

**Appendix B:  
Biological Resources Supporting Information**

THIS PAGE INTENTIONALLY LEFT BLANK

**B.1 - CNDDDB Search Results**

THIS PAGE INTENTIONALLY LEFT BLANK



# Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Whittier (3311881) OR La Habra (3311788) OR Yorba Linda (3311787) OR Los Alamitos (3311871) OR Anaheim (3311778) OR Orange (3311777) OR Seal Beach (3311861) OR Newport Beach (3311768) OR Tustin (3311767))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Abronia villosa var. aurita</i> chaparral sand-verbena	PDNYC010P1	None	None	G5T2?	S2	1B.1
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
<i>Aimophila ruficeps canescens</i> southern California rufous-crowned sparrow	ABPBX91091	None	None	G5T3	S3	WL
<i>Ammodramus savannarum</i> grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
<i>Anniella stebbinsi</i> Southern California legless lizard	ARACC01060	None	None	G3	S3	SSC
<i>Aphanisma blitoides</i> aphanisma	PDCHE02010	None	None	G3G4	S2	1B.2
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Asio otus</i> long-eared owl	ABNSB13010	None	None	G5	S3?	SSC
<i>Aspidoscelis hyperythra</i> orange-throated whiptail	ARACJ02060	None	None	G5	S2S3	WL
<i>Aspidoscelis tigris stejnegeri</i> coastal whiptail	ARACJ02143	None	None	G5T5	S3	SSC
<i>Astragalus hornii var. hornii</i> Horn's milk-vetch	PDFAB0F421	None	None	GUT1	S1	1B.1
<i>Astragalus pycnostachyus var. lanosissimus</i> Ventura Marsh milk-vetch	PDFAB0F7B1	Endangered	Endangered	G2T1	S1	1B.1
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Atriplex coulteri</i> Coulter's saltbush	PDCHE040E0	None	None	G3	S1S2	1B.2
<i>Atriplex pacifica</i> south coast saltscale	PDCHE041C0	None	None	G4	S2	1B.2
<i>Atriplex parishii</i> Parish's brittle-scale	PDCHE041D0	None	None	G1G2	S1	1B.1
<i>Atriplex serenana var. davidsonii</i> Davidson's saltscale	PDCHE041T1	None	None	G5T1	S1	1B.2



Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Bombus crotchii</i></b> Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
<b><i>Branchinecta sandiegonensis</i></b> San Diego fairy shrimp	ICBRA03060	Endangered	None	G2	S2	
<b><i>Buteo regalis</i></b> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
<b><i>Buteo swainsoni</i></b> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<b><i>California Walnut Woodland</i></b> California Walnut Woodland	CTT71210CA	None	None	G2	S2.1	
<b><i>Calochortus plummerae</i></b> Plummer's mariposa-lily	PMLIL0D150	None	None	G4	S4	4.2
<b><i>Calochortus weedii var. intermedius</i></b> intermediate mariposa-lily	PMLIL0D1J1	None	None	G3G4T2	S2	1B.2
<b><i>Calystegia felix</i></b> lucky morning-glory	PDCON040P0	None	None	G1Q	S1	1B.1
<b><i>Campylorhynchus brunneicapillus sandiegonensis</i></b> coastal cactus wren	ABPBG02095	None	None	G5T3Q	S3	SSC
<b><i>Catostomus santaanae</i></b> Santa Ana sucker	AFCJC02190	Threatened	None	G1	S1	
<b><i>Centromadia parryi ssp. australis</i></b> southern tarplant	PDAST4R0P4	None	None	G3T2	S2	1B.1
<b><i>Charadrius nivosus nivosus</i></b> western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
<b><i>Chelonia mydas</i></b> green turtle	ARAAA02010	Threatened	None	G3	S4	
<b><i>Chloropyron maritimum ssp. maritimum</i></b> salt marsh bird's-beak	PDSCR0J0C2	Endangered	Endangered	G4?T1	S1	1B.2
<b><i>Choeronycteris mexicana</i></b> Mexican long-tongued bat	AMACB02010	None	None	G3G4	S1	SSC
<b><i>Cicindela hirticollis gravida</i></b> sandy beach tiger beetle	IICOL02101	None	None	G5T2	S2	
<b><i>Cicindela latesignata latesignata</i></b> western beach tiger beetle	IICOL02113	None	None	G2G4T1T2	S1	
<b><i>Cicindela senilis frosti</i></b> senile tiger beetle	IICOL02121	None	None	G2G3T1T3	S1	
<b><i>Coccyzus americanus occidentalis</i></b> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<b><i>Coelus globosus</i></b> globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
<b><i>Coturnicops noveboracensis</i></b> yellow rail	ABNME01010	None	None	G4	S1S2	SSC



