears to host the key population in this region (Unitt 2004).

Habitat

In general, Grasshopper Sparrows in California prefer short to middle-height, moderately open grasslands with scattered shrubs (Unitt 2004).

Threats

In California, this species is threatened by habitat loss. Much of the grassland found in San Diego County is privately owned and can potentially be destroyed by construction and urbanization (Unitt 2004).

Slater, G.L. (2004, October 7). Grasshopper Sparrow (*Ammodramus savannarum*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Available: Accessed August 1, 2012 <*http://www.fs.fed.us/r2/projects/scp/assessments/grasshoppersparrow.pdf*>.

Bell's Sage Sparrow

Artemisiospiza belli belli (Cassin)

BCC

Description

The Bell's Sage Sparrow is a medium-sized sparrow that breeds in sagebrush shrubsteppe of the intermountain west and California. Males and females are similar in appearance, with a relatively long tail, a pale brownish-gray top of the head and nape, pale brownish mantle, dull white underparts, and brown rump. The breast often has a necklace of thin dark stripes, and a dark brownish central spot. The wing has a distinct whitish bar, and on the underside, a yellow patch at the wrist. Adults have a complete white eye-ring, a hazel-brown iris, and two darkish lateral stripes on a white throat. The bill is grayish-brown, and legs and feet are dark grayish-brown (Chase and Carlson 2002).

The Bell's Sage Sparrow remains paired year round, but not necessarily with the same partner. To defend its territory, the male sings from atop a shrub, twitching its tails as it sings. Fights, chases, and displays are also used to exclude others. Nesting occurs from March to July, with one to three clutches produced per year. The nest is usually set in a low shrub a few feet off the ground but is sometimes in a depression on the ground or a clump of grasses (Audubon 2012).

Taxonomic Remarks

The Bell's Sage Sparrow is a member of the Emberizidae family.

Distribution

In California, the Bell's Sage Sparrow centers of abundance are in western Riverside County and in the vicinity of El Cajon, San Diego County. It is fairly common in eastern Santa Barbara County and very uncommon to rare residents in coastal areas of Santa Barbara county (Chase and Carlson 2002). In San Diego County, the distribution is most continuous in the extensive chaparral of the Campo Plateau, north into the south-facing slopes of the Laguna Mountains. In north-central San Diego County, semi-desert climates attract this species around Ranchita and in Dameron and Oak Grove valleys. In south county, these sparrows are found west of Sweetwater and Otay reservoirs, and there is a small number on Cowles Mountain, Mission Trails Regional Park, and Marine Corps Air Station Miramar (Unitt 2004).

Habitat

The Bell's Sage Sparrow breeds in sagebrush over 90% of the time. Stands of other low desert scrub are sometimes used: bitterbrush, chamise chaparral, creosote bush, rabbit bush, saltbush, and shadscale. A mixture of bare ground and herbaceous plants appears to be an important component. Wintering birds use various semi-arid landscapes dominated by cactus, creosote bush, short native grasses, honey mesquite, and sagebrush (Audubon 2012).

Threats

For Sage Sparrows in the shrublands of the Intermountain West, loss, fragmentation, and degradation of sagebrush habitat are primary concerns (Unitt 2004).

Chase, M.K. and B.A. Carlson. 2002. Sage Sparrow (*Amphispiza belli*). *In* The Coastal Scrub and Chaparral Bird Conservation Plan: a strategy for protecting and managing coastal scrub and chaparral habitats and associated birds in California. California Partners in Flight. *<http://www.prbo.org/calpif/htmldocs/scrub.html>*

National Audubon Society. 2012. Sage Sparrow Description. Accessed August 1, 2012 *<http://birds.audubon.org/species/sagspa>*

Golden Eagle

Aquila chrysaetos (Linnaeus)

California Species of Special Concern

Description

The Golden Eagle is a large, dark brown raptor with a golden nape and long, broad wings. This species ranges from 72 to 84 centimeters (28 to 33 inches) and wingspan ranges from 185 to 220 centimeters (73 to 87 inches) (Kochert et al. 2002). Golden Eagles weigh between 3,000 to 6,125 grams (8.7-13.5 lbs), with females being 25% larger than males. Juvenile eagles have white patches on the underside of the wing and tails that are white at the base with a dark tip.

Golden Eagles construct their nests on cliffs or in the largest trees of forested stands that provide unobstructed views of the surrounding habitat. Many of the cliff sites in San Diego County have been used regularly since the early 1900's (Unitt 2004). Golden Eagles lay one to four eggs, with two being the average. In San Diego most eggs are laid in mid-February, with chicks hatching between late March and early April (Unitt 2004). In San Diego, most pairs remain in their territories year round, though the young may move great distances (Unitt 2004).Golden Eagles prey primarily on rodents and lagomorphs but will also feed on other mammals, birds, reptiles, and carrion (Polite and Pratt 1999).

Taxonomic Remarks

The Golden Eagle is a member of the Family Accipitridae.

Distribution

In North America, the Golden Eagle breeds mainly in the western portion of the continent from central Mexico north to Alaska, while in the eastern half of the continent, a few breeding pairs are found in Canada and the United States. Other than the center of Central Valley in California, this species is an uncommon permanent resident and migrant. From 1997-2001, 55 Golden Eagle pairs nested in San Diego County, with only four found west of Interstate 15 (three in Camp Pendleton and one at Lake Hodges) (Unitt 2004). The non-breeding distribution of the Golden Eagle in San Diego County is similar to the breeding distribution. In southern San Diego County a handful of birds are often found west to the Otay and Tijuana River valleys (Unitt 2004). Long-term survey data indicate that Golden Eagle populations in the western U.S. have declined in some parts and remained stable elsewhere.

Habitat

Characteristics of suitable breeding habitats include the following: 1) cliff edges rocky outcrops or large trees for nesting; 2) open foraging habitat such as grassland, shrubland, desert, and savanna; availability of small to medium sized prey, particularly lagomorphs and ground squirrels (Kochert et al. 2002). In southern California, Golden Eagles tend to avoid heavily forested mountains, the coast, and urban areas.

Threats

Conversion of foraging habitat to development has led to significant declines in breeding pairs of Golden Eagles in San Diego County (Unitt 2004). The construction of residential developments and associated disturbances has led to nest abandonment in southern California (Kochert et al. 2002). Other possible causes of decline include direct strikes from wind turbines, electrocution, and poisoning.

Kochert, M.N., K. Steenhof, C.L. Mcintyre, and E.H. Craig. 2002. Golden Eagle (*Aquila chrysaetos*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell\Lab of Ornithology; Retrieved from the Birds of North America Online: <*http://bna.birds.cornell.edu/bna/species/684doi:bna.684*>

Polite, C. and J. Pratt. 1999. Bald eagle (*Haliaeetus leucocephalus*). California Wildlife Habitat Relationships System, California Department of Fish and Game, California Interagency Wildlife Task Group. Available on the Internet at: <*http://www.dfg.ca.gov/whdab/cwhr/A043.html*>

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Short-eared Owl

Asio flammeus (Pontoppidan)

California Species of Special Concern

Description

The Short-eared Owl is a medium sized owl 38 centimeters (15 inches) in length with a wingspan of 96 centimeters (38 inches). The plumage is dorsally mottled brown and pale buff. Ventrally, these owls are buff to rust colored, with heavy vertical streaking on the breast. Females are typically larger and darker than males. The head is large with short ear tuffs and dark triangles around the eyes.

The Short-eared Owl is a ground nesting species that is much more diurnal than most other owl species and is often seen during daylight, especially early and late in the day. Short-eared Owls construct their nests in open country characterized by vegetation that is tall and dense enough to adequately conceal the incubating female and provide cover for the owls' prey base (Holt and Leasure 1993). Clutch size ranges from 4-14 with an average clutch size of 5.6 (Holt and Leasure 1993). This species forages mostly in the late evening and early morning, feeding almost exclusively on small mammals, especially voles (*Microtus* spp.) (Shuford and Gardali 2008).

Taxonomic Remarks

The Short-eared Owl is a member of the Family Strigidae.

Distribution

The Short-eared Owl is a widespread species, occurring on all continents except Australia and Antarctica. This species breeds throughout much of northern North America and most northern populations are migratory; North American breeders winter south to northern Mexico and Florida (Shuford and Gardali 2008). Populations fluctuate dramatically, following periodic "bust or boom" cycles of the owls' primary prey; the breeding range expands and contracts with these prey cycles. Short-eared Owls are year-round residents in certain areas within California, although it is principally a winter visitor to San Diego County (Unitt 2004). This species has been documented frequently during the winter in the Chula Vista Nature Center, the Tijuana estuary, Fiesta Island, and Mission Bay. Only one record, from the early 1900's, exists of the Short-eared Owl breeding in San Diego County (Unitt 2004).

Habitat

In North America, Short-eared Owl nesting habitat includes grasslands, sagebrush, marshes, and tundra.

Suitable in California include salt-and freshwater marshes, irrigated alfalfa or grain fields, and ungrazed grasslands and old pastures (Shuford and Gardali 2008).

Threats

The primary threats to this species are habitat loss and degradation. Increased predation due to habitat fragmentation and development has also led to a decline in nesting success (Unitt 2004).

Holt, D.W. and S.M. Leasure. 1993. Short-eared Owl (*Asio flammeus*). In: The Birds of North America, No. 62 (A. Poole and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Long-eared Owl

Asio otus (Linnaeus)

California Species of Special Concern

Description

Long-eared Owls are medium-sized owls. Females are generally much larger than males. These owls have long, rounded wings and a long tail. The wingspan of adults ranges from 90 to 100 centimeters (35.4 to 39.3 inches). The head of long-eared owls is large and round, topped with long blackish ear tufts that are close together and are not visible in flight. Long-eared owls are brownish gray, with vertical streaks that distinguishing them from great horned owls, which have horizontal streaks. They have pale patches on the face that give the appearance of white eyebrows, and a white patch below the bill. They have a black bill, orange or yellow eyes, and their legs and toes are completely feathered. Females are generally darker and more richly colored than males (Ivory 1999).

Long-eared Owls breed between February and July. They raise one brood per season. Long-eared Owls nest in trees in nests built by other species. Once they choose a nest, the female lays two to 10 (usually five to six) eggs. She lays one egg every other day (Ivory 1999).

Taxonomic Remarks

The Long-eared Owl is a member of the Strigidae family.

Distribution

Long-eared Owls are found throughout the northern hemisphere. Their range extends throughout temperate North America, through Europe and the former Soviet Union as far east as Japan. Isolated populations are also found North and East Africa, the Azores, and the Canary Islands (Ivory 1999). The Long-eared Owl occurs in all parts of San Diego County. The largest colony is that in Sycamore Canyon. Nests have been found most frequently in the foothills and inland valleys, but they range as near the coast as Guajome Lake and the Tijuana River Valley near the west end of Sunset Road. The highest elevations at which we found the Long-eared Owl nesting were 1306 meters (4286 feet) in Johnson Canyon and 1316 meters (4320 feet) at the more eastern of Twin Lakes (Unitt 2004).

Habitat

In San Diego County the Long-eared Owl is a rare resident in shady oak woodlands and broad riparian forests. Ideal habitat includes a closed canopy, nearby open habitats for foraging, and a good supply of abandoned raptor and corvid nests or debris platforms for nesting. Although widespread in San Diego County the Long-eared Owl is limited by the paucity of forest, reduction of adjacent grasslands, and human disturbance (Unitt 2004).

Threats

The Long-eared Owl has experienced a steep decline in southern California during the 20th century, attributed to the loss of riparian and grassland habitats (Unitt 2004.)

Ivory, A. 1999. "Asio otus" (On-line), Animal Diversity Web. Accessed July 31, 2012 <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Asio_otus.html*>

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Western Burrowing Owl

Athene cunicularia hypugaea (Bonaparte)

California Species of Special Concern

Description

The long legs and boldly spotted and barred plumage distinguish the small sized (22.8 to 27.9 centimeters [9 to 11 inches]) Western Burrowing Owl from other ground-dwelling owls. The Western Burrowing Owl is nocturnal and perches during daylight at the entrance to its burrow or on low posts. Nesting occurs from March through August. Burrowing Owls form pair bonds for more than one year and exhibit high site fidelity, reusing the same burrow year after year (Klute et al. 2003). Burrowing Owls are dependent on burrowing mammals such as prairie dogs and grounds squirrels throughout their range for nesting and roosting habitat. Burrows occupied by Western Burrowing Owls in California are most commonly dug and subsequently abandoned by ground squirrels. The female remains inside the burrow during most of the egg laying and incubation period and is fed by the male throughout brooding. Western Burrowing Owls are opportunistic feeders consuming a diet that includes arthropods, small mammals, and birds, and occasionally amphibians and reptiles (Klute et al. 2003).

Source: *http://www.burrowingowlconservation.org/ReportOwls.html*

Taxonomic Remarks

The Western Burrowing Owl is a member of the Family Strigidae. Two recognized subspecies occur in North America: *A. c. hypugaea* in the West, and *A. c. floridana* in Florida and the Bahamas (Shuford and Gardali 2008).

Distribution

The Western Burrowing Owl is primarily restricted to the western United States and Mexico. Although the historical breeding range is largely intact, range contractions have occurred primarily at peripheral regions, in southern Canada, the northeast Great Plains, and parts of California and the Pacific Northwest. Although once considered common in San Diego County, this species is now known from only five areas: 1) North Island Naval Air Station; 2) Imperial Beach Naval Auxiliary Landing Field; 3) Otay Mesa; 4) Warner Valley, and 5) Borrego Valley (Unitt 2004).

Habitat

This owl is associated with grassland, desert, and shrub-steppe habitats throughout western North America. They are also known to exist in areas modified by human activity. Owls have been documented nesting in ditches and drains in agricultural areas, city parks, and adjacent to busy roads (Shuford and Gardali 2008).

Threats

The primary threats to this species are habitat loss and degradation. Conversion of habitat to agriculture in the central areas of the Central valley is the greatest threat to western Burrowing Owls in California (Shuford and Garaldi 2008). Habitat fragmentation and the associated increase in terrestrial predators, as well as an increase in vehicle related mortalities are the primary threats to this species in San Diego County (Unitt 2004).

Klute, D. S., L. W. Ayers, M. T. Green, W. H. Howe, S. L. Jones, J. A. Shaffer, S. R. Sheffield, and T. S. Zimmerman. 2003. Status Assessment and Conservation Plan for the Western Burrowing Owl in the United States. U.S. Department of Interior, Fish and Wildlife Service, Biological Technical Publication FWS/BTP-R6001-2003, Washington, D.C..

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Oak Titmouse

Baeolophus inornatus (Gambel)

BCC

Description

The Oak Titmouse is brown-tinged with a plain face and short crest, and measures 14.6 centimeters (5.75 inches) in length. The Oak Titmouse gives a repeated series of three to seven syllables, each comprised of one low and one high note (Audubon 2012). The Titmouse nests in mostly natural cavities and sometimes in old woodpecker holes. It also uses artificial boxes. Female builds nest with grass, moss, feathers, shredded bark, and other material mostly from mid-March through April. Incubation is 14 to 16 days, and young fledge in about 17 days (Audubon 2012).

Taxonomic Remarks

The Oak Titmouse is a member of the Paridae family.

Distribution

The Oak Titmouse's year-round range is from southwest Oregon through California to northwestern Baja California, Mexico, where it breeds in low to middle elevations. In San Diego County, the range approaches the coast most closely in the north (within 3 miles along San Onofre Creek), then retracts inland with increasing distance to the south. Along the Mexican border, however, the westernmost site for the Titmouse is 32.2 kilometers (20 miles) inland at Marron Valley (Unitt 2004).

Habitat

The Oak Titmouse is most common in oak woodland, though it is common also wherever there are trees in San Diego County's foothills and mountains. A year-round resident, the Titmouse is found around campgrounds and picnic tables and because of its patronizing bird feeders and birdhouses. But in spite of this familiarity with humanity it has not spread into cities now landscaped into urban forest (Unitt 2004).

Threats

The main threat to the Oak Titmouse is the destruction of habitat and the urbanization of its range (Audubon 2012).

National Audubon Society. 2012. Oak Titmouse Species Description. Accessed August 1, 2012 <*http://birds.audubon.org/species/oaktit*>.

Black Brant

Branta bernicla (Linnaeus)

California Species of Special Concern

Description

The Black Brant is a small sea goose that measures 55 to 66 centimeters (22 to 26 inches) long with a wingspan of 106 to 121 centimeters (42 to 48 inches). This species appears blackish brown and white in color. It has a dark brown or black head, neck and chest and a white band on its neck. It has a white rump, dark wing feathers and a black bill, legs and feet.

The Black Brant is a fully migratory species. Spring migration occurs over a four month period beginning in February with birds arriving on breeding grounds in early June (USFWS 1993). Black Brants establish pair bonds on wintering grounds and arrive at breeding sites as pairs. Most Black Brants breed when at age three, laying one to seven eggs per clutch. Adults and fledged young follow traditional routes from nesting sites to fall staging areas where they congregate in large numbers and forage on extensive beds of eelgrass. Fall migration occurs during October and November. The earliest record of arrival for Black Brant fall migrants on central San Diego Bay was 22 November (Unitt 2004).

Taxonomic Remarks

The Black Brant is a subspecies of Brant migrating along the Pacific coast and regular in San Diego County. It is part of the Anatidae family.

Distribution

The Black Brant nests from the western Canadian high arctic to the coastal plains of Canada, Alaska, and Russia. Wintering grounds occur along the Pacific coastal states, the Baja California peninsula, and mainland Mexico estuaries (USFWS 1993). South San Diego Bay is currently the Black Brant's primary habitat in San Diego County (Unitt 2004). Although relatively few Black Brant utilize central and northern San Diego Bay, the highest numbers frequently occur in the vicinity of North Island Naval Air Station (Shuford and Gardali 2008).

In the 1880's an estimated 50,000 to 100,000 Black Brant were present in San Diego Bay. However, unregulated shooting caused the near extirpation of the species in the area by the early 1900's. Current major Black Brant wintering and staging sites in California include Humboldt Bay, Bodega Bay, Tomales Bay/DrakesEstero, Morro Bay, and San Diego Bay/Mission Bay San Diego River flood control channel (Shuford and Gardali 2008). Recent estimates of the San Diego Bay population are 750 to 1500.

Habitat

The Black Brant relies on coastal habitats for most of its life history requirements. This species require well protected, shallow marine waters with intertidal eelgrass beds, located in bays and estuaries (Shuford and Gardali 2008). During the non-breeding period the Black Brant is a food specialist, relying heavily on eelgrass.

Threats

Unregulated hunting was associated with significant declines of Black Brant in the late 1800's (Unitt 2004). The heavy dependence on eelgrass makes this species susceptible to pollution, dredging, grazing,

and coastal development in close proximity to eelgrass beds. Disturbance during the winter and staging season can limit the ability of the Black Brant to develop adequate fat reserves for migration and breeding.

USFWS 1993. Waterfowl Management Handbook, Fish and Wildlife Leaflet 13.1.15. Anchorage, AK.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Ferruginous Hawk

Buteo regalis (Gray)

California Species of Special Concern

Description

The Ferruginous Hawk is large hawk with a broad head and long, narrow-tipped wings. This species averages about 56 centimeters (22 inches) in length with a wingspan of 142 centimeters (56 inches). Although similar in plumage, females are slightly larger than males. This species occurs in distinct light and dark color morphs. In the light morph, adults are mostly whitish grey, with the back and shoulders rufous tinted. Dark morphs have brownish-black heads, dorsal and ventral areas, with a light colored tail and primaries (Bechard and Schmutz 1995).

This species usually nests in prairies or foothills; in trees and shrubs or on rock outcrops and cliffs. Occasionally, if no elevated structures are available, Ferruginous Hawks will nest on the ground. Two to four eggs are usually laid in April and May (Bechard and Schmutz 1995). Nesting areas usually occur within, or in close proximity to, foraging habitat. Ferruginous Hawks forage over open, treeless areas for lagomorphs, pocket gophers, ground squirrels, and mice.

Taxonomic Remarks

The Ferruginous Hawk is a member of the Family Accipitridae.

Distribution

This species breeds from British Columbia eastward to southwestern Manitoba southward to Texas and Nevada. Ferruginous Hawks winter from central and southern parts of their breeding range southward to Baja California and northern Mexico. Ferruginous Hawks do not breed in southern California but winter there in some interior and coastal areas. In San Diego County, this species is considered a rare winter visitor of grasslands with a total population of about 100 hawks counted annually (Unitt 2004). The highest counts of Ferruginous Hawks have been documented in the east arm of the Warner Valley, the upper basin of Lake Cuyamaca, and Lake Henshaw (Unitt 2004).

Habitat

This hawk is a denizen of open, dry country. Large tracts of open desert, grassland, plains, or shrub-steppe are required for successful nesting. Ferruginous Hawk winter habitat is similar to breeding habitat. Preservation of the threatened Ramona grasslands will benefit the wintering population of Ferruginous Hawks in San Diego County (Unitt 2004).

Threats

Habitat loss is the major threat to Ferruginous Hawk populations. In San Diego County this species has lost habitat to urbanization at Rancho Otay (Unitt 2004). Overgrazing of open habitats can also lead to reduction in the hawks' prey base.

Bechard, M. J. and J. K. Schmutz. 1995. Ferruginous hawk *(Buteo regalis)*. *In* The Birds of North America, No. 172 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA and The American Ornithologists' Union, Washington, D.C.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Swainson's Hawk

Buteo swainsoni (Bonaparte)

California Threatened, BCC

Description

Swainson's Hawk is a slender hawk with long pointed wings. This species averages about 48 centimeters (19 inches) in length with a wingspan of 130 centimeters (51 inches). This species occurs in distinct light and dark color morphs, with variations in between. In the light morph, adults have a whitish forehead and a white throat patch. The ventral area is white and streaked with brown. The rest of the head, sides of throat, and chest patch, as well as the dorsal area are dark brown. Birds of the dark morph are completely dark brown, except for a light patch under the tail.