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Crotalus ruber</i></b> red-diamond rattlesnake	ARADE02090	None	None	G4	S3	SSC
<b><i>Danaus plexippus pop. 1</i></b> monarch - California overwintering population	IILEPP2012	None	None	G4T2T3	S2S3	
<b><i>Dudleya multicaulis</i></b> many-stemmed dudleya	PDCRA040H0	None	None	G2	S2	1B.2
<b><i>Elanus leucurus</i></b> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Eremophila alpestris actia</i></b> California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
<b><i>Eriastrum densifolium ssp. sanctorum</i></b> Santa Ana River woollystar	PDPLM03035	Endangered	Endangered	G4T1	S1	1B.1
<b><i>Eryngium aristulatum var. parishii</i></b> San Diego button-celery	PDAP10Z042	Endangered	Endangered	G5T1	S1	1B.1
<b><i>Eumops perotis californicus</i></b> western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
<b><i>Euphydryas editha quino</i></b> quino checkerspot butterfly	IILEPK405L	Endangered	None	G5T1T2	S1S2	
<b><i>Falco peregrinus anatum</i></b> American peregrine falcon	ABNKD06071	Delisted	Delisted	G4T4	S3S4	FP
<b><i>Glyptostoma gabrielense</i></b> San Gabriel chestnut	IMGASB1010	None	None	G2	S2	
<b><i>Habroscelimorpha gabbii</i></b> western tidal-flat tiger beetle	IICOL02080	None	None	G2G4	S1	
<b><i>Helianthus nuttallii ssp. parishii</i></b> Los Angeles sunflower	PDAST4N102	None	None	G5TX	SX	1A
<b><i>Icteria virens</i></b> yellow-breasted chat	ABPBX24010	None	None	G5	S3	SSC
<b><i>Isocoma menziesii var. decumbens</i></b> decumbent goldenbush	PDAST57091	None	None	G3G5T2T3	S2	1B.2
<b><i>Lasionycteris noctivagans</i></b> silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
<b><i>Lasiurus cinereus</i></b> hoary bat	AMACC05030	None	None	G3G4	S4	
<b><i>Lasiurus xanthinus</i></b> western yellow bat	AMACC05070	None	None	G4G5	S3	SSC
<b><i>Lasthenia glabrata ssp. coulteri</i></b> Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
<b><i>Laterallus jamaicensis coturniculus</i></b> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Lepidium virginicum var. robinsonii</i> Robinson's pepper-grass	PDBRA1M114	None	None	G5T3	S3	4.3
<i>Microtus californicus stephensi</i> south coast marsh vole	AMAFF11035	None	None	G5T2T3	S1S2	SSC
<i>Myotis yumanensis</i> Yuma myotis	AMACC01020	None	None	G5	S4	
<i>Nama stenocarpa</i> mud nama	PDHYD0A0H0	None	None	G4G5	S1S2	2B.2
<i>Nasturtium gambelii</i> Gambel's water cress	PDBRA270V0	Endangered	Threatened	G1	S1	1B.1
<i>Navarretia prostrata</i> prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.2
<i>Nemacaulis denudata var. denudata</i> coast woolly-heads	PDPGN0G011	None	None	G3G4T2	S2	1B.2
<i>Nyctinomops femorosaccus</i> pocketed free-tailed bat	AMACD04010	None	None	G5	S3	SSC
<i>Nyctinomops macrotis</i> big free-tailed bat	AMACD04020	None	None	G5	S3	SSC
<i>Oncorhynchus mykiss irideus pop. 10</i> steelhead - southern California DPS	AFCHA0209J	Endangered	None	G5T1Q	S1	
<i>Orcuttia californica</i> California Orcutt grass	PMPOA4G010	Endangered	Endangered	G1	S1	1B.1
<i>Pandion haliaetus</i> osprey	ABNKC01010	None	None	G5	S4	WL
<i>Panoquina errans</i> wandering (=saltmarsh) skipper	IILEP84030	None	None	G4G5	S2	
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow	ABPBX99015	None	Endangered	G5T3	S3	
<i>Pentachaeta aurea ssp. allenii</i> Allen's pentachaeta	PDAST6X021	None	None	G4T1	S1	1B.1
<i>Perognathus longimembris pacificus</i> Pacific pocket mouse	AMAFD01042	Endangered	None	G5T1	S1	SSC
<i>Phacelia stellaris</i> Brand's star phacelia	PDHYD0C510	None	None	G1	S1	1B.1
<i>Phrynosoma blainvillii</i> coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
<i>Polioptila californica californica</i> coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T3Q	S2	SSC
<i>Rallus obsoletus levipes</i> light-footed Ridgway's rail	ABNME05014	Endangered	Endangered	G3T1T2	S1	FP
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	