This species begins nesting in California in late March. Nests are constructed in trees or on utility poles, with two to four eggs being laid. Historical records from San Diego County indicate that Swainson's Hawks preferred sycamores (*Platanus* sp.) and cottonwoods (*Populus freemonti*) (Unitt 2004). Swainson's Hawks will forage over long distances (up to 30 kilometers [18.6 miles]) in search of prey (Woodbridge 1998). Swainson's Hawks feed heavily on ground squirrels, voles, and other small mammals. In the Central Valley of California, dietary items included small mammals, birds, toads, crayfish, and insects (Woodbridge 1998).

Taxonomic Remarks

The Swainson's Hawk is a member of the Family Accipitridae.

Distribution

This species breeds throughout most of western North America. Swainson's Hawks are highly migratory, breeding in North America and wintering in southern South America (Woodbridge 1998). In California, breeding populations of Swainson's Hawks occur in grassland, desert, shrub steppe, and agricultural habitats. The majority of California's breeding Swainson's Hawks are found in the Great Basin and Central Valley (Woodbridge 1998). Although this raptor was a fairly common breeder in San Diego County in the early 1900's, Swainson's Hawks in southern California are now rarely seen during spring and fall migration (Unitt 2004).

Habitat

This hawk occupies a variety of open habitats, such as desert, shrub steppe, prairie, and agricultural fields. Although a high percentage of Swainson's breeding sites in California are located in riparian forest, the presence of riparian habitat alone should not be used an indicator of habitat quality for this species. Recent studies indicate that the majority of Swainson's Hawk home ranges consist of open areas used for foraging. The abundance of riparian forest as well as high quality foraging habitat are both important factors in determining habitat suitability (Woodbridge 1998). In San Diego County, Swainson's Hawks nested in riparian areas and foraged in nearby grasslands (Unitt 2004).

Threats

Declines of this species have been attributed to loss of nesting habitat (Unitt 2004).

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Woodbridge, B. 1998. Swainson's Hawk (*Buteo swainsoni*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. <*http://www.prbo.org/calpif/htmldocs/riparian_v-2.html*>

Red Knot

Calidris canutus roselaari (Linnaeus)

BCC

Description

The Red Knot is a medium-sized shorebird. Average length is 25 centimeters (10 inches) with a wingspan of 58 centimeters (23 inches). During breeding season, this subspecies has a rufous face, breast, and upper ventral area. The lower ventral area and under tail-coverts are light colored with dark flecks. Upperparts are dark brown and the feathers are edged rufous and white. The sexes are similar, although females are slightly drabber. Outside of the breeding season, these bids are grayish above and whitish below (USFWS 2011).

Red Knots nest on limestone mounds in upland habitat near the Arctic coast and typically lay four eggs (USFWS 2011). Red Knots forage on terrestrial invertebrates on breeding grounds, but will also consume plant material as well.

Taxonomic Remarks

The Red Knot belongs to the Family Charadriidae. Six subspecies, three of which are known to occur in North America, are currently recognized worldwide (USFWS 2011). *C. c. roselaari* is the only Red Knot subspecies known to nest in the United States.

Distribution

This subspecies breeds in Alaska and on Wrangel Island, Russia. The nesting range in Alaska is known to include the Seward Peninsula and inland areas north of Kotzebue, including the Delong Mountains (USFWS 2011). Red Knots migrate along the Pacific Coast and the winter range includes the southern coasts of the United States south to the tropical coasts of South America. Important stopover sites are in Washington and southern Alaska. Estimates of numbers on the Pacific coast of the lower 48 are incomplete, but indicate that the population has never exceeded 10,000 birds (Page et al. 1999). In Baja California, 1,053 Red Knots were counted in January 1994 (Page et al. 1999). Red Knots are most commonly seen in San Diego County during the winter months, although they have been documented during late summer and fall.

Habitat

Red Knots occupy different habitats for breeding and migration/wintering. During migration stopovers and in wintering areas, Red Knots are usually found in coastal habitats, particularly in areas with extensive sandy intertidal flats or mouths of bays and estuaries (USFWS 2011).

Threats

Although very little is known concerning this subspecies of Knot, threats include overharvest in some portions of the range as well habitat degradation. Loss of wetlands to development has depleted Red Knot migration stopover habitat in the U.S. (USFWS 2011).

Page, G.W., L. E. Stenzel & J. E. Kjelmyr. 1999. Overview of shorebird abundance and distribution in wetlands of the Pacific coast of the contiguous United States. *Condor* 101: 461-471.

U.S. Fish and Wildlife Service. 2011. 90-Day Finding on a Petition to List the Red Knot Subspecies *Calidris canutus roselaari* as Endangered. FR CFR Part 17. Volume 76 No. 2. Docket No. FWS-R7-ES-2010-0061.

Coastal Cactus Wren

Campylorhynchus brunneicapillus sandiegoensis (Lafresnaye)

California Species of Special Concern, BCC

Description

The Coastal Cactus Wren is the largest wren in the United States; it is 17.8 to 22.9 centimeters (7 to 9 inches) long. The sexes are similar, characterized by a long, slightly decurved bill, dark crown with a distinctive white stripe over the eye, white throat, gray-brown back streaked with white and black, and white to buff belly and sides, densely spotted at the breast. The wings and tail feathers are mostly black with white barring and the legs are dark. Juveniles resemble adults, but have fewer, lighter chest spots and a shorter tail (Peterson 2001). Breeding for the Coastal Cactus Wren begins in late February or early March and continues through June. The clutches consist of 4 to 5 buff colored eggs, speckled with brown (Peterson 2001).

Taxonomic Remarks

The Coastal Cactus Wren is a member of the Troglodytidae family.

Distribution

The Coastal Cactus Wrens nest in stands of prickly pear or cholla cactus throughout coastal San Diego County, with concentrations in southern Camp Pendleton, Fallbrook Naval Weapons Station, Lake Hodges, San Pasqual, Lake Jennings, Sweetwater, and Otay (Unitt 2004).

Habitat

The Coastal Cactus Wren is found a variety of low, dry habitats; most numerous in desert, in areas with thorny shrubs and cactus, especially where cholla cactus is common; also found in mesquite brush, in towns, and locally in coastal chaparral where cactus grows (Planet of Birds 2012).

Threats

Habitat destruction from urban development threatens the Coastal Cactus Wren. Currently, massive construction of housing tracts in eastern Chula Vista is taking place in much of the habitat for the Sweetwater/Otay population. The pressure from urbanization in the rest of the subspecies' range is also great. Two freeways currently being built or scheduled for construction, the Foothill Transportation Corridor in southern Orange County and Highway 125 in the Sweetwater/Otay region of southern San Diego County, cut through two of the largest known populations and eliminate occupied habitat (Shuford and Gardali 2008). Large wildfires in 2003 and 2007 also impacted several of the known Cactus Wren breeding areas, and significantly reduced the numbers of cactus patches available to the species. More large wildfires could be a stochastic factor leading to a rapid decline in the county.

Peterson, L. 2001. "Campylorhynchus brunneicapillus" (On-line), Animal Diversity Web. Accessed July 31, 2012 *<http://animaldiversity.ummz.umich.edu/site/accounts/information/Campylorhynchus_brunneicapillus.html>*

Planet of Birds. 2012. Cactus Wren Species Description. Accessed July 31, 2012 <*http://www.planetofbirds.com/passeriformes-troglodytidae-cactus-wren-campylorhynchus-brunneicapillus*>.

PDF of San Diego Cactus Wren account from:

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Vaux's Swift

Chaetura vauxi (Townsend)

California Species of Special Concern

Description

Vaux's Swift is a small migratory bird with narrow wings and dark brown plumage. This species averages about 12 centimeters (4.75 inches) in length with a wingspan of 31 centimeters (12 inches).

Vaux's Swifts are cavity nesting birds, although they are occasionally discovered in chimneys. These birds mix saliva with small sticks and conifer needles to fashion a nest to the inside of the tree bole. Most of the cavities used by Vaux's Swifts in Oregon were excavated by Pileated Woodpeckers, and Sterling and Paton (1996) suggest a strong association between these two species. Vaux's Swifts forage on insects and spiders above and within the forest canopy, as well as over water and grasslands.

Taxonomic Remarks

Vaux's Swift is a member of the Family Apodidae.

Distribution

Vaux's Swift breeds in western North America from southeastern Alaska, southern British Columbia, northern Idaho, and western Montana south to central California. During the winter, this species resides from central Mexico to Venezuela. In California, Vaux's Swift breeds from the Oregon border south to Santa Cruz County. In southern California, Vaux's Swift is typically seen migrating through, but may be encountered rarely during the winter except for near Oceanside, the only place where Vaux's Swift winters regularly north of central Mexico (Unitt 2004). In 2002, a large stopover roost was discovered in downtown San Diego in an old brick chimney (Unitt 2004).

Habitat

The majority of Vaux's Swift nests in California have been located in redwoods (*Sequoia sempervirens*) and several studies indicate a preference for old-growth forests (Shuford and Garaldi 2008). Vaux's are also commonly found in Douglas fir forest types (Sterling and Paton 1996).

Threats

Vaux's Swift population declines have been attributed to excessive logging in parts of their breeding ranges. In addition, their proclivity for nesting in chimneys puts them at risk of being trapped or killed.

Sterling, J., and Paton, P. W. C. 1996. Breeding distribution of Vaux's Swift in California. W. Birds 27:30–40.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Western Snowy Plover

Charadrius nivosus nivosus (Linnaeus)

Federally Threatened, California Species of Special Concern, BCC

Description

Western Snowy Plover

Credit: U.S. Navy

The Western Snowy Plover is a small shorebird about 16 centimeters (6.25 inches) in length with a wingspan of 43 centimeters (17 inches). It is pale gray-brown above and white below, with a white hindneck collar and dark lateral breast patches, forehead bar, and eye patches. The bill and legs are blackish. In breeding plumage, males usually have black markings on the head and breast; in females, usually one or more of these markings are dark brown. Early in the breeding season a rufous crown may be evident on breeding males, but it is not typically seen on females. In non-breeding plumage, sexes cannot be distinguished because the distinguishing markings disappear (USFWS 2007).

This species nests in colonies on sandy beaches along the west coast of the United States and into Southern Baja California (U.S. Navy 2006c). Vegetation and driftwood are generally sparse or absent from plover nesting sites. Plovers may nest several times during the breeding season, which extends from March into mid-to-late September. There are usually three eggs per clutch, and the chicks hatch in approximately 27 days, leaving the nest within hours to search for food. The male Western Snowy Plovers tend to care for the chicks, while the females will often nest again with a new mate. Adults and chicks feed on terrestrial and aquatic invertebrates such as amphipods, sand hoppers, and flies (U.S. Navy 2010c). Kelp wrack provides an abundant food source of the invertebrates that frequent these kelp piles. Mudflats are also used for foraging (U.S. Navy 2005).

Taxonomic Remarks

The Western Snowy Plover is a member of the Family Charadriidae. Two subspecies are found in the Americas: *C. a. nivosus* (Western); and *C. a. tenuirostris* (Cuban).

Distribution

The Western Snowy Plover nests in colonies on sandy beaches along the west coast of the United States and into Southern Baja California (U.S. Navy 2006c). The Pacific coast population of the Western Snowy Plover breeds on the Pacific coast from southern Washington to southern Baja California, Mexico. Wintering birds may remain at their breeding sites or move north or south to other wintering sites along the Pacific coast (USFWS 2007a). The two main breeding sites in San Diego County are at Camp Pendleton and the Silver Strand (Unitt 2004).

Western Snowy Plovers nest on the beach and within the airfield at NASNI (see **Figure 4-8**). Surveys of the nesting activity of the Western Snowy Plover were conducted throughout the year (January through December) in 2008 documenting both nesting and non-nesting populations and distribution to determine the species' abundance, distribution, and nesting success at these sites (U.S. Navy 2008f). Thirty-eight nests were documented at NASNI (26 on the beach and 12 on the airfield). Within the 38 nests, a total of 105 eggs were documented. Of those 105 eggs, an estimated 35 chicks fledged. Predation at the beach site resulted in the documented mortality of five eggs (U.S. Navy 2008f). Eleven Snowy Plover nests

containing 32 eggs were collected from the airfield at NASNI by Navy personnel, with concurrence from USFWS, and taken to Project Wildlife to be incubated until hatched and then the chicks to be raised in captivity, and subsequently released (U.S. Navy 2008f).

Western Snowy Plovers were observed during migration and found wintering both at the beginning and end of 2008 at NASNI. Winter roosting flocks were observed regularly at NASNI. As in past years, Western Snowy Plovers continued to use NASNI for nesting and as migratory and nonbreeding season roost sites (U.S. Navy 2008f).

Habitat

The Pacific coast population of the Western Snowy Plover breeds primarily on coastal beaches. Sand spits, dune-backed beaches, creek and river mouths, and salt pans in lagoons and estuaries are the main coastal habitats for nesting (USFWS 2007a). This habitat is unstable because of unconsolidated soils, high winds, storms, wave action, and colonization by plants. Less common nesting habitats include bluff-backed beaches, dredged material disposal sites, salt pond levees, dry salt ponds, and river bars (USFWS 2007a).

Threats

Nesting areas can be vulnerable to trampling, especially since plover nests and chicks can be difficult to detect. Foraging areas have also been compromised by development and human recreational use. Intrusion of salt marsh vegetation, or of nonnative vegetation, on plover nesting grounds may pose problems for plover chicks, possibly preventing them from moving freely to forage or escape incoming tides. Predation by birds and mammals is the primary cause of reproductive failure for plovers (U.S. Navy 2004d). Areas where predators have been excluded from plover nesting sites have had dramatically higher nesting success than unprotected sites (USFWS 2007a).

A recent, range expansion of the gull-billed tern (*Gelochelidon nilotica vanrossemi*) into the San Diego Bay area has presented a new management problem. This species has been observed preying on California Least Tern and Western Snowy Plover chicks (U.S. Navy 2004d).

NOTE: Above citations (save for Unitt 2004, below) came from previous INRMP description.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Mountain Plover

Charadrius montanus (Townsend)

California Species of Special Concern, BCC

Description

The Mountain Plover has a black crown patch of variable extent, a white supercilium, and variable buff or orange-buff color on the mantle, upper breast, and flanks. Basic plumage is similar to alternate plumage but the head pattern is less distinct and there is no buff color on the body. Juvenile plumage is typified by bright orange-buff color on the head, neck, mantle, and upper breast, and an indistinct head pattern (Dinsmore 2003).

The Mountain Plover breeds from northern Montana and North Dakota south in the Great Plains to southeastern New Mexico and Texas. It winters from northern California, southern Arizona, and central Texas south into north-central Mexico. Breeding season is from late April through June; peak in late May and winters from September through March (Dinsmore 2003).

Taxonomic Remarks

The Mountain Plover is a member of the Charadriidae family.

Distribution

Mountain Plovers breed primarily in eastern Colorado, central Wyoming, and eastern Montana, and more locally in northern Mexico, Texas, northeastern New Mexico, western Oklahoma, southwestern Kansas, southwestern Nebraska, northeastern Utah, Arizona, and southeastern Alberta (Dinsmore 2003). October to February was the Mountain Plover's main season in San Diego County, the only report since 1991 is of a migrant at Stuart Mesa (Unitt 2004).

Habitat

Mountain Plovers are a disturbed-prairie or semi-desert species rather than a grassland species, and they are often characterized as a breeding bird of high plains and desert tablelands. They prefer disturbed habitats for nesting, including areas formerly occupied by bison and prairie dogs, and agricultural fields (Dinsmore 2003).

Threats

The primary factor decimating the Plover is habitat change in its breeding range on the Great Plains and intermountain plateaus: conversion of short-grass prairie to cropland and pastures of taller grass and elimination of the prairie dogs that once kept the prairie partly open. But in its winter range in southern California the Plover has also lost much of its habitat, open plains and plowed fields of bare dirt. The Mountain Plover's former regular wintering in San Diego County came to an end in 1991 (Unitt 2004).

Dinsmore, S.J. 2003. Mountain Plover (*Charadrius montanus*): a technical conservation assessment. [Online]. USDA Forest Service, Rocky Mountain Region. Accessed August 02, 2012 <*http://www.fs.fed.us/r2/projects/scp/assessments/mountainplover.pdf*>.

Northern Harrier

Circus cyaneus (Linnaeus)

California Species of Special Concern

Description

Northern Harriers have specialized feathers around their face in the shape of a disk that focuses sound into their ears. Their wings form a dihedral when in gliding flight, and they have a distinctive white rump patch which is obvious during flight. Adult Harriers have yellow eyes. Adult males are gray on their dorsal side. Ventrally, they are white, except for spots on their chest, and black wingtips. Adult females are a brown color, except for underneath their wings, where there are white stripes. Immature males and females resemble the adult female, but they have a darker shade of brown covering the dorsal side and a brownish rusty color underneath. Immature Harriers have brown eyes (Limas 2001).

The Northern Harrier breeds from March through June beginning in the south and moving north; they can mate for life, but sometimes males are polygamous. Migration begins when they move north beginning in February and migrate south by late November (Snyder 1993).

Taxonomic Remarks

The Northern Harrier is a member of the Accipitridae family.

Distribution

Northern Harriers are found throughout the northern hemisphere. In the Americas they breed throughout North America from Alaska and Canadian provinces south of tundra regions south as far as Baja California, New Mexico, Texas, Kansas, and North Carolina. Their winter range is from southern Canada to the Caribbean and Central America (Limas 2001). In San Diego County breeding Northern Harriers use Camp Pendleton, with its extensive grasslands, as a refuge. In central San Diego County, the most important area for breeding harriers is Los Peñasquitos Canyon. Additional breeding areas include southwestern San Diego County, the San Dieguito River and east to San Pasqual, Alpine, and Dulzura Northern Harriers (Unitt 2004).

Habitat

Northern Harriers are found mainly in open habitats such as fields, savannas, meadows, marshes, upland prairies, and desert steppe. They also occur in agricultural areas and riparian zones. Densest populations are found in large expanses of undisturbed, open habitats with dense, low vegetation. In eastern North America Northern Harriers are found most frequently in wetland habitats. In western North America they are most abundant in upland habitats such as desert steppe. Northern Harriers avoid forested and mountainous areas (Limas 2001).

Threats

The main threats are the changes in the habitat for agriculture expansion, drainage of wetlands and deforestation.

Limas, B. 2001. "Circus cyaneus" (On-line), Animal Diversity Web. Accessed August 02, 2012 at <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Circus_cyaneus.html*>.

Snyder, S. A. 1993. Circus cyaneus. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Accessed August 02, 2012 <*http://www.fs.fed.us/database/feis/*>.

Clark's Marsh Wren

Cistothorus palustris clarkae (Unitt, Messer & Thery)

California Species of Special Concern

Description

The Clark's Marsh Wren is a small wren, ranging from 10.4 and 14.0 centimeters (4.1 to 5.5 inches) in total length and weighing between 9.0 and 14.0 grams (.3 to .5 ounces). Males and females have similar plumage. This species has a black crown, white superciliary stripes, warm-brown upperparts with faint black bars, a black and white striped triangular region on the upper back, buffy sides and breast, whitish below, and dark barring on the tail. These wrens have brown eyes, pale brown feet and legs, and a brownish bill. Males are larger than females, though body size varies geographically (Lesperance 2001). In San Diego County, the breeding season extends from late March to early August (Unitt 2004).

Taxonomic Remarks

The Clark's Marsh Wren is a member of the Troglodytidae family.

Distribution

In northern San Diego County, the Clark's Marsh Wren summers at every coastal wetland from the San Mateo Creek mouth south to Los Peñasquitos Lagoon and extends inland along the Santa Margarita River valley as far as Fallbrook, along the San Luis Rey River valley as far as Couser Canyon between Bonsall and Pala, and less than 8 kilometers inland in the valleys of Escondido Creek, the San Dieguito River, and Los Peñasquitos Creek (Unitt 2004). There are isolated colonies around Lake Hodges, in Boden Canyon east of San Pasqual, in La Jolla Valley west of Rancho Bernardo, and at Miramar Lake. Sites in southern San Diego County are along the San Diego River in Mission Valley and Santee, at Lake Murray, along the Sweetwater River between National City and Chula Vista and at Sweetwater Reservoir, and in the Tijuana River valley (Unitt 2004).

Habitat

The Clark's Marsh Wren breeds in many fresh and brackish marsh situations, usually with a large area of cattails, bulrushes, or cordgrass; also in other kinds of low rank growth along shallow water. It winters in a wider variety of large and small marshes, including salt marshes and brushy edges of ponds or irrigation ditches (Shuford and Gardali 2008).

Threats

The biggest threat to the Clark's Marsh Wren is habitat degradation, although some migrants are killed every year in collisions with structures (Lesperance 2001).