**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Rynchops niger</i></b> black skimmer	ABNNM14010	None	None	G5	S2	SSC
<b><i>Salvadora hexalepis virgultea</i></b> coast patch-nosed snake	ARADB30033	None	None	G5T4	S2S3	SSC
<b><i>Senecio aphanactis</i></b> chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
<b><i>Setophaga petechia</i></b> yellow warbler	ABPBX03010	None	None	G5	S3S4	SSC
<b><i>Sidalcea neomexicana</i></b> salt spring checkerbloom	PDMAL110J0	None	None	G4	S2	2B.2
<b><i>Sorex ornatus salicornicus</i></b> southern California saltmarsh shrew	AMABA01104	None	None	G5T1?	S1	SSC
<b><i>Southern California Arroyo Chub/Santa Ana Sucker Stream</i></b> Southern California Arroyo Chub/Santa Ana Sucker Stream	CARE2330CA	None	None	GNR	SNR	
<b><i>Southern Coast Live Oak Riparian Forest</i></b> Southern Coast Live Oak Riparian Forest	CTT61310CA	None	None	G4	S4	
<b><i>Southern Coastal Salt Marsh</i></b> Southern Coastal Salt Marsh	CTT52120CA	None	None	G2	S2.1	
<b><i>Southern Cottonwood Willow Riparian Forest</i></b> Southern Cottonwood Willow Riparian Forest	CTT61330CA	None	None	G3	S3.2	
<b><i>Southern Dune Scrub</i></b> Southern Dune Scrub	CTT21330CA	None	None	G1	S1.1	
<b><i>Southern Foredunes</i></b> Southern Foredunes	CTT21230CA	None	None	G2	S2.1	
<b><i>Southern Sycamore Alder Riparian Woodland</i></b> Southern Sycamore Alder Riparian Woodland	CTT62400CA	None	None	G4	S4	
<b><i>Southern Willow Scrub</i></b> Southern Willow Scrub	CTT63320CA	None	None	G3	S2.1	
<b><i>Spea hammondi</i></b> western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
<b><i>Sternula antillarum browni</i></b> California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
<b><i>Streptocephalus woottoni</i></b> Riverside fairy shrimp	ICBRA07010	Endangered	None	G1G2	S1S2	
<b><i>Suaeda esteroa</i></b> estuary seablite	PDCHE0P0D0	None	None	G3	S2	1B.2
<b><i>Symphotrichum defoliatum</i></b> San Bernardino aster	PDASTE80C0	None	None	G2	S2	1B.2
<b><i>Taxidea taxus</i></b> American badger	AMAJF04010	None	None	G5	S3	SSC
<b><i>Trigonoscuta dorothea dorothea</i></b> Dorothy's El Segundo Dune weevil	IICOL51021	None	None	G1T1	S1	