Lesperance, M. 2001. "Cistothorus palustris" (On-line), Animal Diversity Web. Accessed August 01, 2012 at <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Cistothorus_palustris.html*>

PDF of Clark's Marsh Wren account from: Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Olive-sided Flycatcher

Contopus cooperi (Nuttall)

BCC

Description

The Olive-sided Flycatcher is a stout bird, averaging 19 centimeters (7.5 inches) in length, with a relatively large head and a short tail. The back and sides are olive to grayish-brown, with the throat and belly a contrasting white. The song of the Olive-sided Flycatcher is a sharp penetrating whistle often translated as "quick, THREE beers!" (Unitt 2004). The Olive-sided Flycatcher constructs a cup-shaped nest consisting of grasses, mosses, lichens, and pine needles (Gaines 2005). Nests are often located towards the outer ends of branches of coniferous trees. The nesting period typically lasts three to four weeks, with clutches averaging 3 eggs. Breeding dates have been recorded from 5 June-4 July in San Diego County (Unitt 2004). Incubation lasts about 14 days, and fledging occurs in 15-19 days (Gaines 2005).

Taxonomic Remarks

The Olive-sided Flycatcher is a member of the Tyrannidae family.

Distribution

The Olive-sided Flycatcher breeds from western Alaska eastward throughout central and southern Canada south into the United States in the Great Lakes region, northern New England, and in the West south through the Pacific coast states to Baja California. The Olive-sided Flycatcher can be found during the summer throughout most of California except for deserts, the Central Valley, and other lowland areas. In San Diego County, this species can be found above 1,370 meters (4,500 feet) in most mountains supporting large stands of coniferous forest including Palomar, Hot Springs, Volcan, Cuyamaca, and Laguna (Unitt 2004).

Habitat

The Olive-sided Flycatcher is most common in montane conifer forests with open canopies. This species is typically associated with edges, openings, and clearings in otherwise relatively dense stands, although they also occur in semi-open forests (Shuford and Gardali 2008). The Olive-sided Flycatcher, although considered uncommon in San Diego County, is easily located. These birds frequently utilize conspicuous perches in forest openings for foraging and singing-posts (Unitt 2004).

Threats

The main threat to the Olive-sided Flycatcher is the destruction and degradation of habitat (Shuford and Gardali 2008).

Gaines, D. 2005. California Wildlife Habitat Relationships System. California Department of Fish and Game, California Interagency Wildlife Task Group, Sacramento, California.

Shuford, W.D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in

California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat. Hist.

Yellow Warbler

Setophaga petechia brewsteri (Grinnell)

California Species of Special Concern, BCC

Description

Yellow Warblers are easily recognized. They are the most extensively yellow of warblers, with golden yellow plumage and rusty streaks on the breast. Males and females are similar with golden yellow upper parts tinged with olive, yellow under parts, and thin pointed beaks. Males are generally brighter, especially during the breeding season. Yellow Warblers reach an average size of 10 to 18 centimeters (3.9 to 7.1 inches) in length (Kadlec 2003).

Yellow Warblers usually breed in late May and early June. Females lay four to five eggs, incubation lasts 10 to 14 days, nestling period lasts from eight to 12 days, and parental feeding may extend to two weeks after the young leave the nest, sometimes longer. Females and males first attempt to breed in their first year after hatching (Kadlec 2003).

Taxonomic Remarks

The Yellow Warbler is a member of the Parulidae family.

Distribution

The Yellow Warbler breeding distribution is located in riparian corridors on the coastal slope. There is one area of known breeding on the desert slope, San Felipe Valley. In the coastal lowland, breeding Yellow Warblers are most widespread from Carlsbad north, more localized farther south. At low elevations the species is more confined to larger streams; in the foothills and mountains it takes advantage of narrow strips and patches of riparian trees. Some sites where breeding Yellow Warblers are exceptionally numerous are the Santa Margarita River north of Fallbrook, the east end of Lake Hodges, and the Tijuana River valley (Unitt 2004).

Habitat

The Yellow Warbler inhabits mature riparian woodland, such as, streamside cottonwood, willow, alder, and ash trees that have reached their full height (Unitt 2004).

Threats

The Yellow Warbler is well known throughout its range as a frequent host of the Brown-headed Cowbird, and is often parasitized by the cowbird. Like that of many other riparian songbirds, the population of the Yellow Warbler in southern California collapsed during the mid 20th century under the double onslaught of the cowbird invasion and the elimination of riparian woodland. Now the population is increasing throughout southern California (Unitt 2004).

Kadlec, M. 2003. "Dendroica petechia" (On-line), Animal Diversity Web. Accessed July 31, 2012 *<http://animaldiversity.ummz.umich.edu/site/accounts/information/Dendroica_petechia.html>*

White-tailed Kite

Elanus leucurus (Vieillot)

California Fully Protected

Description

The White-tailed Kite is a distinctive bird, especially when hovering over open fields. The Kite's upperparts are mostly gray, with bold black shoulders. Its tail is white above and below, with a small stripe of light gray down the center of the upper side of the tail. From below, the Kite's body appears to be white, with black patches at the wrists and gray-black primaries. Its head is mostly white with red eyes. Juveniles are similar, but have a buffy wash over much of their bodies. The Kite's wings are long and pointed, often held in a dihedral during soaring. The White-tailed Kite builds its nest January through August and egg-laying begins in February and probably peaks in March and April. Peak fledging probably occurs in May and June (GRIN 2012).

Taxonomic Remarks

The White-tailed Kite is a member of the Accipitridae family.

Distribution

The White-tailed Kite is a local resident from southwestern Washington south, mostly west of the deserts, to Baja California, southern Arizona, northeastern Kansas, southern Oklahoma, southern Louisiana, southwestern Mississippi, east-central and southern Texas, and peninsular Florida (GRIN 2012). In San Diego County, the White-tailed Kite is widespread over the coastal slope, preferring riparian woodland, oak groves, or sycamore groves adjacent to grassland. Regions of concentration are in the northwest from Camp Pendleton to Carlsbad and Vista, in the central region from Los Peñasquitos Canyon through Miramar to Poway, and in the south from the Tijuana River valley to Otay Mesa and Otay lakes (Unitt 2004).

Habitat

The White-tailed Kite occurs mostly in lowlands and middle elevations, frequenting open savannas, pastures, grassland, marshes, and agricultural areas with scattered trees, where it perches on the tops of trees or on powerlines. It also frequents the right-of-ways or medians of roadways (GRIN 2012).

Threats

In the early 20th century, the Kite became endangered due to hunting, egg collecting, and habitat loss. But between the 1940's and 1970's, its population recovered, possibly due to accelerating rodent populations in California's agricultural areas (Vaughn 2011).

Global Raptor Information Network (GRIN). 2012. Species account: White-tailed Kite *Elanus leucurus.* Accessed July 31, 2012<*http://www.globalraptors.org*>.

S.E. Vaughn. 2011. El Tolocote: Newsletter of the Santa Barbara Audubon Society, Inc. Monitoring the White-tailed Kite. Vol 50 Issue 1. August-September 2011.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Willow Flycatcher

Empidonax traillii (Audubon)

California Endangered, BCC

Description

The Willow Flycatcher is one of the largest flycatchers in the genus *Empidonax*, with a relatively flat forehead and distinct peak on the rear of its crown. It is gray in color, with buffy or light-gray wing-bars and an almost invisible white eye-ring. The lack of visible eye-ring helps distinguish it from the other *Empidonax* Flycatchers. It has a pale breast and white throat, and the base of the lower mandible is yellow. Its bill is broad with a pale lower mandible and a long, broad, straight-sided tail (Seattle Audubon 2012).

Willow Flycatcher

Credit: U.S. Forest Service

Little is known about each subspecies' pre-breeding season movements in California. At the South Fork Kern River from 1992 to 1997, the average first arrival date was 27 April, the earliest date was 16 April, and the latest date of first spring arrival was 10 May. Transients are observed in the state through mid-September (Craig and Williams 1998).

Taxonomic Remarks

The Willow Flycatcher is a member of the Tyrannidae family.

Distribution

The Willow Flycatcher breeds from central British Columbia across southern Canada and northern U.S. to New Brunswick, Prince Edward Island, and Nova Scotia, south to southern California, northern Baja California, northern Sonora, southern Arizona and New Mexico, western and central Texas, Arkansas, northern Georgia, and eastern Virginia. Its non-breeding distribution includes Nayarit and southwestern Oaxaca south to Panama and northwestern Colombia (NatureServe 2012).

Habitat

In California, Willow Flycatcher breeding habitat is typically moist meadows with perennial streams; lowland riparian woodlands dominated by willows (*Salix* spp.), primarily in tree form, and cottonwoods (*Populus* spp.); or smaller spring-fed or boggy areas with willow or alders (*Alnus* spp.). Riparian deciduous shrubs or trees, such as willow or alder, are essential elements on Willow Flycatcher territories (Craig and Williams 1998).

Threats

This species is predominately threatened by the destruction of their riparian habitat (Craig and Williams 1998).

Craig, D. and P. L. Williams. 1998. Willow Flycatcher (*Empidonax traillii*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. <*http://www.prbo.org/calpif/htmldocs/riparian_v-2.html*>.

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Accessed August 1, 2012. <*http://www.natureserve.org/explorer*>.

Seattle Audubon Society. 2012. Willow Flycatcher Species Information. Accessed August 1, 2012 <*http://birdweb.org/birdweb/bird/willow_flycatcher*>

Southwestern Willow Flycatcher

Epidonax traillii extimus (Audubon)

Federally Endangered, California Endangered.

Description

The Southwestern Willow Flycatcher is small Neotropical migratory bird; usually a little less than 6 inches in length, including tail. It has conspicuous light-colored wingbars and lacks the conspicuous pale eye-ring of many similar *Empidonax* species. Overall, its body is brownish-olive to gray-green above. Its throat is whitish, breast pale olive, and belly yellowish in color. Its bill is relatively large, with a completely pale lower mandible. While perched, characteristically flicks tail slightly upward (USFWS 2002).

A Neotropical migrant, the Southwestern Willow Flycatchers spend only three to four months on their breeding grounds. The remainder of the year is spent on migration and in wintering areas south of the United States. They typically arrive on breeding grounds between early May and early June, although a few individuals may establish territories in very late April (USFWS 2002).

Taxonomic Remarks

The Southwestern Willow Flycatcher is a member of the Tyrannidae family.

Distribution

The historical breeding range of the Southwestern Willow Flycatcher included southern California, southern Nevada, southern Utah, Arizona, New Mexico, western Texas, southwestern Colorado, and extreme northwestern Mexico. The Flycatcher's current range is similar to the historical range, but the quantity of suitable habitat within that range is much reduced from historical levels. The Flycatcher occurs from near sea level to over 2,600 meters (8,500 feet), but is primarily found in lower elevation riparian habitats (USFWS 200). In San Diego County, the Southwestern Willow Flycatcher breeds on the San Luis Rey river, Santa Margarita river and Pilgrim creek, De Luz creek, French creek, and Las Flores creek (Craigs and Williams 1998).

Habitat

The Southwestern Willow Flycatcher breeds in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands, including lakes (e.g., reservoirs). Most of these habitats are classified as forested wetlands or scrub-shrub wetlands. Habitat requirements for wintering are not well known, but include brushy savanna edges, second growth, shrubby clearings and pastures, and woodlands near water (USFWS 2002).

Threats

The reasons for the decline of the Southwestern Willow Flycatcher and current threats it faces are numerous; though the primary cause of the Flycatcher's decline is loss and modification of habitat. Modification of habitat occurs from agricultural use of riparian systems, livestock, dam construction, changes in river flow, and urbanization (USFWS 2002).

Craig, D. and P. L. Williams. 1998. Willow Flycatcher (*Empidonax traillii*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. <*http://www.prbo.org/calpif/htmldocs/riparian_v-2.html*>.

USFWS. 2002. Southwestern Willow Flycatcher Recovery Plan. Albuquerque, New Mexico. i-ix + 210 pp., Appendices A-O

Prairie Falcon

Falco mexicanus (Schlegel)

BCC

Description

Prairie Falcons are large, pale brown falcons with squarish heads and large, dark eyes. Characteristic facial features include black malar streaks, a dark ear patch, and a distinctive white patch between the eyes and ear patch. About one year after birth, at full maturation, the bill horn is dark-bluish and yellow at the base. Yellow feet and a white throat also distinguish adults. Prairie Falcons are distinguishable from similar looking falcons by dark, triangular patches on the undersurface of their pale wings. Females tend to be larger in size and have greater basal metabolic rates than males (Goulet 2007).

The breeding season varies depending on geographic area. Reproductive activity usually begins in late winter or early spring. Courtship and mate selection occur on the breeding grounds at least 1 month before egg laying. In California, Prairie Falcons breed from mid-February to mid-September with peak activity from early May to early August (Tesky 1994).

Taxonomic Remarks

The Prairie Falcon is a member of the Falconidae family.

Distribution

Prairie Falcons breed from central British Columbia, southern Alberta, Saskatchewan, and North Dakota south to Baja California. They winter from the northern parts of their breeding range south to central Mexico and east to the Mississippi River (Tesky 1994). In San Diego County, the Prairie Falcon has an inland distribution; all known nest sites are at least 23 miles from the coast. They occur on the steep east slope of the county's mountains, and in rocky hills or badlands within the Anza–Borrego Desert (Unitt 2004).

Habitat

Prairie Falcons occupy open treeless terrain including prairies, deserts, riverine escarpments, canyons, foothills, and mountains in relatively arid western regions. During the breeding season Prairie Falcons are commonly found in foothills and mountains which provide cliffs and escarpments suitable for nest sites (Tesky 1994).

Threats

Potential threats include human disturbances during nesting, grazing activities, invasive plant species, and energy development.

Goulet, M. 2007. "Falco mexicanus" (On-line), Animal Diversity Web. Accessed July 31, 2012 at <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Falco_mexicanus.html*>>

Tesky, Julie L. 1994. Falco mexicanus. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Accessed July 31, 2012: <*http://www.fs.fed.us/database/feis/*>.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

American Peregrine Falcon

Falco peregrinus anatum (Bonaparte)

BCC, California Fully Protected

Description

The Peregrine Falcon is a crow-sized bird, weighing just over 0.9 kilograms (two pounds) with a wing span of approximately 0.9 meters (3 feet). An adult Peregrine has a dark grey back and crown, dark bars or streaks on a pale chest and abdomen, and heavy malar (cheek) stripes on the side of the face. Immature Peregrines are buff colored in front and have dark brown backs; adults are white or buff in front and bluish-gray on their backs. Females and males are identical in appearance; however, the female can be a third larger than the male (USFWS 2012).

Timing of migrations, courtship, and breeding appears to be influenced by local weather and prey availability. Peregrine Falcon migrations closely parallel the migrations and breeding cycles of waterfowl, shorebird, and songbird prey. In southern and central-coastal California, Peregrine Falcons lay their eggs mid to late February (Luensmann2012).

Taxonomic Remarks

The American Peregrine Falcon is a member of the Falconidae family.

Distribution

The Peregrine Falcon is global in distribution. General ecosystem types in which Peregrine Falcon occurs include arctic tundra, tropical ecosystems, deserts, wetlands, grasslands, mountainous regions, continental forests, maritime islands, and urban areas. In North America, the Peregrine Falcon's range extends from western Alaska to southern Greenland and south into Mexico (Luensmann2012). In San Diego County, Peregrine Falcons have been known to nest along the waterfront of National City, the cliff at the tip of Point Loma, in Ysidora Gorge along the lower Santa Margarita River, and U. S. Grant hotel in downtown San Diego (Unitt 2004). Wintering Peregrines are most numerous along the coast; San Diego Bay serves as a nucleus for the wintering birds. The breeding population, away from the coast, is seen most often around lakes, such as Sweetwater Reservoir (Unitt 2004).

Habitat

In coastal California, Peregrine Falcons inhabit coastal sage scrub communities that are associated with coastal dunes, perennial grasslands, annual grasslands, croplands, pastures, coast Douglas fir (*Pseudotsuga menziesii* var. *menziesii*)-hardwood forests, coastal oak (*Quercus* spp.) woodlands, montane hardwood woodlands, closed-cone pine-cypress (*Cupressus* spp.) woodlands, chamise-red shank (*Adenostoma fasciculatum-A. sparsifolium*) chaparral, and mixed-chaparral communities. Coastal sage scrub is vegetated with bush lupine (*Lupinus* spp.) and many colored lupine (*L. versicolor*) on exposed, oceanside sites and coyote bush (*Baccharis pilularis*) on less exposed sites (Luensmann2012).

Threats

From the 1950s to the mid-1970s, global Peregrine Falcon population declines resulted from eggshell thinning and embryo mortality due to use of organochlorine pesticides, particularly DDT and DDE, in agriculture and forestry. Recovery of Peregrine Falcon populations began after DDT and similar pesticides were banned in 1972. Threats that may contribute to the Peregrine Falcon decline include

destruction of wetlands, construction of roads and other structures, poaching, removal of eggs and nestlings from nests, disturbance from recreational activities, and climate change (Luensmann2012).

Luensmann, Peggy. 2010. Falco peregrinus. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Accessed July 31, 2012 <*http://www.fs.fed.us/database/feis/*>

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

USFWS. 2012. American Peregrine Falcon Species Profile. Accessed July 31, 2012 <*http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B01H*>

Common Loon

Gavia immer (Brünnich)

California Species of Special Concern

Description

Common Loons are large swimming birds with long bodies (70 to 90 centimeters [27.6 to 35.4 inches] long) weighing 1.6 to 8.0 kilograms (3.5 to 17.6 pounds) that sit low in the water. They have straight, thick, "daggerlike" bills that are black in the breeding season and gray during the rest of the year. The plumage of loons is black, white and gray. During the breeding season, common loons have a black head with a white and black barred necklace, and a checkered pattern on their back. During the winter, they are evenly gray on the head and back, with a white neck and underside (Rodriguez 2002). Common Loons breed once per year in the spring and summer, beginning at age two or three. The male and female build a nest approximately 0.6 meters (2 feet) in diameter of soil, grasses, moss or vegetation. The nest is usually in a sheltered location near deep water, allowing the male and female to swim to and from the nest undetected by predators. Often nests are built on islands or peninsulas projecting into the water (Rodriguez 2002).

Taxonomic Remarks

The Common Loon is a member of the Gaviidae family.

Distribution

The Common Loon is most abundant in Canada and the Northern United States. They breed on lakes and other waterways from western Greenland west across Canada and the northernmost United States, including Alaska and winter along both coasts of North America as far south as Baja California and Texas (Rodriguez 2002). In San Diego County, it occurs all along the coast in winter. Such areas as Oceanside and Mission Bay are favorable spots for the Loon. The Common Loon also winters occasionally on inland lakes such as Lake Murray, Sweetwater Reservoir, and Lake Morena (Unitt 2004).

Habitat

Common Loons breed on clear freshwater lakes with rocky shorelines surrounded by forest; as well as on subarctic tundra lakes. They stage for migration on large lakes and rivers and winter primarily in coastal marine areas near shore as well as large freshwater lakes (Unitt 2004).

Threats

Common Loons are threatened primarily by habitat loss and/or degradation and oil spills. They are highly sensitive to human disturbance through recreation or development on formerly secluded lakes. Other threats include industrial pollutants, such as mercury and other heavy metals that accumulate in the Loons' bodies and slowly poison them. Acid rain kills phytoplankton, collapsing the aquatic food chains that Loons depend on for food (Rodriguez 2002).

Rodriguez, R. 2002. "Gavia immer" (On-line), Animal Diversity Web. Accessed July 31, 2012 at *<http://animaldiversity.ummz.umich.edu/site/accounts/information/Gavia_immer.html>*

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Gull-billed Tern

Gelochelidon nilotica (Gmelin)

California Species of Special Concern, BCC

Description

The Gull-billed Tern is a unique heavy-billed, long-legged tern, with a slightly formed tail, broad wings and very pale body. It is 35 to 40 centimeters (13.8 to 15.7 inches) in length, weighs 130 to 300 grams (4.6 to 10.6 ounces), and has a wingspan of 85 to 100 centimeters (33.5 to 39.4 inches). Its eyes are dark brown, and have a black crown and nape, their upperparts including the rump are pale grey, the primaries are slightly darker but the wingtips are whitish to pale grey. The tail and underparts are white (Planet of Birds 2012).

The Gull-billed Tern is found worldwide and depending on the location it has a different reproductive cycle. In North America, this species breeds from May through June. They arrive in San Diego County early March till early September (Unitt 2004).

Taxonomic Remarks

The Gull-billed Tern is a member of the Laridae family.

Distribution

This subspecies of Gull-billed Tern breeds very locally on the Pacific Coast and in the lower Colorado River delta region of southern California and northwestern Mexico, and very locally farther south in Mexico from Sinaloa to at least Colima; it winters in western Mexico and to an unknown extent south to the Pacific Coast of Central America and possibly northwestern South America (Planet of Birds 2012). The south San Diego Bay salt works are the Gull-billed Tern's only nesting site in San Diego County. The only other site in the western United States is the Salton Sea. Even though the San Diego population is small, it has an important role in the species' conservation in western North America (Unitt 2004).

Habitat

The Gull-billed Tern breeds on barrier beaches and dunes, salt marshes, and rivers and freshwater lagoons. It usually prefers coastal plains to continental interiors, but also known to breed on hypersaline lakes. It often feeds in large numbers on emerging insects over lakes, fields and grassland and even over semi desert. They winter on estuaries, lakes and salt-pans (Planet of Birds 2012).

Threats

The decreasing water levels and modification of habitat that the Gull-billed Tern relies on is a predominant threat to the wintering population (Unitt 2004).

Planet of Birds. 2012. Gull billed Tern (Gelochelidon nilotica). Accessed July 31, 2012 *<http://www.planetofbirds.com/charadriiformes-sternidae-gull-billed-tern-gelochelidon-nilotica>*

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Saltmarsh Common Yellowthroat

Geothlypis trichas sinuosa (Grinnell)

California Species of Special Concern, BCC

Description

The Saltmarsh Common Yellowthroat has olive-brown colored upperparts, yellow throat and breast; tan sides; and a whitish belly. The adult male has a broad black mask, bordered above by white; immature males have a pale eye-ring and an indistinct mask. They are 11 to 14 centimeters (4.3 to 5.5 inches) long (NatureServe 2012). Saltmarsh Common Yellowthroats begin laying eggs as early as mid March and continue laying as late as mid July.

Taxonomic Remarks

The Saltmarsh Common Yellowthroat is a member of the Parulidae family.

Distribution

The Saltmarsh Yellowthroat's breeding range extends from San Francisco Bay area, to Tomales Bay, Carquinez Strait, and San Jose. Its non-breeding occurs along the California coast from the breeding range to San Diego, and casual north to northern California (NatureServe2012).

Habitat

The Saltmarsh Common Yellowthroat is found in salt marsh habitat. When breeding, it nests just above ground or over water, in thick herbaceous vegetation, often at base of shrub or sapling, sometimes higher in weeds or shrubs up to about 1 meter (3.3 feet)(NatureServe 2012). In San Diego County it prefers, riparian woodland, freshwater marshes and even uplands overgrown with rank weeds like fennel or white sweet clover. Wintering birds move into ornamental shrubbery and thickets of dry weeds where the species does not breed, and migrants show up occasionally even in desert scrub or chaparral (Unitt 2004).

Threats

There is no strong evidence for significant changes in the numbers or status of the Saltmarsh Common Yellowthroat through San Diego history. Even though marshes and riparian woodland have been much reduced, the Yellowthroat persists in small remnants and readily recolonizes regenerated habitat (Unitt 2004).

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Accessed: July 31, 2012. *<http://www.natureserve.org/explorer>*

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Bald Eagle

Haliaeetus leucocephalus (Linnaeus)

BGEPA, California Fully Protected, BCC

Description

The Bald Eagle is 76.2 to 78.7 centimeters (30 to 31 inches) in length with a wingspan of 1.8 to 2.1 meters (6 to 7 feet). It has a dark brown body, a white tail and a white head and shoulders. It has bright yellow eyes, a large hooked yellow bill, and powerful yellow legs and talons. Young Bald Eagles won't have a white head and shoulders until they are about five years old. Males and females look alike, although the female is a little larger. Bald eagles are only partially migratory; if they possess access to open water, they will remain at that nesting site year round. When they do migrate, they begin arriving in San Diego County in early October for winter (Unitt 2004).

Taxonomic Remarks

The Bald Eagle is a member of the Accipitridae family.

Distribution

The Bald Eagle breeds from central Alaska across Canada to Labrador and Newfoundland and south to southern mainland Alaska and the Aleutian Islands. It also breeds in Baja California, central Arizona, southwestern and central New Mexico, and along the Gulf Coast from Texas to Florida. It occurs only locally throughout much of the Great Basin and Great Plains. They winter in most of their breeding range, from southern Alaska and Canada southward (Forest Service 2012). In San Diego County the Bald Eagle is a rare but annual winter visitor to lakes in the foothills and mountains, especially Lake Henshaw (Unitt 2004).

Habitat

Bald Eagles prefer habitat near seacoasts, rivers, large lakes, and other large areas of open water. They prefer to nest, perch, and roost primarily in old-growth and mature stands of conifers or hardwoods. Eagles usually select the oldest and tallest trees that have good visibility, an open structure, and are near prey. They used areas away from human disturbance and selected nesting sites near lakes with an abundance of warm-water fishes. Eagles choose sites more than 0.75 miles (1.2 kilometers) from low-density human disturbance and more than 1.2 miles (1.8 kilometers) from medium- to high-density human disturbance (Forest Service 2012).

Threats

The Bald Eagle suffered greatly from shooting and from poisoning by DDT and lead. With these adverse factors largely controlled, however, since 1980 the population has climbed steeply (Unitt 2004).

Forest Service. 2012. Fire Effects Information System: Bald Eagle. Accessed July 30, 2012 *<http://www.fs.fed.us/database/feis/animals/bird/hale/all.html>*

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Black Oystercatcher

Haematopus bachmani (Audubon)

BCC

Description

The Black Oystercatcher is about 38.1 to 48.3 centimeters (15 to 19 inches) in length. It has a stocky black body, yellow eyes surrounded by a red ring, a long bright red-orange bill and pink legs. Males and females look alike. Black Oystercatchers are non-migratory. They may move a little in the spring and fall, but they usually remain close to their nesting area. The nest is built by both the male and the female. They will create a scrape or depression in the ground and then pick up and toss shells and bits of rocks and pebbles into the depression with a backwards or sideways flip of their heads. They use the same nest year-after-year (Tessler et al 2007).

Taxonomic Remarks

The Black Oystercatcher is a member of the Haematopodidae family.

Distribution

The Black Oystercatcher can be found from the Aleutian Islands in Alaska southward along the Pacific Coast to Baja California. The Oystercatcher is a fairly common resident on Los Coronados Islands, but a rare visitor on the nearby coast of San Diego County, although seen at all seasons. The Oystercatcher frequents natural rocky shorelines, occasionally jetties of riprap. Point Loma and La Jolla were the primary sights for wintering Oystercatchers in San Diego County (Unitt 2004).

Habitat

The black oystercatcher is found on rocky shores and often nests on shingle beaches. However, human disturbance excludes it from many potentially suitable areas in breeding season (Tessler et al 2007).

Threats

This species has a very large range and the population trend appears to be stable, and hence the species does not appear threatened. The destruction of breeding habitat could possibly be considered a threat to population viability (Tessler et al 2007).

Tessler, D.F., J.A. Johnson, B.A. Andres, S. Thomas, and R.B. Lanctot. 2007. Black Oystercatcher (*Haematopus bachmani*) Conservation Action Plan. International Black Oystercatcher Working Group, Alaska Department of Fish and Game, Anchorage, Alaska, U.S. Fish and Wildlife Service, Anchorage, Alaska, and Manomet Center for Conservation Sciences, Manomet, Massachusetts. 115 pp.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Caspian Tern

Hydroprogne caspia (Pallas)

Formerly *Sterna caspia*

BCC

Description

The Caspian Tern has long, slender backswept wings and a slightly forked tail. The heavy bill is red with a dusky tip. The sexes are similar, with a body length between 53 and 60 centimeters (20.9 and 23.6 inches) long, and an average weight of 680 grams (24 ounces). It has a white body, with a black and white streaked crown from bill to nape and a short shaggy crest. The mantle and upperwings are grey and the flight feathers are darker. The eye is dark brown and legs are black. When breeding, the crown is black (Australia 2012).

The Caspian Tern is primarily a summer visitor to California; it is common from April to September, and generally uncommon from October to March (Unitt 2004).

Taxonomic Remarks

The Caspian Tern is a member of the Laridae family.

Distribution

In California, the salt works of South San Diego Bay have been the site of a major colony of the Caspian Tern since at least the 1940s. Foraging birds range widely along San Diego County's coast and on its inland lakes. Over much of North America the Caspian Tern population is on the increase—the lack of suitable sites elsewhere is probably the reason why the salt works remain the site of the county's only colony (Unitt 2004).

Habitat

The Caspian Tern is mostly found in sheltered coastal embayments (harbors, lagoons, inlets, bays, estuaries and river deltas) and those with sandy or muddy margins are preferred. They also occur on near-coastal or inland terrestrial wetlands that are either fresh or saline, especially lakes (including ephemeral lakes), waterholes, reservoirs, rivers and creeks. They also use artificial wetlands, including reservoirs, sewage ponds and saltworks. In offshore areas the species prefers sheltered situations, particularly near islands, and is rarely seen beyond reefs. Large numbers may shelter along the coast, behind coastal sand-dunes or coastal lakes during rough weather, and have been recorded inland after storms (Australia 2012).

Threats

Although Caspian Tern populations are increasing, threats to their success include erosion of nesting islands, changing water levels, gull predation on eggs and young, and harassment by predators and humans. Breeding colonies that are not situated on islands are especially vulnerable to disturbance and predation; Caspian Terns readily desert their colonies if disturbed by mammalian predators, including humans, early in the breeding season (Audubon 2012).

National Audubon Society. 2012. Caspian Tern Species Description. Accessed July 30, 2012 < *http://birds.audubon.org/species/caster>*

Australian Natural Resources Department. 2012. Accessed July 29 2012 <*http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=808#description*>

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Yellow-breasted Chat

Icteria virens (Linnaeus)

California Species of Special Concern

Description

The Yellow-breasted Chat is a medium-sized songbird and is considered to be the largest wood-warbler. They are robustly built with a heavy bill and a long tail. As their name implies, they have a bright yellow chest and throat with a white belly and underside of the tail. Their backs are olive-green and they have white spectacles.

Breeding Yellow-breasted Chats arrive in Santa Barbara County in early to mid-April. Breeders in northern populations probably arrive from late April to early May. Departure from breeding grounds occurs from August to September (after complete prebasic molt); some may leave in July, some stragglers into October. Spring migration occurs from March through May. Fall migration occurs from July through October (Ricketts and Kus 2000).

Taxonomic Remarks

The Yellow-breasted Chat is a member of the Parulidae family.

Distribution

The Yellow-breasted Chat breeds east across portions of Canada and northern U.S. to northern New England, and south to Gulf Coast and portions of Mexico. It winters from portions of northern Mexico, southern Texas, and southern Florida, south to portions of Central America. In San Diego County, riparian woodlands of the coastal lowlands, specifically along portions of the San Luis Rey, Santa Margarita, and San Diego Rivers, and along Las Pulgas and Jamul Creeks, contain breeding chats (Unitt 2004).

Habitat

In California, Yellow-breasted Chats require dense riparian thickets of willows, vine tangles, and dense brush associated with streams, swampy ground and the borders of small ponds. Some taller trees (i.e., cottonwoods and alders) are required for song perches (Ricketts and Kus 2000).

Threats

The Yellow-breasted Chat is predominately threatened by the loss of riparian woodlands and the invasion of the Brown-headed Cowbird. It is known as a common cowbird host over much of its range, including southern California (Unitt 2004).

Ricketts, M. and B. Kus. 2000. Yellow-breasted Chat (*Icteria virens*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. *http://www.prbo.org/calpif/htmldocs/riparian_v-2.html*

Least Bittern

Ixobrychus exilis (Gmelin)

California Species of Special Concern, BCC

Description

The smallest member of the heron family, the Least Bittern is 28 to 35.6 centimeters (11 to 14 inches) in length and has a 40.6- to 45.7-centimeter (16- to 18-inch) wingspan. This primarily black and tan bird has a blackish-green cap and back, brown neck and underparts, and a white throat. The Least Bittern is most readily identified in flight by conspicuous, light, chestnut colored wing patches. A rare, darker phase also exists. When disturbed, the Least Bittern is more likely to run than fly, and like its relative, the American Bittern, it also has the habit of freezing with its bill pointed straight up when alarmed (Felbaum 1995).

The Least Bittern is primarily a summer resident in California, with at least some remaining during the winter in the Salton Sink, the lower Colorado River valley, and coastal Orange and San Diego counties. It is unclear whether the paucity of winter records for northern California indicates rarity or the species' silence and secretive habits during this season. In southern California, populations increase from mid-March to mid-April and decrease from late September to mid-October (Unitt 2004).

Taxonomic Remarks

The Least Bittern is a member of the Ardeidae family.

Distribution

In North America, this species is primarily restricted to the eastern U.S., ranging from the Great Plains states eastward to the Atlantic Coast and north to the Great Lakes region and the New England states. Western populations are concentrated in low-lying areas of the Central Valley and Modoc Plateau of California, the Klamath and Malheur basins of Oregon, and along the Colorado River in southwest Arizona and southeast California (Monfils 2003). In San Diego County, the most frequent sites for the species were O'Neill Lake, the San Diego River between Santee and Lakeside, and Lake Murray (Unitt 2004).

Habitat

Breeding habitat for the Least Bittern in California lies largely in the coastal lowland, at brackish lagoons and lakes, ponds, and streams inland.

Threats

Numbers of the Least Bittern are generally thought to have declined in parallel with the elimination of freshwater marshes. The species is difficult to monitor, so real evidence for a decline is lacking in San Diego County (Unitt 2004).

Felbaum, Mitchell, et al. Endangered and Threatened Species of Pennsylvania. Harrisburg, PA: Wild Resource Conservation Fund, 1995.

Monfils, M.J. 2003. Special animal abstract for *Ixobrychus exilis* (least bittern). Michigan Natural Features Inventory, Lansing, MI. 6 pp.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Loggerhead Shrike

Lanius ludovicianus (Linnaeus)

California Species of Special Concern, BCC

Description

The Loggerhead Shrike is a medium-sized passerine with several different colors whose arrangement is considered important in attracting a mate (along with displayed hunting prowess). The Shrike's grayish back and black wings are evident against its white breast and other body areas. The most prominent, however, is the Loggerhead's black mask which extends around the eyes and down into the forehead. It also has a slightly hooked beak somewhat similar to that of a falcon's beak. It is 20.3 to 25.4 centimeters (8 to 10 inches) long and has a wing span of approximately 30.9 centimeters (12 inches), making it about the size of an average robin. The male and female of the species are similar in appearance (Porter 2000).

The Loggerhead Shrikes are believed to be solitary migrants, moving short distances each day and sometimes staying in an area for several days to feed. They overwinter in the southern U.S. and Mexico, returning to the northern part of their range in March. Loggerhead Shrikes use their sharply-hooked bill to subdue vertebrate prey by biting their neck and severing their cerebral vertebrae. Shrikes will often impale prey on sharp branches, spines, or wires (barbed wire) to more easily eat them. Small items, such as grasshoppers or beetles, may be impaled or eaten whole, but larger items, including large invertebrates, amphibians, lizards, small snakes, mice, and small birds, are always impaled first or wedged into a forked branch, and then eaten. This is an adaptation that allows Loggerhead Shrikes to eat large prey without the benefit of strong talons (Porter 2000).

Taxonomic Remarks

The Loggerhead Shrike is a member of the Laniidae family.

Distribution

The Loggerhead Shrike is prominent in many parts of central Canada, border states of Canada, and in the Greater Midwest of the United States. During its spring / summer migration, however, it can be seen as far south and west as California though in ever decreasing numbers. In San Diego County, the Loggerhead Shrike is most numerous in the Anza–Borrego Desert, where it is widespread on both the desert floor and in desert-edge scrub on the east slopes of the mountains. Elevationally, the shrike ranges in the breeding season up to about 1219 meters (4000 feet), as near Ranchita and Live Oak Springs. In the winter they can be found on the coastal slope, areas of extensive grassland, even if now dominated by European annuals (Camp Pendleton, Warner Valley, Santa Maria Valley, Otay Mesa, Marron Valley), show clearly as important shrike habitat (Unitt 2004).

Habitat

The Loggerhead Shrike prefers washes with scattered trees or shrubs, or valley floors with scattered thickets of mesquite or saltbush. The Shrike’s habitat requirements include plants that can protect and conceal a nest and much open ground for foraging (Unitt 2004).

Threats

The threats responsible for Shrike declines in California and the West are poorly understood. Habitat loss, on breeding and wintering grounds as well as along migratory routes, is undoubtedly a major threat

to the species. Loss of oak savannah, coastal scrub, and riparian habitats to agriculture that does not meet the ecological requirements of the species (e.g., vineyards, orchards, row crops) is a continued threat in many regions, as is habitat conversion from increasing urbanization (Porter 2000).

Porter, C. 2000. "Lanius ludovicianus" (On-line), Animal Diversity Web. Accessed July 29, 2012 at *<http://animaldiversity.ummz.umich.edu/site/accounts/information/Lanius_ludovicianus.html>*

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Short-billed Dowitcher

Limnodromus griseus (Gmelin)

BCC

Description

Short-billed Dowitchers have rusty orange faces and rufous, streaked under parts during breeding season. It has a complex pattern of yellows and oranges over dark brown mark the upper parts. In flight, there is a large white patch on the upper rump. The non-breeding Short-billed Dowitchers are grey above and whitish below. They have long, straight bills, stocky bodies, and short legs. On average, this shorebird is 27.9 centimeters (11 inches) long, and weighs 110 grams (3.9 ounces), with a wingspan of 48.3 centimeters (19 inches) (Audubon 2012).

Short-billed Dowitcher flocks migrate medium to long distances, by day or night. Each subspecies follows its own route. In the fall, females depart the breeding grounds earliest, and males precede juveniles, so that the flocks are largely segregated (Audubon 2012).

Taxonomic Remarks

The Short-billed Dowitcher is a member of the Scolopacidae family.

Distribution

In the winter, the mudflats of south San Diego Bay are the Short-billed Dowitcher's center in San Diego County. Some specific areas include Chula Vista bayfront, the Tijuana River estuary, and northeastern Mission Bay (Unitt 2004).

Habitat

Migrant Short-billed Dowitchers use freshwater ponds, lakeshores, and brackish lagoons as well as tidal mudflats.

Threats

The use of pesticide and the local destruction of migratory habitat, especially in the Midwest, have contributed to the recent decline in Short-billed Dowitchers. In the United States, this species relies heavily on National Wildlife Refuges, which should minimize disturbances from human visitors and maximize habitat for shorebirds by integrating their needs into management plans for waterfowl (Audubon 2012).

National Audubon Society. 2012. Short-billed Dowitcher Species Description. Accessed July 30, 2012 <*http://birds.audubon.org/species/shodow*>

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Marbled Godwit

Limosa fedoa (Linnaeus)

BCC

Description

The Marbled Godwit is a large shorebird with a long, slightly upturned bill with dark tip and pinkish base. It has long legs and is a rich buff-brown color all over. It has cinnamon wing linings and an orangish stripe in its wings. Its breeding plumage has a barring across their chest. Their nonbreeding plumage is similar but with a plain breast. The Marbled Godwit breeds on grassy plains, wet meadows, or prairie marshes near rivers or streams. The nest is a grass-lined depression in the ground. The female lays about four eggs in the nest that hatch in 21 to 23 days. Once the eggs hatch, both the male and female care for and protect the young. The birds breed in the interior summer range, and migrate in the winter to the coastal range.

Taxonomic Remarks

The Marbled Godwit is a member of the Scolopacidae family.

Distribution

The Marbled Godwit breeds in the Central Plains region of North America from central Alberta through central Manitoba and along St. James Bay south through Montana, North Dakota, east central South Dakota, and north central Nebraska, and east to north central Minnesota. It winters along the Pacific coast from California south, from Virginia south and along the Gulf Coast. The Marbled Godwit is one of the dominant shorebirds along San Diego County's coast, especially around San Diego and Mission bays and in the Tijuana River estuary. In terms of biomass, in winter the Marbled Godwit is probably the dominant shorebird. Though the species is principally a winter visitor, with usually around 2500 to 3000 annually, several hundred remain through the summer.

Habitat

The Marbled Godwit breeds on grassy plains, wet meadows and prairies sloughs, usually near rivers or streams. During migration it can be found on coastal beaches and along lake shores. In the winter it can be found in estuaries, salt marshes, tidal creeks, mudflats and ocean beaches.

Threats

Although the numbers for the Marbled Godwit have remained stable over the past few years, the major threat to this species of bird is development of grassland into agricultural land.

<http://www.nhptv.org/natureworks/marbledgodwit.htm>

Long-billed Curlew

Numenius americanus (Bechstein)

BCC

Description

The Long-billed Curlew is the largest member of the sandpiper family with a total body length of 53.3 to 66 centimeters (21 to 26 inches), including its long bill (up to 10.2 centimeters (4 inches) in juveniles and 20.3 centimeters (8 inches) in adults). It has speckled brown wings, a lighter brown head and chest, and a very long curved bill. Both the male and female look alike.

The Long-billed Curlew is primarily a migrant and winter visitor, but small numbers remain along the coast through June, the brief interval between spring and fall migration.

Taxonomic Remarks

The Long-billed Curlew is a member of the Scolopacidae family.

Distribution

The Long-billed Curlew breeds from southern Canada to northern California, Utah, northern New Mexico and Texas. In winter the most consistent sites for Long-billed Curlews in San Diego County are south San Diego Bay and the Tijuana River estuary. San Diego County's only remaining upland habitat the curlew uses with any regularity is on Otay Mesa.

Habitat

Breeding habitat is short-grass or mixed-grass native prairie, but varies from moist meadows to very dry grasslands. It generally prefers to nest in large open expanses of relatively low vegetation, and is late maturing, long-lived and has a low reproductive output. In winter it favors intertidal habitats but will feed in adjacent pastures.

Threats

Sea-level rise may reduce the amount of available intertidal wintering habitat in future. The loss and conversion of large areas of short grass prairie into agricultural land within its range has presumably had a major impact upon the species and is likely to the most important threat at present. Long-billed Curlew are facing increasing threats in the grasslands and prairies of North America, both on their breeding and wintering grounds.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

<http://www.nhptv.org/natureworks/longbillcurlew.htm>

Whimbrel

Numenius phaeopus hudsonicus (Latham)

BCC

Description

The Whimbrel is a medium-size curlew with a median crown stripe and dark eye line. The Nearctic form, *N. p. hudsonicus,* is distinct from Palearctic forms in having a dark rump with little contrast to the back and a characteristic buffy ventor. All forms are sexually dimorphic with females generally larger than males but with considerable overlap (Wilke and Johnston-Gonzalez 2010).

The whimbrel breeds in various tundra habitats, from wet lowlands to dry heath. In migration, it frequents various coastal and inland habitats, including fields and beaches. Breeding occurs May through July. Females usually lay four eggs in a depression they scraped out of the ground and lined with leaves. After 22 to 28 days of incubation, the eggs hatch (Wilke and Johnston-Gonzalez 2010).