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



<b>Species</b>	<b>Element Code</b>	<b>Federal Status</b>	<b>State Status</b>	<b>Global Rank</b>	<b>State Rank</b>	<b>Rare Plant Rank/CDFW SSC or FP</b>
<b><i>Tryonia imitator</i></b> mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	
<b><i>Vireo bellii pusillus</i></b> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

**Record Count: 104**

**B.2 - USFWS IPaC Resource List**

THIS PAGE INTENTIONALLY LEFT BLANK



# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Birds

NAME

STATUS

Coastal California Gnatcatcher *Polioptila californica californica* Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/8178>

## Flowering Plants

NAME

STATUS

Ventura Marsh Milk-vetch *Astragalus pycnostachyus* var.

Endangered

*lanosissimus*

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/1160>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the [FAQ below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
<p><b>Allen's Hummingbird</b> <i>Selasphorus sasin</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9637">https://ecos.fws.gov/ecp/species/9637</a></p>	Breeds Feb 1 to Jul 15
<p><b>Black Skimmer</b> <i>Rynchops niger</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/5234">https://ecos.fws.gov/ecp/species/5234</a></p>	Breeds May 20 to Sep 15
<p><b>Clark's Grebe</b> <i>Aechmophorus clarkii</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jan 1 to Dec 31
<p><b>Common Yellowthroat</b> <i>Geothlypis trichas sinuosa</i>            This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA  <a href="https://ecos.fws.gov/ecp/species/2084">https://ecos.fws.gov/ecp/species/2084</a></p>	Breeds May 20 to Jul 31



<b>Costa's Hummingbird</b> <i>Calypte costae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9470">https://ecos.fws.gov/ecp/species/9470</a>	Breeds Jan 15 to Jun 10
<b>Golden Eagle</b> <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds Jan 1 to Aug 31
<b>Marbled Godwit</b> <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a>	Breeds elsewhere
<b>Nuttall's Woodpecker</b> <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/9410">https://ecos.fws.gov/ecp/species/9410</a>	Breeds Apr 1 to Jul 20
<b>Oak Titmouse</b> <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a>	Breeds Mar 15 to Jul 15
<b>Rufous Hummingbird</b> <i>selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8002">https://ecos.fws.gov/ecp/species/8002</a>	Breeds elsewhere
<b>Short-billed Dowitcher</b> <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a>	Breeds elsewhere
<b>Song Sparrow</b> <i>Melospiza melodia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
<b>Spotted Towhee</b> <i>Pipilo maculatus clementae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/4243">https://ecos.fws.gov/ecp/species/4243</a>	Breeds Apr 15 to Jul 20

**Willet** *Tringa semipalmata*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

**Wrentit** *Chamaea fasciata*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (–)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

---

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

## What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

## Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

## What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

## Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

## Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

## Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters.

Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

## **B.3 - CNPS Inventory Search Results**

THIS PAGE INTENTIONALLY LEFT BLANK





\*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

## Plant List

43 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quads 3311881, 3311788, 3311787, 3311871, 3311778, 3311777, 3311861 3311768 and 3311767;