Taxonomic Remarks

The whimbrel is a member of the Scolopacidae family.

Distribution

The Whimbrel can be seen along San Diego County's coastline year round but is by far the most common in fall migration, July through September. In winter Whimbrels are generally uncommon in San Diego County, though widespread along the coast. They have been recorded in the Tijuana River estuary, south San Diego Bay, and Silver Strand. The Whimbrel's only regular winter site inland is the San Dieguito Valley (Unitt 2004).

Habitat

Whimbrels are known to use a wide variety of coastal and terrestrial habitats during both north- and southbound migrations. The species is often referred to as a primarily coastal migrant; however its varied habitat use also includes agricultural wetlands, berry-rich upland habitats, pastures, meadows, and fields adjacent to coastal migration routes or staging sites. Other habitats included intertidal zones, grass patches, and wetland habitats, as well as the roost sites within the mangroves lining the bay shorelines. In California, shallow-water habitats in the Central Valley appear to provide habitat for the largest numbers of Whimbrels during northbound migration. The highest concentrations are in agricultural fields, with smaller numbers in managed wetlands, agricultural evaporation ponds, sewage ponds, and other wetland habitats. Smaller numbers are documented along the sandy beaches and embayments of California's coastline (Wilke and Johnston-Gonzalez 2010).

Threats

Habitat loss and degradation is likely the most serious threat to Whimbrel conservation throughout the Western Hemisphere during all life stages.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Wilke, A.L., and R. Johnston-González . 2010. Conservation Plan for the Whimbrel (*Numenius phaeopus*). Version 1.1. Manomet Center for Conservation Sciences, Manomet, Massachusetts.

Black Storm-petrel

Oceanodroma melania (Bonaparte)

California Species of Special Concern

Description

The Black Storm-petrel is 23 centimeters (9.1 inches) in length with a wingspan of 460 to 510 millimeters (18.1 to 20 inches) and weighs 55 grams (1.9 ounces). They have brown eyes and a large black bill. Their plumage is brownish black overall, with a paler bar across upperwings. Their tail is deeply forked with very long black legs. Males and females are similar in appearance (Ramos-Ordoñez et al 2010).

The Black Storm-petrel is seen off San Diego County mainly from April to November, corresponding to the time at which the birds are at the colony on Los Coronados Islands. The petrel's migration reflects that of many seabirds nesting primarily around Baja California, with movement north in summer after breeding, then movement south in winter. The species reaches its peak numbers off southern California in August and September, within 50 kilometers of the mainland coast (Unitt 2004).

Taxonomic Remarks

The Black Storm-petrel is a member of the Hydrobatidae family.

Distribution

The Black is the most numerous of the storm-petrels occurring on the ocean off San Diego County and nests on Los Coronados Islands. It is primarily a summer visitor, regular just two or three miles off shore but rarely seen from land. On several occasions disoriented young Black Storm-petrels have been picked up inland in metropolitan San Diego (Unitt 2004).

Habitat

The Black Storm-petrel nests in burrows and rock crevices on small coastal islands; it if found in the Gulf of California and ocean waters, mainly in open Gulf and over continental shelf and upper slope (NatureServe 2007).

Threats

Though still abundant, the Black Storm-petrel is vulnerable because the overwhelming majority of the population nests in a small area, the three San Benito Islands off the Pacific coast of central Baja California. On all its nesting islands, including Los Coronados, the primary threat to the Black Storm-petrel has been the introduction of mammals: cats, rats, dogs, and pigs (Unitt 2004).

InfoNatura: Animals and Ecosystems of Latin America [web application]. 2007. Version 5.0 . Arlington, Virginia (USA): NatureServe. Available: http://www.natureserve.org/infonatura. (Accessed: July 27, 2012).

Ramos-Ordoñez, M.F., C. Rodríguez-Flores, C. Soberanes-González & M.C. Arizmendi. 2010. Black Storm-Petrel (*Oceanodroma melania*), Neotropical Birds Online (T. S. Schulenberg, Editor). Ithaca: Cornell Lab of Ornithology; retrieved from Neotropical Birds Online: <*http://neotropical.birds.cornell.edu/portal/species/overview?p_p_spp=105276*>

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Belding's Savannah Sparrow

Passerculus sandwichensis beldingi (Ridgway)

California Endangered

Belding's Savannah Sparrow

Credit: U.S. Fish and Wildlife Service

Description

The Belding's Savannah Sparrow has yellow lores, a yellowish eyebrow, pale crown stripe, and a dark whisker stripe. Its upperparts and lower parts are heavily and darkly streaked. It has a short notched tail. The Belding's Savannah Sparrow is sedentary. The northern subspecies of the Savannah Sparrow occur in San Diego County mainly from mid or late August to late April. The breeding activity occurs from early March to early July.

Taxonomic Remarks

The Belding's Savannah Sparrow is a member of the Emberizidae family.

Distribution

The Belding's Savannah Sparrow is one of few species of birds that reside year-round in the coastal salt marshes of southern California. This subspecies of Savannah Sparrow is a salt marsh endemic, ranging historically from Goleta in Santa Barbara County, California on the north, south to el Rosario, Baja California, Mexico. Belding's are doing well within their range in California but particularly at Point Mugu, Seal Beach National Wildlife Refuge (NWR), Bolsa Chica, Upper Newport Bay, Sweetwater Marsh NWR, and Tijuana Slough NWR (Zembal and Hoffman 2010).

Habitat

The Belding's Savannah Sparrow inhabits salt marshes. They nest on the ground in natural depression or scrape, primarily in pickleweed (*Salicornia virginica*) habitat at the higher levels of the marsh, above the reach of the highest spring tides (NatureServe 2012).

Threats

Habitat destruction is the predominant threat to Belding's Savannah Sparrow populations. With the elimination of 75% of southern California's salt marshes, the range of Belding's Savannah Sparrow contracted greatly, especially around Mission and San Diego bays. Only 1182 hectares of salt marsh are left in San Diego County, some of it seriously degraded, and the birds fill the remaining suitable habitat to capacity. Nesting success in small, isolated marshes like that at F Street is low to none, so these sites probably act as population sinks (Unitt 2004).

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Zembal, R. and S. M. Hoffman. 2010. A survey of the Belding's Savannah sparrow (*Passerculus sandwichensis beldin*gi) in California, 2010. Calif. Dep. Fish and Game, Wildlife Branch, Nongame Wildlife Program Report 2010-10, Sacramento, CA 17 pp.

Large-billed Savannah Sparrow

Passerculus sandwichensis rostratus (Cassin)

California Species of Special Concern

Description

The Large-billed Savannah Sparrow has an eyebrow stripe that is broad but indistinct, it has a pale buffy grayish to nearly white color; it also has a buffy whisker stripe. Their upperparts usually not streaked, sometimes there is streaking on their back. Their tail is short and notched. It has diffusely streaked sides and breast and a whitish belly (NatureServe 2012).

The Large-billed Savannah Sparrow is a nonbreeding visitor occurring primarily from late August to early March along the southern coast and from late July to mid-February (peak numbers Nov through Jan) at the Salton Sea (Shuford and Gardali 2008).

Taxonomic Remarks

The Large-billed Savannah Sparrow is a member of the Emberizidae family.

Distribution

The Large-billed Savannah Sparrow is nonbreeding visitor of California occurring primarily from late August to early March along the southern coast and from late July to mid-February (peak numbers Nov through Jan) at the Salton Sea. Since around 1990, there has been a reappearance of some birds in coastal marshes from San Diego north to San Luis Obispo County; none have been recorded north of there since early in the 20th century. In San Diego County, small numbers winter, primarily at the Tijuana River estuary. Recent winter surveys have tallied from six to nine birds at the Del Mar Jetty at Camp Pendleton, North Island, south San Diego Bay, and Imperial Beach, and fewer at the San Luis Rey River mouth and San Diego River flood-control channel (Shuford and Gardari 2008).

Habitat

This species is almost entirely restricted to shorelines within its California nonbreeding range. The accounts of wintering birds in coastal southern California from days of former abundance emphasized use of salt marshes, beaches, kelp wracks, wharves, docks, and city streets.

Threats

The steep decline in the global population of this subspecies is almost certainly tied to massive habitat changes in the delta of the Colorado River after construction of upstream dams and subsequent reduction of freshwater flow to the river's mouth. The cumulative loss of about 75% of historic salt marsh habitat in coastal southern California by 1970, extensive disturbance of remaining marshes, and surrounding extensive urban development has limited potential winter habitat for these sparrows. A possible factor in declining habitat quality on the southern California coast is the thorough daily raking of large stretches of beaches by county and state maintenance workers; in the process, kelp and associated food resources for the sparrows are not allowed to accumulate. Urbanization adjacent to the inland limit of beaches also eliminates weedy growth and tracts of salt grass (*Distichlis*), which formerly provided an abundant food source for these sparrows (Shuford and Gardali 2008).

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <*http://www.natureserve.org/explore*r> (Accessed: July 26, 2012).

Shuford, W. D., and Gardali, T., editors. 2008b. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

American White Pelican

Pelecanus erythrorhynchos (Gmelin)

California Species of Special Concern

Description

The American White Pelican about 1.2 meters (4 feet) tall and has a wingspan of about 2.7 meters (9 feet). It is entirely white except for its black-edged wings that are visible when the American White Pelican is in flight. It has a long neck, a long orange bill with an expandable pouch and short orange legs with big webbed feet. In breeding season, it has a light yellowish crest on the back of its head and a nuptial tubercle or fibrous plate on the upper part of its bill. The nuptial tubercle will fall off when mating season is over and the crest will turn gray. Young American White Pelicans have grayish markings on their heads and backs (Dewey 2009).

The American White Pelicans mate from late March through early May. They forage in shallow waters for fish, crustaceans, and amphibians. They may also forage in deeper waters where fish occur near the surface. They forage during the day typically, but may forage at night during the breeding season (Knopf and Evans 2004).

Taxonomic Remarks

The American White Pelican is a member of the Pelecanidae family.

Distribution

American White Pelicans are found throughout North America. They breed in inland, prairie regions of the United States and Canada and winter in southern and coastal areas. Breeding occurs in suitable habitat from British Columbia, Alberta, Saskatchewan, Manitoba, and southwestern Ontario south through northern California, Nevada, and Colorado. They winter in southern California, coastal and eastern Mexico, the coastal plain of Texas, and throughout the Gulf States, including Florida. Populations that breed mostly east of the continental divide tend to migrate to winter ranges in the Gulf of Mexico; breeding populations west of the continental divide tend to migrate towards Baja California and western Mexico. There are several, small year-round populations along the Gulf of Mexico and in central Durango, Mexico. The winter range is characterized by minimum January temperatures above 4 degrees Celsius (Dewey 2009).

Habitat

American White Pelicans winter in coastal areas, such as coastal bays and estuaries. Significant inland wintering areas are the Salton Sea in California and large rivers in areas where water flow prevents freezing. They breed on islands in or near shallow, inland lakes, rivers, and marshes. Islands can be either permanent islands in freshwater water bodies or temporary islands in wetlands. These temporary nesting and roosting habitats can be important in determining breeding and winter distribution. Breeding islands are commonly more than 50 kilometers from areas used for foraging. American White Pelicans migrate over inland areas with large lakes and rivers for resting and foraging (Knopf and Evans 2004).

Threats

Historically pelican populations declined in response to destruction of breeding and foraging habitats and continued destruction of wetland habitats remains one of the most important influences on current

populations. American White Pelicans are especially sensitive to human disturbance at nesting sites, where human presence can result in temporary or permanent nest abandonment, increasing the likelihood of mortality associated with exposure and gull predation (Dewey 2009).

Dewey, T. 2009. "Pelecanus erythrorhynchos" (On-line), Animal Diversity Web. Accessed July 26, 2012 at <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Pelecanus_erythrorhynchos.html*>

Knopf, F., and R. Evans. 2004. American White Pelican (Pelecanus erythrorhynchos). *The Birds of North America Online*, 57: 1-20. Accessed July 26, 2012 at <*http://bna.birds.cornell.edu/bna/species/057*>

California Brown Pelican

Pelecanus occidentalis californicus (Ridgway)

California Fully Protected

Description

Brown Pelicans can reach an overall length of up to 137 centimeters (54 inches), with a bill up to 38 centimeters (15 inches) long, and an average mass of 2 to 5 kilograms (4.4 to 11 pounds). Males weigh more than females and generally have a longer bill than females. Juvenile plumage is brown above with white below and the adult plumage of gray/brown dorsal feathers and black/brown below forms at around three to five years of age. There is no sexual dimorphism in the Brown Pelican's plumage (Burkett et al 2007).

Brown Pelicans nesting peaks during March and April; their nests are in colonies either in trees, bushes, or on the ground. Those placed in trees are made of reeds, grasses, straw, and sticks; if on the ground, nests consist of a shallow scrape lined with feathers and a rim of soil built 10 to 30 centimeters (3.9 to 11.8 inches) above the ground. Pelicans dive from the air for fish. Menhaden account for 90-95% of their food. They also prey on pigfish, pinfish, herring, sheepshead, silversides, mullet, grass and top minnows, and they sometimes eat crustaceans, usually prawns.

Taxonomic Remarks

The California Brown Pelican is a member of the Pelecanidae family.

Distribution

The Brown Pelican is found throughout the temperate and tropical regions of the Americas, along both Atlantic and Pacific coasts. The California Brown Pelican breeds in western North America primarily on islands off southern California and western Mexico, and including the Gulf of California. In California, Brown Pelicans nest on West Anacapa Island and are regular breeders on Santa Barbara Island. Large numbers of Brown Pelicans disperse northward along the Pacific coast after breeding, during the summer and fall, going as far north as British Columbia. Brown Pelicans also occur inland at the Salton Sea in southern California and these birds are probably from the Gulf of California (Burkett et al. 2007).

Habitat

The California Brown Pelican is found on the Pacific coast, occasionally found inland. Preferred habitats include sandy coastal beaches and lagoons, waterfronts and pilings, and rocky cliffs.

Threats

Food availability has been identified as a primary factor limiting the reproductive success of California Brown Pelicans. Brown Pelicans breeding in Southern California are highly dependent on northern anchovy (*Engraulis mordax)* and Pacific sardine (*Sardinops sagax*) during the breeding season. Breeding adults are known to abandon nests and chicks in years of low food availability and migrate to areas of higher prey density (Wright 2005).

Burkett, E. E., R. J. Logsdon, and K. M. Fien. 2007. Report to the California Fish and Game Commission: Status Review of California Brown Pelican (*Pelicanus occidentalis californicus*) in California. Calif. Dept. of Fish and Game, Wildlife Branch, Nongame Wildlife Program Report 2007-04. 26pp.+ appendices.

S. Wright. 2005. Disturbance and Roosting Ecology of California Brown Pelicans (*Pelecanus occidentalis californicus*) on East Sand Island in the Columbia River Estuary.

Nuttall's Woodpecker

Picoides albolarvatus (Cassin)

BCC

Description

The Nuttall's Woodpecker is unique among North American woodpeckers in having entirely black body plumage and tail, with only the face, throat, crown, and large patch at the base of the primaries white. Males have a red patch at the back of the head; juvenile males have a variable patch of red on the crown (Gebauer 2004).

In British Columbia, Nuttall's Woodpecker eggs have been found in nests from mid-May to mid-June. Clutch size ranges from three to nine eggs (av. 4–5). The incubation period usually lasts for 14 days. In British Columbia, young have been recorded at nests from 30 May to 16 July. Nestlings may fledge as early as late June. Typically there is one brood per breeding season (Gebauer 2004).

Taxonomic Remarks

The Nuttall's Woodpecker is a member of the Picidae family.

Distribution

The Nuttall's Woodpecker is most concentrated in inland canyons and foothills where the coast live oak is most numerous. The species breeds at all elevations within San Diego County, nearly to the summit of Hot Springs Mountain. Otay Mesa, Otay Mountain, and Tecate Peak, along the Mexican border, now form the only extensive area on the coastal slope where Nuttall's Woodpecker is absent as a breeding bird. On the desert slope of the mountains, for the most part, the east edge of Nuttall's Woodpecker range tracks the east edge of the oaks. Along Coyote Creek they occur in the breeding season only at Middle Willows on the Riverside County line. They occur also in Borrego Palm Canyon and along San Felipe Creek downstream to the head of Sentenac Canyon. In southern San Diego County Nuttall's Woodpecker ranges beyond the oaks to Jacumba and the mesquite-dominated thicket along Carrizo Creek 2 miles north of Jacumba near Arsenic Springs (Unitt 2004).

Habitat

Nuttall's is San Diego County's most widespread woodpecker; it is a common permanent resident in riparian, oak, and coniferous woodland. It is spreading farther, colonizing formerly treeless scrub now replaced by urban landscaping (Unitt 2004).

Threats

The greatest threat to the Nuttall's Woodpecker is the loss of habitat, especially riparian woodlands (Unitt 2004).

M. Gebauer. 2004. White-headed woodpecker *Picoides albolarvatus*. Accounts and Measures for Managing Identified Wildlife – Accounts V. 2004. Accessed August 1, 2012 <*http://www.env.gov.bc.ca/wld/frpa/iwms/documents/Birds/b_whiteheadedwoodpecker.pdf*>.

Oregon Vesper Sparrow

Pooecetes gramineus affinis (Miller)

California Species of Special Concern, BCC

Description

The Oregon Vesper Sparrow is 15.2 centimeters (6 inches) in length. It is reminiscent of a grayish Song Sparrow (*Melospiza melodia*) with a white eye-ring. Its breast is finely streaked, but without a central spot. It has chestnut colored shoulder patches and white outer tail feathers that are evident when it is in flight. The shoulder patches are sometimes visible while bird is perched. Tail is notched, bill and legs are pale.

Taxonomic Remarks

The Oregon Vesper Sparrow is a member of the Emberizidae family.

Distribution

The Oregon Vesper Sparrow is restricted almost entirely to California in winter. It is generally found in the lower valleys and plains west of the mountains from central California south to northwestern Baja California. Highest densities apparently occur in central and southwestern California. In general, it breeds in the lower valleys and plains west of the Cascade Range in western Washington, western Oregon, and extreme northwestern California (Shuford and Gardali 2008). In San Diego County, sparse semidesert sage scrub in Dameron Valley and around the upper end of El Capitan Reservoir hosts this species. Warner Valley and San Felipe Valley offer the most Vesper Sparrow habitat, and the birds are most numerous there, north of Lake Henshaw. In the northwestern part of the county Camp Pendleton, the Fallbrook Naval Weapons Station, and grassland around Willow Spring are the only areas where the it occurs (Unitt 2004).

Habitat

The Oregon Vesper Sparrow is an obligate grassland species that feeds on both invertebrates and seeds procured on the ground and in vegetation. The habitat of Oregon Vesper Sparrow's wintering in California is mainly open ground with little vegetation or grown to short grass and low annuals, including stubble fields, meadows, and road edges (Shuford and Gardali 2008).

Threats

The main threat on the Oregon Vesper Sparrow's wintering grounds is the development of relatively open, flat ground at low elevations (e.g., the development of the Los Angeles basin and San Fernando Valley). Agricultural pressures, perhaps especially a proliferation of vineyards, may be the greatest threat north of the Tehachapi Mountains, whereas residential and commercial pressures are probably the greatest to the south. Problems associated with fragmentation of Vesper Sparrow habitat on the breeding grounds also apply on the wintering grounds (Shuford and Garadli 2008).

PDF of Oregon Vesper Sparrow account from: Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Purple Martin

Progne subis (Linnaeus)

California Species of Special Concern

Description

Adult male Purple Martins can look all-dark in poor light, but at close range note glossy bluish purple sheen on body plumage. The females have gray-brown upperparts overall, with variable hint of bluish sheen on back and cap; note the pale gray collar and forehead. Their underparts are mottled gray-brown, palest on belly and often forming a distinct patch (Synman 2011).

The breeding season for the Purple Martin starts in May and will last until June. They are primarily insectivores. They capture food in flight and rarely glean insects from foliage or the ground. Purple Martins prefer eating fruit flies (*Ceratitis* sp.), mosquitoes (family Culicidae), wasps (*Polistes* sp.), beetles (order Coleoptera), ants (family Formicidae), grasshoppers (order Orthoptera), cicadas (family Cicadidae) as well as dragonflies (suborder Anisoptera) (Synman 2011).

Taxonomic Remarks

The Purple Martin is a member of the Hirundinidae family.

Distribution

Purple Martins are widely but locally distributed in forest and woodland areas at low to intermediate elevations throughout much of the state. In southwestern California, martins are very rare in the Transverse Ranges (western Transverse Ranges, San Gabriel, and San Bernardino Mountains). In the Peninsular Ranges, they are rare in the Santa Ana and San Jacinto mountains and most abundant in the Palomar Mountains and, particularly, the Laguna and Cuyamaca mountains of San Diego County (Shuford and Gardali 2008).

Habitat

Purple Martins prefer open spaces that are situated close to any water source, as they are insectivores and are attracted to the large populations of insects near wetlands, swamps, and wet meadows. They also seem to avoid high elevations, but may be found at elevations up to 4,000 meters (13,123 feet). Due to colonization and human interactions in their natural habitats, Purple Martins are now accustomed to human interaction and live in close proximity with humans today. They tend to find shelter in urban settlements, often living in specially made birdhouses called "martin houses". Historically, this species inhabited forest edges, montane forests, and deserts and nested in abandoned woodpecker cavities. Some populations that breed in the western United States continue to live in these natural settings, however most utilize man-made martin houses (Snyman 2011).

Threats

In midelevation forests in much of the state, removal of large snags in suitable ridge and upper slope areas continues to reduce opportunities for Martin establishment. Competition from Starlings is the main threat to remnant Martin populations in lowland woodlands, making recolonization of most areas unlikely (Shuford and Gardali 2008).

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Snyman, N. 2011. "Progne subis" (On-line), Animal Diversity Web. Accessed July 26, 2012 at <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Progne_subis.html*>

Light-footed Clapper Rail

Rallus longirostris levipes (Bangs)

Federally Endangered, California Endangered, California Fully Protected

Description

The Light-footed Clapper Rail is a hen-sized marsh bird and approximately 36 centimeters (14 inches) in length with a slightly down-curved bill longer than the head, and a short, upturned tail. Its long legs and long toes are dull yellowish-gray. Males and females are identical in plumage. The cinnamon breast contrasts with the streaked plumage of its grayish-brown back and gray and white barred flanks. Most of the side of the head, including the cheeks, is gray. The chin and throat, and a line from the base of the bill to the top of the eye, are very light buff (USFWS 2009).

This species of Clapper Rail eats mainly crabs; also other crustaceans, small fishes, tadpoles, snails, insects, and some plant material. Probably probes in mud or sand in or near shallow water, or picks items from substrate. They lay their eggs from early April to early May (NatureServe 2012).

Light-footed Clapper Rail

Credit: California Coastal Commission

Taxonomic Remarks

The Light-footed Clapper Rail is a member of the Rallidae Family

Distribution

The Light-footed Clapper Rail range in California extends from Ventura County in the north to the Mexican border in the south. Today the northern most marsh occupied by Light-footed Clapper Rail is Mugu Lagoon in Ventura County. Southern California's largest population of Light-footed Clapper Rails is located in Upper Newport Bay and is an Ecological Reserve of the California Department of Fish and Wildlife. It contains 105 hectares (260 acres) of marsh lands. Tijuana Slough NWR in southwestern San Diego County contains about 425 hectares (1,051 acres) of wetlands (USFWS 2009).

Habitat

The Light-footed Clapper Rail uses coastal salt marshes, lagoons, and their maritime environments. Nesting habitat includes tall, dense cordgrass (*Spartina foliosa*) and occasionally in pickleweed (*Salicornia virginica*) in the low littoral zone, wrack deposits in the low marsh zone, and hummocks of high marsh within the low marsh zone (NatureServe 2012).

Threats

The destruction or degradation of habitat remains the predominant threat to the Light-footed Clapper Rail population.

NatureServe. 2012. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: July 26, 2012).

USFWS. 2009. Light-footed clapper rail 5-Year Review. Carlsbad, CA. August 2009.

Black Skimmer

Rynchops niger (Linnaeus)

California Species of Special Concern, BCC

Description

The breeding adult Black Skimmer has brown-black upperparts, contrasting with a white forehead and underparts. The upperwing shows a white trailing edge from the secondaries to the inner primaries. The tail is white, with dark central feathers. The bill is black with a reddish-orange base. The legs and feet are also reddish-orange. Male black skimmers are slightly larger than females. Nonbreeding adult plumage is similar, but duller, to that of breeding adults. In winter, the bill and upperparts are somewhat paler. In addition, white feathers on the nape form a light collar around the neck (NJFW).

The species is a year-round resident in coastal Los Angeles, Orange, and San Diego counties, and Santa Clara County. It winters locally in substantial numbers on the coast of southern California from Santa Barbara to San Diego counties. The breeding colonies on the coast and in the interior are generally occupied from mid-April through September and occasionally into mid-October, the first eggs appear in early May and last fledged young occur by late September (Shuford and Gardali 2008).

Taxonomic Remarks

The Black Skimmer is a member of the Laridae family.

Distribution

The Black Skimmer breeds on the coast from San Francisco Bay south to south San Diego Bay and in the interior at the Salton Sea. Nesting in San Diego County is not well known since the area was not consistently studied over the years. Nesting has been recorded and Los Angeles Harbor, Seal Beach National Wildlife Refuge, and Batiquitos Lagoon (Shuford and Gardali 2008).

Habitat

The Black Skimmer nests on open sandy beaches, inlets, sandbars, offshore islands, and dredge disposal islands that are sparsely vegetated and contain shell fragments. The growth of dense vegetation may cause colony relocation. Skimmers also frequently nest on wrack mats (deposits of dead sea grasses and other vegetation) on marsh islands in the back bays; however, these colonies are typically much smaller than the beach colonies. Black Skimmers forage in shallow-water tidal creeks, inlets, and ponds. Similar coastal and estuarine habitats are used throughout the year (NJFW).

Threats

The greatest threat to the long-term viability of the breeding populations is the apparent shortage of suitable open nesting habitat and continued loss as a result of erosion or vegetation growth on small islets (Shuford and Gardali 2008).

New Jersey Fish and Wildlife (NJFW). Species Description: Black Skimmer. Accessed July 26, 2012 <*http://www.njfishandwildlife.com/ensp/pdf/end-thrtened/blkskimmer.pdf*>

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

Rufous Hummingbird

Selasphorus rufus (Gmelin)

BCC

Description

The adult male Rufous Hummingbird has a white breast with a greenish back and crown. The back is sometimes glossed with metallic bronze-green. The pileum (the top of the head from the bill to the nape) is bronze-green, and the collar is bright orange-red. The chin and throat is a shiny metallic scarlet color. The bill is long, straight, thin, black or dark brown in color. The feet are a dusky color. The adult female has a metallic bronze-green back, and the pileum is a little duller than the male rufous. From the chin and the throat, down to the breast of the female, is a dull white color. Rufous Hummingbird has a body length of about 7.3 to 9.1 centimeters (2.87 to 3.58 inches), and weighs around 2.8 grams to 4.0 grams (0.10 to 0.14 ounces) (Kong 2001). The Rufous Hummingbird migrations are early; spring migration begins in February, exceptionally late January but peaks in late March and early April (Unitt 2004).

Taxonomic Remarks

The Rufous Hummingbird is a member of the Trochilidae family.

Distribution

The Rufous Hummingbird is found in western and coastal North America from March through August, and migrates to Mexico in the winter months of October through February (Kong 2001). In San Diego County, fall migrants concentrate at patches of native wildflowers in the mountains such as, near the Palomar Observatory, and at exotic flowering plants in the coastal lowland at Quail Botanical Garden. There are a few fall records in the Anza–Borrego Desert, near the Borrego Palm Canyon campground. Most wintering Rufous Hummingbirds are in parks, cemeteries, and well-landscaped residential areas in the coastal lowland, such as La Jolla and Carlsbad (Unitt 2004).

Habitat

During the breeding season, Rufous Hummingbirds are found in forests, on seed-tree harvest units, riparian shrub, and spruce-fir habitats. During the winter, it lives wherever flowers are present. It migrates to lowland stream bottoms, foothill brush land, seacoast and high mountain meadows (Kong 2001).

Threats

The introduction of diverse exotic flowering plants has augmented the food supply for migrating hummingbirds and has allowed a few of the Rufous Hummingbird to cut short their long migration and winter in southern California (Unitt 2004).

Kong, B. 2001. "Selasphorus rufus" (On-line), Animal Diversity Web. Accessed July 31, 2012 *<http://animaldiversity.ummz.umich.edu/site/accounts/information/Selasphorus_rufus.html>*.

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Allen’s Hummingbird

Selasphorus sasin (Lesson)

BCC

Description

Allen's Hummingbirds are some the smallest birds, they are only 7.5 to 9 centimeters (3 to 3.5 in.) long and typically weigh a little over 3 grams (.11 ounces). A male Allen's hummingbird has a fiery red-orange throat, white collar, and metallic green on its back and cap. The female's upper body is green. The tail and sides are orange-brown and the throat and central belly is white with iridescent dots on its throat (Pineda 2001).

Allen’s Hummingbirds locate their nests in shrubs and trees with dense vegetation (such as vines and thickets) anywhere from 0.5 to 15 meters (4.9 to 49 feet) off the ground. Nests are composed of grasses and leaves woven together with spider webs. The outside is covered with mosses and lichens and the inside is lined with downy materials (Mitchell 2000).

Taxonomic Remarks

The Allen’s Hummingbird is a member of the Trochilidae family.

Distribution

Allen's Hummingbirds have one of the smallest breeding ranges of all U.S. hummingbirds. They breed in a narrow strip along the Pacific coast from southwest Oregon to southern California. They are more numerous in San Diego County in summer as a southbound migrant than in late winter as it heads north. Because only adult males are identifiable in the field, high counts are concentrated during the last week of June and first week of July, they were found in Camp Pendleton, and Point Loma. Confirmed nesting in San Diego County has occurred at San Onofre State Beach (Unitt 2004).

Habitat

The Allen's Hummingbird inhabits chaparral and riparian woodlands below 300 meters (984 feet) in elevation. Males maintain territories that overlook open coastal scrub or riparian shrubs where they perch in conspicuous places. Females choose nest sites in areas where there is more tree cover (Mitchell 2000).

Threats

Potential threats to the Allen’s Hummingbird include habitat loss, increased use of pesticides, replacement of native plants by invasive plants. The restricted breeding and wintering range makes the species more susceptible to natural disasters, diseases, or land use changes that could wipe out significant portions of the population, especially the residents on the Channel Islands (Mitchell 2001).

Mitchell, D. E. 2000. Allen's Hummingbird (Selasphorus sasin). In The Birds of North America, No. 501(A. Poole and F. Gill, eds.). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.

Pineda, N. 2001. "Selasphorus sasin" (On-line), Animal Diversity Web. Accessed July 31, 2012 <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Selasphorus_sasin.html*>

Lawrence's Goldfinch

Spinus lawrencei (Cassin)

BCC

Description

The Lawrence's Goldfinch has gray body plumage, with yellow wing markings, and a yellow patch on the center of the breast distinguish this bird from its close relatives, Lesser and American Goldfinches. The male Lawrence's Goldfinch has a black face, forehead, and chin, and broad yellow wing bars. The female is similar to the male but duller overall, with an entirely gray head and face, and subtle yellow and gray wing bars (Audubon).

Lawrence's Goldfinch is an irregular, partial migrant, a variable fraction of the population moving east of the Colorado River for the winter. In San Diego County, migrants are most notable in March and April, when flocks are seen occasionally and the birds show up more frequently in the Anza–Borrego Desert and along the coast (Unitt 2004).

Taxonomic Remarks

The Lawrence's Goldfinch is a member of the Fringillidae Family.

Distribution

Lawrence's Goldfinches have a wide distribution, but in San Diego County, they are concentrated in the mountains. At lower elevations, toward the coast, they can be found in Pauma Valley along the San Diego River in Santee, they may still occur in the middle of the breeding season in the inland valleys. Along the coast, Lawrence's Goldfinch is rare, especially as a breeding bird (Unitt 2004).

Habitat

Lawrence's Goldfinches typically nest in arid, open woodlands near chaparral, weed fields, and near small bodies of water.

Threats

Much of the breeding range of this species is threatened by development. Especially given its relatively small overall population size, habitat loss from such encroachment may put the species at some risk.

Audubon's Watch List. 2012. Lawrence's Goldfinch Species Description. Accessed July 27, 2012 <*http://audubon2.org/watchlist/viewSpecies.jsp?id=117*>

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Black-chinned Sparrow

Spizella atrogularis (Cabanis)

BCC

Description

The Black-chinned Sparrow is a small sparrow; it is plain dark gray with a brown-streaked back, pale gray belly, and a black chin.

Taxonomic Remarks

The Black-chinned Sparrow is a member of the Emberizidae family.

Distribution

Black-chinned Sparrows breed locally and uncommonly in the foothills bordering the Central Valley, and commonly in the mountains of Southern California. They are found in the Pine Valley area of San Diego County. It breeds regularly as far north as Lake and Mariposa County and irregularly to Shasta and Trinity Counties (Winter 2002). The Black-chinned Sparrow occurs widely in San Diego County's foothills and mountains above 457 meters (1500 feet) elevation. The largest concentrations appear to be between 762 and 1676 meters (2500 and 5500 feet) elevation on south-facing slopes, e.g., in Noble Canyon, Otay Mountain, and along the Pacific Crest Trail from Kitchen Creek to Fred Canyon. Outlying sites closer to the coast correspond to more isolated chaparral-covered hills, such as San Onofre Mountain, Black Mountain, the western edge of steep hills on Miramar, and Cowles Mountain. The lowest elevation to which breeding Black-chinned Sparrows descend appears to be about 152 meters (500 feet), as in Sycamore Canyon (Unitt 2004).

Black-chinned Sparrow, breeding male; California.

Female Black-chinned Sparrow, California.

Habitat

The Black-chinned Sparrow occurs in brushy mountain slopes, open chaparral, and sagebrush. It is found mostly in arid scrub on hillsides, from low foothills up to almost 2134 meters (7,000 feet) in mountains, in chaparral and open thickets of manzanita, scrub oak, sagebrush, chamise, and other low shrubs. In winter it is also found locally in desert areas, mesquite thickets (Planet of Birds 2012).

Threats

Threats include degradation of habitat alterations in fire regimes, heavy grazing, and introduction of exotic species.

Winter, K. 2002. Black-chinned Sparrow (*Spizella atrogularis*). *In* The Coastal Scrub and Chaparral Bird Conservation Plan: a strategy for protecting and managing coastal scrub and chaparral habitats and associated birds in California. California Partners in Flight.
http://www.prbo.org/calpif/htmldocs/scrub.html

California Least Tern

Sternula antillarum browni (Mearns)

Federally Endangered, California Endangered, California Fully Protected

Description

California Least Tern

Credit: U.S. Fish and Wildlife Service

The California Least Tern is the smallest of the North American terns it is 22–24 centimeters (8.7 to 9.5 inches) long, with a wingspan of 50 centimeters (19.7 inches), and weighing 39 to 52 grams (1.4 ounces). The upper parts are a fairly uniform pale gray, and the underparts white. The head is white, with a black cap and line through the eye to the base of the bill, and a small white forehead patch above the bill; in winter, the white forehead is more extensive, with a smaller and less sharply defined black cap. The bill is yellow with a small black tip in summer, all blackish in winter. The legs are yellowish. The wings are mostly pale gray, but with conspicuous black markings on their outermost primaries (USFWS 2006).

California Least Terns nest in colonies on open beaches, free of vegetation. The typical colony size is usually 25 pairs. Their nest is a simple scrape in the sand or shell fragments. Their fall migration begins the last week of July and the first week of August, prior to migrating the adults and their young forage and roost along the coastline (USFWS 2006).

Taxonomic Remarks

The California Least Tern is a member of the Laridae family.

Distribution

In San Diego County, California Least Terns have been reported at Aliso Creek, the Santa Margarita River mouth, Naval Amphibious Base, and Tijuana River mouth. These are the county's only sites where the Tern still nests on dunes and flats in their relatively natural condition. At Batiquitos Lagoon, the Terns nest on several artificial sand flats installed for them. Around Mission and San Diego bays, most of the Tern's nesting sites are fills, islands, or dikes built of dredge spoil, sometimes covered with sand (Unitt 2004).

Habitat

California Least Terns establish nesting colonies on sandy soils with little vegetation along the ocean, lagoons, and bays. (USFWS 2006).

Threats

The threats identified in the Tern's listing as endangered are coastline development, and lack of alternative sites. If a site is overgrown with vegetation it becomes unsuitable. The accelerated silting in of lagoons, the result of the vegetation being stripped from watersheds during development, has eliminated some former nesting sites, in San Diego County (Unitt 2004).

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

USFWS. 2006. California Least Tern. (Sternula antillarum browni). 5-Year Review. Carlsbad, CA. 2006.

Least Bell's Vireo

Vireo bellii pusillus (Name/Species authority)

California Endangered, BCC

Least Bell's Vireo

Credit: U.S. Fish and Wildlife Service

Description

The Least Bell's Vireo is a small songbird inhabiting riparian vegetation along meandering rivers of southern California. It has a plain, ash gray head and pale sulfur yellow-tinged sides. The body is olive gray above and whitish underneath; each wing bears two dull white bars. Its beak is short and slightly hooked at the tip, to pluck insects from the surfaces of leaves or branches.

Least Bell's Vireos begin returning to southern California breeding sites in mid- to late-March. Males arrive in advance of females by several days. They are generally present on the breeding grounds until September, although they may begin departing by late July. They occasionally occur in California during the winter (Kus 2002).

Taxonomic Remarks

The Least Bell's Vireo is a member of the Vireonidae family.

Distribution

Nesting vireos have been reported as far north as the Santa Clara River in Ventura County, and the Mojave River in San Bernardino County. The northernmost reported sighting in recent years is near Gilroy in Santa Clara County in 1997. Roughly half of the current vireo population occurs on drainages within Marine Corps Base Camp Pendleton in San Diego County (Kus 2002). Elsewhere in the coastal lowland, the major sites are the San Dieguito River from Lake Hodges east to San Pasqual, the San Diego River from Interstate 805 to Santee, the Sweetwater River from Sweetwater Reservoir to the Rancho San Diego/Cottonwood golf course, Jamul and Dulzura creeks, Otay River, and the Tijuana River valley (Unitt 2004).

Habitat

Least Bell's Vireo inhabits dense, low brush near water. Its diet consists mainly of insects, particularly large insects such as grasshoppers, beetles, and wasps. It typically forages amongst the foliage of riparian thickets, picking insects off the leaves and twigs. Nests are usually built in the fork of a slender branch, approximately 0.6 to 1.5 meters (2 to 5 feet) above the ground. The nest is a small, hanging cup comprised of grass, weeds, leaves, and strips of bark.

Threats

The predominant threats to the Least Bell's Vireo include the clearing of its riparian woodland habitat and parasitism by the Brown-headed Cowbird (Unitt 2004).

Kus, B. 2002. Least Bell's Vireo (*Vireo bellii pusillus*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. <*http://www.prbo.org/calpif/htmldocs/riparian_v-2.htm*l>

Unitt, P. 2004. San Diego County Bird Atlas. Proc. San Diego Soc. Nat Hist.

Gray Vireo

Vireo vicinior (Coues)

California Species of Special Concern, BCC

Description

Gray Vireo is a drab, medium-sized vireo with a small bill. It is gray overall, with the upperparts being a darker gray and the underparts being more of a grayish white. The only noticeable field marks on this bird are a thin white eye-ring, a white lore between the eye and the bill, and a weak white wing-bar (Barlow et al 1999).

The Gray Vireo arrives in its nesting areas in California in March; in Arizona and Texas it usually arrives in April. It moves out of northern Arizona by mid to late September; and may arrive on its wintering grounds as early as August 25. The Vireo winters from southwestern Arizona mountains into Mexico to southern Sonora and southern Baja California. Several wintering individuals have also been confirmed in the Big Bend region, Texas (NatureServe 2012).

Taxonomic Remarks

The Gray Vireo is a member of the Vireonidae family.

Distribution

The Gray Vireo breeds in the southwestern United States and northwestern Mexico, and winters from southeastern California, southwestern Arizona, and southwestern Texas south into Sonora and southern Baja California, Mexico (Winter and Hargrove 2004).

Habitat

In all parts of the Gray Vireo's range, shrub cover that forms a continuous zone of twig growth from 0.3 to 1.5 meters (1 to 5 feet) above the ground is the common factor of habitat. The shrubbery may evidently be either closed, as in chaparral, or partly open, as in the understory of pinyon-juniper woodland. In the Peninsular Ranges of southern California, the Gray Vireo frequents chaparral dominated by chamise (*Adenostoma fasciculatum*) or red shank (*A. sparsifolium*). The birds range into scrub oak (*Quercus* spp.), manzanita (*Arctostaphylos* spp.), *Ceanothus* spp., pinyon, or big sagebrush (*Artemisia tridentata* ssp. *tridentata*) where these are mixed with or near *Adenostoma* (Shuford and Gardali 2008).

Threats

The primary threat to Gray Vireo is loss of habitat. Habitat loss in southern California since the 1940s is blamed for a contraction of the species' range in that area, as well as a decrease in numbers.

Barlow, J.C., S. N. Leckie, and C. T. Baril. 1999. Gray Vireo (Vireo vicinior). In The Birds of North America, No. 447 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.

Winter, K and L. Hargrove. 2004. Gray Vireo (Vireo vicinior). In The Coastal Scrub and Chaparral Bird Conservation Plan: a strategy for protecting and managing coastal scrub and chaparral habitats and associated birds in California. California Partners in Flight.
http://www.prbo.org/calpif/htmldocs/scrub.html

Yellow-headed Blackbird

Xanthocephalus xanthocephalus (Bonaparte)

California Species of Special Concern

Description

The male Yellow-headed Blackbird has a bright yellow hood and black body. A white patch on his wing can be seen both while perched and flying. The female's coloring is more subdued with a duller-yellow supercilium, throat, and breast. The rest of the body is grayish-brown, and has white streaks extending down its breast. Juveniles are similar in appearance to the females. Both male and female Yellow-headed Blackbirds are 24 centimeters (9.5 inches) long and have sharply pointed black bills (Dotzour 2001).

The Yellow-headed Blackbirds occur in California primarily as a migrant and summer resident from April to early October; breeds from mid-April to late July; small numbers winter, mainly in the southern Central Valley and the Imperial and Colorado River valleys (Unitt 2004).

Taxonomic Remarks

The Yellow-headed Blackbird is a member of the Icteridae family.

Distribution

During the summer, the Yellow-headed Blackbird migrates north to the west-central portions of Canada and the United States. Its range extends as far west as central-interior British Columbia, moving directly south through the central-interior west coast to northeastern Baja California. The eastern edge of the Yellow-headed Blackbird's range extends from western Ontario to northern Missouri. During the winter, it can be found from California to Texas as well as in Mexico and casually in Costa Rica (Dotzour 2001). It occurs in San Diego County mainly as a rare migrant and winter visitor. During spring migration it is found in the Borrego Valley, Agua Caliente County Park, and Sweetwater Reservoir. In winter, they are found in the Santa Maria Valley, San Pasqual Valley, and in the Tijuana River valley (Unitt 2004).

Habitat

Yellow-headed Blackbirds are found in freshwater marshes during the summer. They particularly like to live amongst cattails, tule, and bulrush. During migration and over the winter months, the Yellow-headed Blackbird is found in open, cultivated lands, in fields, and in pastures (Dotzour 2001).

Threats

The urbanization of farm and pasture land, are undoubtedly contributing to the Yellow-headed Blackbird's decline in San Diego County. But factors operating on a broader scale, closer to the species' population centers, are probably more important. Threats identified by A. Jaramillo (unpubl. data) are loss of nesting habitat to drainage of marshes and pesticide contamination; the species feeds predominantly in agricultural areas.

Dotzour, A. 2002. "Xanthocephalus xanthocephalus" (On-line), Animal Diversity Web. Accessed August 01, 2012 <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Xanthocephalus_xanthocephalus.html*>.

Mammals

Pallid Bat

Antrozous palidus (Le Conte)

California Species of Special Concern

Description

Pallid bats range from 60 to 85 millimeters (2.35 to 3.35 inches) long from head to tail. The tail can be 35 to 57 millimeters (1.35 to 2.25 inches) alone. Forearm length is 45 to 60 millimeters (1.75 to 2.35 inches) long and body weight ranges from 17 to 28 grams (.50 to 1.0 ounce). Their fur has a woolly feel with a cream-yellow to light brown color on the dorsum and very pale to white color on the venter. This species has a U-shaped ridge on the top of the muzzle with the nostrils located underneath the ridge on the front of its muzzle. The face has small wart-like pararhinal glands that produce a skunk-like odor, which is thought to be used as defense mechanism. The ears are large with a long, pointed tragus; the tragus is half as long as the ear itself. Their ears have serrated outer edges that are not joined at the base. This species breeding season takes place in early October and continues sporadically throughout the winter, young are born between May and June. Pallid bats are highly social. A single colony can range from 12 to 100 bats. About 95 percent of groups consist of at least 20 individuals, with the largest colony consisting of 162 bats.

Taxonomic Remarks

The Pallid bat belongs to the Vespertilionidae family.

Distribution

Pallid bats range from southern British Columbia through Montana to central Mexico. They occur from the Okanagan valley in British Columbia, south through eastern Washington, Oregon, and California to Baja California Sur, Sonora, Sinaloa, Nayarit, Jalisco, Queretaro, and Nuevo Leon in Mexico. They are found as far east as western Texas, Oklahoma, southern Kansas, southern Wyoming, and southern Idaho.

Habitat

Pallid bats are also called desert bats because they are mostly found in desert habitats. They roost in a variety of places but favor rocky outcrops. They also occur in oak and pine forested areas and open farmland. Roosting sites are variable, depending on what is available. They can be found roosting in caves, rock crevices, mines, hollow trees, and buildings. They use day roosts that are semi-dark, as long as there is some sort of cover. Pallid bats prefer darkness, shelter from wind and rain, and an easy escape if they are disturbed. Roosts are usually near a source of water, but this does not appear to be a main requirement for roosting locations.

Threats

Pallid bats' tendency to roost gregariously and their relative sensitivity to disturbance make them vulnerable to mass displacement. Roosts and hibernacula can be damaged or destroyed by vandalism, mine closures and reclamation, recreational activities such as rock climbing, forestry practices such as timber harvest, and, where man-made structures are occupied, demolition, modification, chemical

treatments, or intentional eradication and exclusion. Loss or modifications of foraging habitat due to prescribed fire, urban development, agricultural expansion, and/or pesticide use pose potential threats.

R. Sherwin. 2005. Pallid Bat Species Description. Western Bat Working Group. Accessed July 24, 2012 <*http://www.wbwg.org/speciesinfo/species_accounts/vespertilonidae/anpa.pdf*>

Weber, K. 2009. "Antrozous pallidus" (On-line), Animal Diversity Web. Accessed July 24, 2012 at <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Antrozous_pallidus.html*>

San Diego Pocket Mouse

Chaetodipus fallax fallax (Merriam)

California Species of Special Concern

Description

San Diego pocket mice are moderately sized pocket mice, ranging in length from 170 to 200 millimeters (6.65 to 7.80 inches) and weighing from 17 to 22 grams (.50 to .75 ounce). There is very little difference in size between males and females. Both are colored a dark brown on top and white underneath, with spines that are black on the rump and white on the hips. The tail length is shorter than the body by about 20 millimeters (.80 inch), it has a darkly colored dorsal crest and is and light below. This pocket mouse reproduces throughout the year, but it usually peaks in the spring. Most females have one litter per year, consisting of two to six young. The young are born between June and August. Some females may have up to three litters in one year. The life span of San Diego pocket mice ranges from just a few months to about five years. The desert habitat in which this species lives does not provide much protection from predators. The common predators include snakes, owls, and various mammals.

Taxonomic Remarks

The San Diego pocket mouse belongs to the Heteromyidae family.

Distribution

The San Diego pocket mouse occurs mainly in arid coastal and desert border areas in San Diego County, in Riverside County southwest of Palm Springs, in San Bernardino County from Cactus Flat in the San Bernardino Mountains to Oro Grande and east to Twenty-nine Palms. It is found from sea level to 1,350 meters (4,500 feet) and 1,800 meters (6,000 feet).

Habitat

San Diego pocket mice are found terrestrially in a wide variety of temperate habitats ranging from chaparral and grasslands to scrub forests and deserts. This area includes a vast range of elevations, extending from sea level along the Pacific coast to around 1,400 meters (4,600 feet) in the mountains of southwest California and Baja California. Rarely found in cities, the major habitat requirement for this species is the presence of low growing vegetation or rocky outcroppings, as well as sandy soil in which they dig burrows.

Threats

This species is threatened by habitat destruction from expansion of metropolitan areas in San Diego County.

San Diego Pocket Mouse. Accessed July 25 2012. <*http://www.sibr.com/mammals/M094.html*>

Meyer, P. 2004. "Chaetodipus fallax" (On-line), Animal Diversity Web. Accessed July 24, 2012 at <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Chaetodipus_fallax.html*>

Townsends Big-eared Bat

Corynorhinus townsendii (Cooper)

California Species of Special Concern

Description

Townsend's big-eared bats are medium-sized bats with broad wings. They have two large, fleshy glands on either side of the muzzle. The snout is short with elongated nostril slits. Their coloration varies although they tend to be some hue of brown or gray. The dorsum can be anywhere from pale cinnamon brown to blackish brown to slate gray. The ventral side tends to be buff to pale brown. Their ears are large, generally more than 25 millimeters (1.0 inch) in length and connected by a low band across the forehead. When these bats are sleeping, the ears are generally rolled down and back across the head, resembling ram horns, which gives these bats one of their nicknames, "ram eared bats". Summer maternity colonies range in size from a few individuals to several hundred individuals. Maternity colonies form between March and June (based on local climactic factors), with a single pup born between May and July. Winter hibernating colonies are composed of mixed-sexed groups, which can range in size from a single individual to colonies of several hundred animals (or in some areas, particularly in the eastern U.S., several thousand). Mating generally takes place between October and February in both transitory migratory sites and hibernacula. This species is a moth specialist with over 90 percent of its diet composed of lepidopterans.

Taxonomic Remarks

This species of bat is a member of the Vespertilionidae family.

Distribution

The Townsend's big-eared bat occurs throughout the west and is distributed from the southern portion of British Columbia south along the Pacific coast to central Mexico and east into the Great Plains, with isolated populations occurring in the central and eastern United States.

Habitat

The Townsend's big-eared bat has been reported in a wide variety of habitat types ranging from sea level to 3,300 meters (10,800 feet). Habitat associations include: coniferous forests, mixed meso-phytic forests, deserts, native prairies, riparian communities, active agricultural areas, and coastal habitat types.

Threats

The primary threat to the Townsend's big-eared bat is almost certainly related to disturbance and/or destruction of roost sites (e.g., recreational caving or mine exploration, mine reclamation, and renewed mining in historic districts).

J. Sullivan. Animal Diversity Web. Accessed July 25 2012 *<http://animaldiversity.ummz.umich.edu/site/accounts/information/Corynorhinus_townsendii.html>*

A. Piaggio. 2005. Townsend's Big-eared Bat Species Description. Western Bat Working Group. Accessed July 25, 2012. < *http://www.wbwg.org/speciesinfo/species_accounts/vespertilonidae/coto.pdf>*

Long-beaked Common Dolphin

Delphinus capensis (Gray)

MMPA

Description

Long-beaked common dolphins are relatively small dolphins that can reach lengths of 1.9 to 2.6 meters (6 to 8.5 feet) and weigh between 80 and 235 kilograms (160 and 500 pounds). Males are slightly larger than females. They have a rounded melon, moderately long beak, and a sleek but robust body with a tall, pointy, "falcate" dorsal fin located in the middle of the back. This species can be identified by its distinct bright contrasting coloration patterns. Long-beaked common dolphins have a dull yellow/tan thoracic panel between the dark cape and white ventral patch forward of the dorsal fin. Narrow dark stripes extend from the lower jaw to the flipper and from the eye to the anal area. Morphologies can be distinct and vary by geographic and regional areas (NOAA 2012).

Long-beaked common dolphins become sexually mature at around 2 meters (6.5 feet) in length. Breeding usually takes place between the spring and autumn, followed by a 10- to 11-month gestation period. Females give birth to a single calf that weighs about 10 kilograms (20 pounds), and have an estimated calving interval of one to three years. These dolphins have an estimated lifespan of approximately 40 years (NOAA 2012).

Taxonomic Remarks

The long-beaked common dolphin is a member of the Delphinidae family.

Distribution

Long-beaked common dolphins have a restricted distribution in the Atlantic, Indian and Pacific Oceans. They are commonly found along the U.S. west coast, from Baja California (including the Gulf of California) northward to about central California. They are not known to occur along the U.S. Atlantic coast. Distinct populations can be found off the coasts of California and Mexico, South America (Peru, Chile, Venezuela, Brazil, and Argentina), West Africa, South Africa, Madagascar, the Arabian Peninsula, India, Indonesia, China, Korea, and southern Japan (NOAA 2012).

Habitat

Long-beaked common dolphins generally prefer shallow, tropical, subtropical and warmer temperate waters closer to the coast (usually within 90 to 180 kilometers [50 to 100 nautical miles]) and on the continental shelf (NOAA 2012).

Threats

Long-beaked common dolphins have been incidentally taken as bycatch in a number of fisheries that include driftnets, gillnets, purse seines, and trawls. A small number of animals have been killed for food and bait in the Caribbean, South America (e.g., Peru), West Africa, and other offshore islands. They have been taken in the Japanese drive fisheries as well (NOAA 2012).

NOAA Fisheries: Office of Protected Resources. 2012. Long-Beaked Common Dolphin Description. Accessed August 06, 2012.
<*http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/commondolphin_longbeaked.htm*>.

Short-beaked Common Dolphin

Delphinus delphis (Linnaeus)

MMPA

Description

Short-beaked common dolphins are typically 1.7 to 2.6 meters (5.6 to 8.5 feet) in length and weigh between 70 to 135 kilograms (154 to 298 pounds). They are fusiform (shaped like a fish) and slender. Their dorsal (upper or top side) side is black to brownish black, with varying coloration and markings. The ventral (under) side is off-white or white. The flanks are distinctly marked with hourglass or criss-cross patterns that are tan or yellowish tan in color. Their short beak is well-defined and often features a white tip. One or more dark stripes are found from the center of the lower jaw to the flippers. Their dorsal fin is triangular to distinctly falcate (curved) in shape with a pointed tip and usually black with a lighter gray region of varying size near the middle (MarineBio 2012).

Common dolphins reach sexual maturity after 12 to 15 years. Courtship occurs in the spring and fall. Males and females court by stroking each other with their flippers, by vigorously rubbing their bodies together, and by swimming alongside each other. Common dolphins have an estimated life span of 35 to 40 years (Alspaugh 2000).

Taxonomic Remarks

The short-beaked common dolphin is a member of the Delphinidae family.

Distribution

Short-beaked common dolphins can occur on the continental shelf or farther offshore. Off the U.S. west coast, the majority of the populations are found off of California, especially during the warm-water months. Off the U.S. east coast, they are more common north of Cape Hatteras, North Carolina. During summer through autumn, large aggregations can be found near Georges Bank, Newfoundland, and the Scotian Shelf. Other distinct populations can be found off of northern Europe, the Black Sea, Newfoundland, the Mediterranean Sea, Africa, Japan, the southwestern Pacific, southern Australia, and New Zealand (NOAA 2012).

Habitat

Short-beaked common dolphins are fond of coastal waters, but are also found well out to sea. Generally, they prefer surface temperatures greater than 10 degrees Celsius (50 degrees Fahrenheit). These dolphins normally travel at 5 to 7 miles per hour (8 to 11 kilometers per hour)(although they are known to reach speeds of 29 miles per hour (46.7 kilometers per hour) when pursuing food), and can move up to 150 to 200 miles (241 to 322 kilometers) in a 48-hour period. When swimming, schools follow and dive over prominent features of the ocean bottom. Also, herd movements correlate with the seasonal shifts in populations of certain fish (Alspaugh 2000).

Threats

These species are the target of fisheries in Japan, South America, and the Azores. "Accidental" catches in fishing gear occur in the eastern tropical Pacific, the Mediterranean, Europe, China, Sri Lanka, South Africa, West Africa, and New Zealand. Short-beaked common dolphin is the third most frequently

caught dolphin in this manner. Despite their active and social behavior in the wild, common dolphins are shy, easily agitated, and prone to illness when kept in captivity (MarineBio 2012).

Alspaugh, M. 2000. "Delphinus delphis" (On-line), Animal Diversity Web. Accessed August 02, 2012 at <*http://animaldiversity.ummz.umich.edu/site/accounts/information/Delphinus_delphis.html*>.

"Common Dolphins, Delphinus delphis at MarineBio.org". MarineBio.org. August 2, 2012 <*http://marinebio.org/species.asp?id=32*>. Note: If no author is given under the main page title, simply cite MarineBio.org.

NOAA Fisheries: Office of Protected Resources. 2012. Long-Beaked Common Dolphin Description. Accessed August 06, 2012.
<*http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/commondolphin_shortbeaked.htm*>.

Stephens' Kangaroo Rat

Dipodomys stephensi (Merriam)

Federally Endangered, California Threatened

Description

Stephens' kangaroo rat is a small, nocturnal mammal. Kangaroo rats are burrow-dwelling, seed-eating animals that inhabit arid and grassy habitats in western North America. They are characterized by furlined, external cheek pouches used for transporting seeds; large hind legs for rapid, bi-pedal, saltatorial (leaping) locomotion; relatively small front legs; long tails; and large heads. Stephens' kangaroo rat constructs burrows to serve as sleeping quarters and nesting sites. Burrows of are frequently found clustered in burrow complexes. Individuals typically emerge from their burrows after sunset; they may be active at any time of night. Stephens' kangaroo rat, are primarily granivores (seed-eaters) and when above ground, spend most of their time moving about the surface. Seeds are extracted from the soil by digging with their forefeet and balancing on their hind legs, by direct clipping of seed stalks and extracting seeds from the felled seed heads of fruit, or by harvesting seeds directly from fruit that lie within 15 to 20 centimeters (5.9 to 7.9 inches) of the ground.

Credit: copyright, B. Moose Peterson

Taxonomic Remarks

The Stephens' kangaroo rat is one of 19 species of kangaroo rats belonging to the family Heteromyidae (USFWS 1997).

Distribution

This species is currently known to occur from the San Jacinto Valley and adjacent areas of western Riverside, southwestern San Bernardino, and northwestern San Diego counties. It is estimated that the entire geographic range is approximately 2,870 square kilometers (1,108 square miles). Most of this occurs in western riverside County and extends into northern San Diego County and, perhaps, southwestern San Bernardino County (USFWS 1997).

Habitat

Stephens' kangaroo rats are closely associated with sparsely vegetated habitats, including dirt roads, previously and currently disturbed areas, and other sites with high percentage of bare ground. This species is primarily found in annual grasslands or sparse sage scrub habitats where perennial cover is less than 30 percent, it is has also been documented in brittle bush (*Encelia farinosa*) dominated sage scrub with estimated shrub cover of 50 percent (USFWS 1997). Stephens' kangaroo rat typically occurs at lower elevations in flat or gently rolling grasslands of the dry inland valleys west of the Peninsular Ranges of southern California, in western Riverside and northern and central San Diego Counties. The

Stephens' kangaroo rat appears to have a higher affinity for vegetation communities dominated by herbaceous plants (forbs) with a low density of grasses than for a vegetation community dominated by grasses. It prefers grassland communities dominated by forbs rather than by annual grasses, as annual forbs provide critical greens in the spring, furnish temporary cover, produce large seeds, and rapidly disintegrate after drying, resulting in substantial patches of bare ground.

Threats

Threats to this species include habitat destruction, degradation, and fragmentation. The primary cause of decline of populations has been the reduction of habitat from an increase in urbanization and agricultural activities (USFWS 1997). In addition, the conversion of native vegetation to nonnative annual grassland is a potentially rangewide, high magnitude threat to Stephen's kangaroo habitat. Increased dominance of nonnative plant species, especially dense thatch-forming grasses and *Lepidium latifolium* (perennial peppergrass, or pepperweed) reduces habitat suitability, by reducing the abundance of forb-dominated grassland habitat preferred by this species, and by reducing necessary open bare-ground habitat. Another threat is the habitat destruction from urban and agricultural development resulting in isolated habitat patches (USFWS 2010).

USFWS 1997. U.S. Fish and Wildlife Service. Draft Recovery Plan for the Stephen's Kangaroo Rat. April 1997.

USFWS. 2010. 12-Month Finding on a Petition To Remove the Stephen's Kangaroo Rat From the Federal List of Endangered and Threatened Wildlife.

Western Mastiff Bat

Eumops perotis californicus (Schinz)

California Species of Special Concern

Description

This species of bat can be distinguished from all other North American molossid (free-tail) species based on size. With a forearm of 73 to 83 millimeters (2.8 to 3.25 inches), it is North America's largest species. The western mastiff bat is primarily a cliff-dwelling species, where maternity colonies of 30 to several hundred (typically fewer than 100) roost generally under exfoliating rock slabs (e.g., granite, sandstone or columnar basalt). Its diet consists primarily of moths (Lepidoptera), but also includes beetles, crickets and katydids.

Taxonomic Remarks

The western mastiff bat is a member of the Molossidae family.

Distribution

The western mastiff bat ranges from central Mexico across the southwestern United States in parts of California, southern Nevada, and Arizona, southern New Mexico and western Texas. Recent surveys have extended the previously known range to the north in both Arizona near the Utah border, and California within a few miles of the Oregon border.

Habitat

The western mastiff bat is present only where there are significant rock features offering suitable roosting habitat. It is found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt and high elevation meadows of mixed conifer forests. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas. Its roosts have been documented up to 1,400 meters (4,600 feet), and foraging animals at > 2,700 meters (8,900 feet).

Threats

The western mastiff bat is threatened in particular by urban expansion. When colonies are within or in close proximity to human dwellings, they are vulnerable to disturbance, vandalism and the hysteria which often surrounds bat colonies, causing extermination by pest control operators and public health departments. Any construction activities (e.g., quarry operations, highway projects, water impoundments) that impact cliffs or boulders could also affect western mastiff bat roosts. Rock climbing may also disturb roosting bats, and is a rapidly-growing recreational activity in their range.

M. Siders. 2005. Western Mastiff Bat Species Description. Western Bat Working Group. Accessed July 25, 2012. *http://www.wbwg.org/speciesinfo/species_accounts/molossidae/eupe.pdf*

Eastern North Pacific Gray Whale

Eschrichtius robustus

MMPA, delisted from ESA in 1994

Description

Gray whales can grow to about 15 meters (50 feet) long, and weigh approximately 35,000 kilograms (80,000 pounds). Females are slightly larger than males. They have a mottled gray body, with small eyes located just above the corners of the mouth. Their pectoral fins (flippers) are broad, paddle-shaped, and pointed at the tips. Lacking a dorsal fin, they instead have a dorsal hump located about two-thirds of the way back on the body, and a series of 8–14 small bumps, known as knuckles, between the dorsal hump and the tail flukes. The tail flukes are more than 3 meters (15 feet) wide, have S-shaped trailing edges, and a deep median notch (NFMS 2012).

Gray whales become sexually mature between 6–12 years, at an average of 8 years old. After 12–13 months of gestation, females give birth to a single calf. Newborn calves are approximately 4.5–5 meters (14–16 feet) long, and weigh about 920 kilograms (2,000 pounds) (NMFS 2012).

Taxonomic Remarks

Gray whales are the only species in the family Eschrichtiidae. There are two isolated geographic distributions of gray whales in the North Pacific Ocean: the Eastern North Pacific stock, found along the west coast of North America, and the Western North Pacific or "Korean" stock, found along the coast of eastern Asia (NMFS 2012).

Distribution

Most of the Eastern North Pacific stock spends the summer feeding in the northern Bering and Chukchi Seas, but gray whales have also been reported feeding along the Pacific coast during the summer in waters off of southeast Alaska, British Columbia, Washington, Oregon, and California. In the fall, gray whales migrate from their summer feeding grounds, heading south along the coast of North America to spend the winter in their breeding and calving areas off the coast of Baja California, Mexico. Calves are born in shallow lagoons and bays from early January to mid-February. From mid-February to May, the Eastern North Pacific stock of gray whales can be seen migrating northward with newborn calves along the west Coast of the United States (NMFS 2012).

Habitat

Gray whales are found mainly in shallow coastal waters in the North Pacific Ocean (NMFS 2012).

Threats

The eastern stock, due to their annual migration along the highly-populated coastline of the western United States, as well as their concentration in limited winter and summer areas, may make them particularly vulnerable to impacts from commercial/industrial development and local catastrophic events. This species is also subject to collisions with vessels, entanglement in fishing gear, habitat degradation, disturbance from ecotourism and whale watching, disturbance from low-frequency noise, and the possibility that illegal whaling or resumed legal whaling will remove animals at biologically unsustainable rates (NMFS 2012).

NOAA Fisheries: Office of Protected Resources. 2012. Gray Whale Description. Accessed December 10, 2012. < *http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/graywhale.htm*>.

Risso’s Dolphin

Grampus griseus

MMPA

Description

Risso's dolphins, sometimes called "gray dolphins," have a robust body with a narrow tailstock. These medium sized cetaceans can reach lengths of approximately 2.6–4 meters (8.5–13 feet) and weigh 300-500 kilograms (660-1,100 pounds). Males and females are usually about the same size. They have a bulbous head with a vertical crease, and an indistinguishable beak. They have a tall, falcate, sickle-shaped dorsal fin located mid-way down the back. Calves have a dark cape and saddle, with little or no scarring on their body. As Risso's dolphins age, their coloration lightens from black, dark gray or brown to pale gray or almost white. As adults, their bodies are usually heavily scarred, with scratches from teeth raking between dolphins, as well as circular markings from their prey (e.g., squid), cookie-cutter sharks (*Isistius brasiliensis*), and lampreys (NMFS 2012).

There is not much known about the reproduction of Risso's dolphins. Individuals become sexually mature when they reach a length of about (2.6–2.8 meters (8.5–9 feet). Breeding and calving may occur year-round and the gestation period is approximately 13–14 months. The peak of the breeding and calving season may vary geographically (especially in the North Pacific), with most animal births occurring from fall to winter in California waters (NMFS 2012).

Taxonomic Remarks

Risso's dolphins are part of the group of delphinids of the subfamily Globicephalinae which also includes false killer whales, pygmy killer whales, melon-headed whales, long-finned pilot whales, and short-finned pilot whales. This subfamily is sometimes referred to as "blackfish."

Distribution

Risso's dolphins have a cosmopolitan distribution in oceans and seas throughout the world from latitudes 60°N to 60°S. In the Northern Hemisphere, their range includes the Gulf of Alaska, Gulf of Mexico, Newfoundland, Norway, Persian Gulf and Red Sea. They are known to inhabit the Mediterranean and Black Sea. In the Southern Hemisphere, their range includes Argentina, Australia, Chile, South Africa, and New Zealand. Little or nothing is known of their migration patterns or movements, but they may be affected by movements of spawning squid and oceanographic conditions (NMFS 2012).

Habitat

Risso's dolphins are found in temperate, subtropical and tropical waters of 50-86°F (10-30°C) that are generally greater than 1,000 meters (3,300 feet) and seaward of the continental shelf and slopes. They are more common in waters of 59–68°F (15–20°C) and may be limited by water temperature. In the northern Gulf of Mexico, they may prefer habitats on the continental slope where the bottom topography is steeper. In the waters off northern Europe, they are known to inhabit shallower coastal areas (NMFS 2012).

Threats

Bycatch in fishing gear is the primary threat to Risso's dolphins. Several types of fishing gear, including gillnets, longlines, and trawls, have been documented to incidentally take this species. Historically, large

numbers of Risso's dolphins were killed incidental to tuna purse seine fishing in the eastern tropical Pacific Ocean (NMFS 2012).

NOAA Fisheries: Office of Protected Resources. 2012. Gray Whale Description. Accessed December 10, 2012. < *http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/rissosdolphin.htm*>.

Pacific White-Sided Dolphin

Lagenorhynchus obliquidens

MMPA

Description

Pacific white-sided dolphins have a robust body and a very short beak. They have an unusually large, curved dorsal fin and are sometimes referred to as the "hookfin porpoise" even though they are not porpoises. Their back, fluke (tail), and lips are black, while their sides, dorsal fin, and flippers are gray and their belly is white. On both sides of the dorsal fin, a white or light gray stripe, which resembles a pair of suspenders, extends from the eyes to the tail.

The average adult Pacific white-sided dolphin weighs about 135-180 kilograms (300-400 pounds) and is between 1.7–2.5 meters (5.5–8.0 feet) long. Males are generally larger than females, with males reaching an average length of 2.5 meters (8 feet) and females reaching an average length of 2.3 meters (7.5 feet). This species of dolphin can live for more than 40 years.

Pacific white-sided dolphins reach sexual maturity at around 7-10 years of age around lengths of 5.5-6 ft (1.7-1.8 m). Gestation lasts for 12 months with calves being born in the summer months. Calves weigh approximately 15 kilograms (30 pounds) and are about 1–1.2 meters (2.5–4 feet) in length. Females give birth less than every other year (NMFS 2012).

Taxonomic Remarks

There are two stocks of Pacific white-sided dolphins in U.S. waters: California/Oregon/Washington and North Pacific stocks. They are the only members of the genus *Lagenorhynchus* in the North Pacific Ocean (NMFS 2012).

Distribution

In the Eastern Pacific Ocean, this species ranges from the Gulf of Alaska to the Gulf of California. They are most common between the latitudes of 38°N and 47°N. The distribution and abundance of Pacific white-sided dolphins may be affected by large-scale oceanographic occurrences, such as El Niño and by underwater acoustic deterrent devices (NMFS 2012).

Habitat

Pacific white-sided dolphins are found in temperate waters of the North Pacific. They inhabit waters from the continental shelf to the deep open ocean (NMFS 2012).

Threats

A primary threat to Pacific white-sided dolphins is incidental catch in fisheries such as in gillnets and trawls. They are sometimes killed by harpooning and drive fisheries in Japan.

NOAA Fisheries: Office of Protected Resources. 2012. Gray Whale Description. Accessed December 10, 2012. < *http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/whitesideddolphin_pacific.htm*>.

Western Red Bat

Lasiurus blossevillii (Lesson and Garnot)

California Species of Special Concern

Description

The western red bat is a medium sized bat. Its pelage coloration is rusty red to brownish and lacks the white-tipped hair which gives the frosted appearance. External measurements average: total length, 103 millimeters (4 inches); tail, 49 millimeters (2 feet); foot, 10 millimeters (.25 inch); ear from notch, 13 millimeters (.50 inch); forearm, 40 millimeters (1.5 inches). Red bats have been observed feeding around street lights and flood lights they have been seen preying on items such as homopterans, coleopterans, hymenopterans, dipterans, and lepidopterans. Red bats mate in late summer or early fall. Females become pregnant in spring and have a pregnancy of 80-90 days. Females may have litters of up to five pups per year. This species is considered to be highly migratory. Although generally solitary, red bats appear to migrate in groups and forage in close association with one another in summer. The timing of migration and the summer ranges of males and females seem to be different.

Taxonomic Remarks

The western red bat belongs to the Vespertilionidae family.

Distribution

Distribution is concentrated at lower elevations, in the Central Valley and along the central and southern coasts. Five of the eight southern California breeding records are from localities close to major drainages including, San Diego, Santa Ana, and Los Angeles Rivers, with the remaining records associated with smaller drainages (e.g., San Onofre Creek in San Diego County and Sycamore Canyon in Santa Barbara County).

Habitat

The western red bat roosts in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas during the day. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores). Roost sites are generally hidden from view from all directions except below; lack obstruction beneath, allowing the bat to drop downward for flight; lack lower perches that would allow visibility by predators; have dark ground cover to minimize solar reflection; have nearby vegetation to reduce wind and dust; and are generally located on the south or southwest side of a tree.

Threats

Loss of riparian zones, primarily due to agricultural conversion and creation of water storage reservoirs has reduced both roosting and foraging habitat of red bats. The intensive use of pesticides in fruit orchards may constitute a threat to roosting bats and may significantly reduce the amount of insect prey available. Controlled burns may be another significant mortality factor for red bats that roosting in leaf litter during cool temperatures.

B. Bolster. 2005. Western Red Bat. Western Bat Working Group. Accessed July 24, 2012 <*http://www.wbwg.org/speciesinfo/species_accounts/vespertilonidae/labl.pdf*>

Pierson, E.D., W.E. Rainey and C. Corben. 2006. Distribution and status of Western red bats (*Lasiurus blossevillii*) in California. Calif. Dept. Fish and Game, Habitat Conservation Planning Branch, Species Conservation and Recovery Program Report 2006-04, Sacramento, CA 45 pp.

San Diego Black-tailed Jackrabbit

Lepus californicus bennettii (Gray)

California Species of Special Concern

Description

San Diego black-tailed jackrabbits measure 47 to 63 centimeters (1.75 to 2.5 inches) from nose to rump, the tail is between 50 to 112 millimeters (2 to 4 inches) and the ears are 10 to 13 centimeters (4 to 5 inches) long. As they are true hares, black-tailed jackrabbits are lankier and leaner than rabbits, have longer ears and legs, and the leverets are born fully-furred and open-eyed. They possess a characteristic black stripe down the center of the back, a black rump patch, and the tail is black dorsally. Both sexes look alike, but the female is the larger of the two sexes. Male black-tailed jackrabbit reach sexual maturity at about seven months of age; females usually breed in the spring of their second year, although females born in spring or early summer may breed in their first year. Two peak breeding seasons corresponding to rainfall patterns and vegetation greenup occur in California, Arizona, and New Mexico.

Black-tailed Jackrabbit
(*Lepus californicus*)

Taxonomic Remarks

The San Diego black-tailed jackrabbit is a member of the Leporidae family.

Distribution

The San Diego black-tailed jackrabbit is found in Southern California, west of the summit of Coast Range from near Gaviota Pass, Santa Barbara County to the Mexican border and south along the coast to San Quintin, Baja California in Mexico. Its range extends from sea level at San Diego up to about meters (6,000 feet) on Cuyamaca Mountains.

Habitat

The San Diego black-tailed jackrabbit occurs in open habitats, primarily including grasslands, Riversidean sage scrub, Riversidean alluvial fan sage scrub, Great Basin sagebrush, desert scrub, and juniper and oak woodlands.

Threats

The San Diego black-tailed jackrabbit is threatened by hunting for sport and local subsistence, human perturbation and exotic predation. In some places the animal competition (livestock), habitat fragmentation and human-induced fire represent important threats for their populations.

<*http://www.fs.fed.us/database/feis/animals/mammal/leca/all.html*>

<*http://www.planet-mammiferes.org/drupal/en/node/39?indice=Lepus+californicus+bennettii*>

Pocketed Free-tailed Bat

Nyctinomops femorosaccus (Merriam)

California Species of Special Concern

Description

This bat has a tail which extends beyond the edge of the interfemoral membrane. With a forearm of 45 to 49 millimeters (1.75 to 2 inches), it is smaller than all other North American molossid species except *Tadarida brasiliensis*. The species forms maternity colonies, and females bear one young in late June or July. It forages mainly on large moths, but its diet includes small moths and beetles, with small amounts of a variety of other insects. Owls and snakes have been documented preying on this species.

Taxonomic Remarks

This species is a member of the Molossidae family.

Distribution (including population information and trends if available)

The pocketed free-tailed bat occurs in western North America, from southern California, central Arizona, southern New Mexico and western Texas, south into Mexico including Baja California. The species is thought to be non-migratory. The known altitudinal distribution is from near sea level to about 2,250 meters (7,300 feet). Breeding populations have recently been identified in southern California.

Habitat

The pocketed free-tailed bat is colonial and roosts primarily in crevices of rugged cliffs, high rocky outcrops and slopes. It has been found in a variety of plant associations, including desert shrub and pine-oak forests. The species may also roost in buildings, caves, and under roof tiles.

Threats

There are no known treats to the species identified to date. However, some of the general threats to bats could apply to this species. These could include impacts to foraging areas from grazing, riparian management, the use of pesticides, and in some places disturbance to roost sites.

K. Navo. 2005. Species Description: Pocketed free-tailed bat. Western Bat Working Group. Accessed July 24, 2012. <*http://www.wbwg.org/speciesinfo/species_accounts/molossidae/nyfe.pdf*>

Pacific Harbor Seal

Phoca vitulina richardsi (Gray)

MMPA

Description

Pacific harbor seals have spotted coats in a variety of shades from white or silver-gray to black or dark brown. They reach 1.7 to 1.9 meters (5 to 6 feet) in length and weigh up to 140 kilograms (300 pounds). Males are slightly larger than females. They are true or crawling seals, since they are unable to rotate their hind flippers forward under the pelvic girdle. They move on land by flopping along on their bellies, a type of locomotion called "galumphing". True seals, or "phocid" seals, may also be distinguished from otariid seals by their lack of external ear flaps and small flippers relative to those of California sea lions. In San Francisco Bay, many harbor seals are fully or partially reddish in color (MMC 2012).

In California, harbor seal pups are born between February and April and weigh about 9.1 to 10.9 kilograms (20 to 24 pounds) at birth. If born prematurely, harbor seals retain a whitish lanugo coat (which is usually lost before birth). A pup can swim at birth and will sometimes ride on its mother's back when tired. After about four weeks, the pups are weaned. Adult females usually mate and give birth every year. They may live 25 to 30 years (MMC 2012).

Taxonomic Remarks

The Pacific harbor seal is a member of the Phocidae family.

Distribution

Harbor seals, also known as common seals, are generally non-migratory and occur on both the U.S. east and west coasts. On the east coast, harbor seals are found from the Canadian Arctic to southern New England, New York and occasionally occur in the Carolinas. On the west coast, harbor seals are found in the coastal and estuarine waters off Baja, California, north to British Columbia, west through the Gulf of Alaska and in the Bering Sea (NOAA 2012).

Habitat

Pacific harbor seals favor near-shore coastal waters and are often seen on rocky islands, sandy beaches, mudflats, bays, and estuaries.

Threats

The Pacific harbor seal is threatened by incidental capture in fishing gear, including gillnets, trawls, purse seines and weirs, boat strikes, oil spill exposure, chemical contaminants, and power plant entrainment, and humans may harass and disturb hauled out seals while the seals are resting (NOAA 2012).

Marine Mammal Center (MMC). 2012. Pacific Harbor Seal Species Description. Accessed August 02, 2012. < *http://www.marinemammalcenter.org/education/marine-mammal-information/pinnipeds/pacific-harbor-seal/*>.

NOAA Fisheries. 2012 Pacific Harbor Seal Description. Accessed August 02 2012. <*http://www.nmfs.noaa.gov/pr/species/mammals/pinnipeds/harborseal.htm*>.

American Badger

Taxidea taxus (Schreber)

California Species of Special Concern

Description

The badger is a somewhat large mustelid that has adapted to a semi-fossorial life. It has powerful, short legs with partially webbed toes and claws measuring 25 to 38 millimeters (1 to 1.5 inches) which aid in digging; the hind feet have shovel-like claws. The body is stout and flat, wider than high. Coloration of its shaggy coat is a silver gray with the head being dark with a white stripe that often extends down the back. The snout of the badger is slightly upturned and the eyes are small with nictating membranes. The tail is relatively short, moderately furred and somewhat yellowish. Weight can range from 5.50 to 11 kilograms (12 to 24 pounds) with the males weighing more on the average. One to four young are born in an extensive burrow system. Mating occurs in late summer or early autumn and is followed by delayed implantation. Implantation then occurs in December or January with the young born in March or April. At birth the young are furred but blind; they become independent by August. The badger is a highly specialized fossorial carnivore. They feed mainly on small mammals, especially ground squirrels, pocket gophers, rats, mice, and chipmunks.

Taxonomic Remarks

The American badger is a member of the Mustelidae family.

Distribution (including population information and trends if available)

In California, recent badger sightings are most heavily clustered in the northeastern and south-coastal areas of the State, and in the central southeastern desert region. Smaller clusters appear on the eastern side of the southern Sierras and in the southern-most section of the San Joaquin Valley. A possible increase in, or a stability of relative abundance of badgers may be evident in San Diego in the south coastal region.

Habitat

They are most abundant in the drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Badgers are generally associated with treeless regions, prairies, park lands and cold desert areas.

Threats

Predator control with the usage of indiscriminate trapping and poisons have caused extensive losses. Additionally, habitat loss, vehicular accidents, farming operations, and indiscriminate shootings are also a cause of mortality.

CAGFD. 1995. Stanislaus River Basin and Calaveras River Water Use Program.
Threatened and Endangered Species Report. March 1995
Bay Delta and Special Water Projects Division, CA Dept of Fish and Game. Access July 24, 2012
<*http://www.dfg.ca.gov/delta/reports/stanriver/sr4415.asp*>

Bottlenose Dolphin

Tursiops truncatus (Montagu)

MMPA

Description

Bottlenose dolphins can grow to be up to 3.1 meters (10 feet) long and weigh from 136 to 295 kilograms (300 to 650 pounds). They have a sleek, streamlined body with forelimbs, called pectoral flippers, that they use to steer, and flukes (lobes of the tail) that they use to propel themselves forward. In general, the color of bottlenose dolphins is a nondescript gray on the back fading to white on the belly and lower jaw (MarineBio 2012).

On the west coast of Mexico, calving generally occurs in the fall months. Dolphins have a relatively close relationship with their offspring with a long period of parental care through maturation. The baby will generally nurse for up to 18 months; while the milk, which is about 33 percent fat, helps the calf establish a thick layer of blubber for insulation (MarineBio 2012).

Taxonomic Remarks

The bottlenose dolphin is a member of the Delphinidae family. No subspecies of bottlenose dolphins are currently recognized, although there is stock structure that distinguishes offshore and coastal populations of this species in California waters.

Distribution

In the Pacific Ocean, bottlenose dolphins are found from northern Japan to Australia and from Southern California to Chile. They are also found offshore in the eastern tropical Pacific as far west as the Hawaiian Islands. Off the California coast, bottlenose dolphins have been observed as far north as Monterey, particularly during years of unusual warmth (MarineBio 2012).

Habitat

Bottlenose dolphins are found in temperate and tropical waters around the world. There are coastal populations that migrate into bays, estuaries and river mouths as well as offshore populations that inhabit pelagic waters along the continental shelf (NOAA 2012).

Threats

The bottlenose dolphins' greatest threat is mortality caused by commercial fishing. In 2006, National Marine Fisheries Service implemented the bottlenose dolphin Take Reduction Plan (BDTRP) to reduce the serious injury and mortality of Western North Atlantic coastal bottlenose dolphins incidental to nine U.S. commercial fisheries. In addition to multiple non-regulatory provisions for research and education, the BDTRP requires modifications of fishing practices for small, medium, and large-mesh gillnet fisheries from New York to Florida. The BDTRP also established seasonal closures for certain commercial fisheries in state waters (NOAA 2012).

Bottlenose Dolphins, Tursiops truncatus at MarineBio.org". MarineBio.org. August 6, 2012 <*http://marinebio.org/species.asp?id=33*>.

NOAA Fisheries: Office of Protected Resources. 2012. Bottlenose Dolphin Description. Accessed August 06, 2012. <*http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/bottlenosedolphin.htm*>.

California Sea Lion

Zalophus californianus (Lesson)

MMPA

Description

The California sea lion is has a streamlined body, a thick layer of blubber and short, thick fur with typical coloring ranges from tan to chocolate brown and may appear black when wet. Males are darker and larger than females. Males may reach 454 kilograms (1,000 pounds) but more often 390 kilograms (850 pounds) and 2.1 meters (7 feet) in length. Females are considerably smaller and grow to 110 kilograms (220 pounds) and up to 1.8 meters (6 feet) in length. Pups are about 75 centimeters (29.5 inches) long and weigh 6 to 9 kilograms (13 to 20 pounds). The head has a pointed muzzle and the profile resembles that of a dog (ONR 2012).

Most pups are born in June or July and weigh 6 to 9 kilograms (13 to 20 pounds). They nurse for at least five to six months and sometimes for over a year. Mothers recognize pups on crowded rookeries through smell, sight and their vocalizations. Pups also learn to recognize the vocalizations of their mothers. Breeding takes place a few weeks after birth. (ONR 2012).

Taxonomic Remarks

The California sea lion is a member of the Otariidae family.

Distribution

California sea lions range from the Pacific coast of Central Mexico north to British Columbia, Canada. Their primary breeding range is from the Channel Islands in Southern California to Central Mexico. There is one stock of California Sea Lions in U.S. waters that ranges from the U.S./Mexico border and extends to Canada (NOAA 2012).

Habitat

California sea lions reside in the Eastern North Pacific Ocean in shallow coastal and estuarine waters. Sandy beaches are preferred for haul out sites. In California, they haul out on marina docks as well as jetties and buoys.

Threats

The California sea lion is threatened by incidental catch and entanglement in fishing gear, biotoxins, as a result of harmful algal blooms, and gunshot wounds and other human-caused injuries, as California sea lions are sometimes viewed as a nuisance by commercial fishermen (NOAA 2012).

Office of Naval Research (ONR). 2012 California Sea Lion. Accessed August 02 2012 <*http://www.onr.navy.mil/focus/ocean/life/sealion1.htm*>.

NOAA. 2012. California Sea Lion Species Description. Accessed August 02, 2012 <*http://www.nmfs.noaa.gov/pr/species/mammals/pinnipeds/californiasealion.htm*>.