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Federal Listing Status	State Listing Status	CA Rare Plant Rank	Habitats	Lowest Elevation	Highest Elevation	Blooming Period
<a href="#">Abronia maritima</a>	red sand-verbena	Nyctaginaceae	perennial herb			4.2	• Coastal dunes	0 m	100 m	Feb-Nov
<a href="#">Abronia villosa var. aurita</a>	chaparral sand-verbena	Nyctaginaceae	annual herb			1B.1	• Chaparral • Coastal scrub • Desert dunes	75 m	1600 m	(Jan)Mar-Sep
<a href="#">Aphanisma blitoides</a>	aphanisma	Chenopodiaceae	annual herb			1B.2	• Coastal bluff scrub • Coastal dunes • Coastal scrub	1 m	305 m	Feb-Jun
<a href="#">Astragalus pycnostachyus var. lanosissimus</a>	Ventura marsh milk-vetch	Fabaceae	perennial herb	FE	CE	1B.1	• Coastal dunes • Coastal scrub • Marshes and swamps (edges, coastal salt or brackish)	1 m	35 m	(Jun)Aug-Oct
<a href="#">Atriplex coulteri</a>	Coulter's saltbush	Chenopodiaceae	perennial herb			1B.2	• Coastal bluff scrub • Coastal dunes • Coastal scrub • Valley and foothill grassland	3 m	460 m	Mar-Oct
<a href="#">Atriplex pacifica</a>	South Coast saltscale	Chenopodiaceae	annual herb			1B.2	• Coastal bluff scrub • Coastal dunes • Coastal	0 m	140 m	Mar-Oct

<a href="#"><u>Atriplex parishii</u></a>	Parish's brittlescale	Chenopodiaceae	annual herb	1B.1	scrub • Playas • Chenopod scrub • Playas • Vernal pools	25 m	1900 m	Jun-Oct
<a href="#"><u>Atriplex serenana var. davidsonii</u></a>	Davidson's saltscale	Chenopodiaceae	annual herb	1B.2	• Coastal bluff scrub • Coastal scrub • Chaparral •	10 m	200 m	Apr-Oct
<a href="#"><u>Calochortus catalinae</u></a>	Catalina mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	Cismontane woodland • Coastal scrub • Valley and foothill grassland • Chaparral •	15 m	700 m	(Feb)Mar-Jun
<a href="#"><u>Calochortus plummerae</u></a>	Plummer's mariposa lily	Liliaceae	perennial bulbiferous herb	4.2	Cismontane woodland • Coastal scrub • Lower montane coniferous forest • Valley and foothill grassland • Chaparral •	100 m	1700 m	May-Jul
<a href="#"><u>Calochortus weedii var. intermedius</u></a>	intermediate mariposa lily	Liliaceae	perennial bulbiferous herb	1B.2	• Coastal scrub • Valley and foothill grassland • Meadows and seeps (sometimes alkaline) • Riparian scrub (alluvial) • Coastal bluff scrub •	105 m	855 m	May-Jul
<a href="#"><u>Calystegia felix</u></a>	lucky morning-glory	Convolvulaceae	annual rhizomatous herb	1B.1	Cismontane woodland • Coastal dunes • Coastal scrub • Valley and foothill grassland	30 m	215 m	Mar-Sep
<a href="#"><u>Camissoniopsis lewisii</u></a>	Lewis' evening-primrose	Onagraceae	annual herb	3	• Marshes and swamps (margins) • Valley and foothill grassland (vernally mesic)	0 m	300 m	Mar-May(Jun)
<a href="#"><u>Centromadia parryi ssp. australis</u></a>	southern tarplant	Asteraceae	annual herb	1B.1	• Marshes and swamps (margins) • Valley and foothill grassland (vernally mesic)	0 m	480 m	May-Nov

<a href="#"><u>Chloropyron maritimum ssp. maritimum</u></a>	salt marsh bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	FE	CE	1B.2	<ul style="list-style-type: none"> <li>• Vernal pools</li> <li>• Coastal dunes</li> <li>• Marshes and swamps (coastal salt)</li> </ul>	0 m	30 m	May-Oct(Nov)
<a href="#"><u>Chorizanthe parryi var. fernandina</u></a>	San Fernando Valley spineflower	Polygonaceae	annual herb	FC	CE	1B.1	<ul style="list-style-type: none"> <li>• Coastal scrub (sandy)</li> <li>• Valley and foothill grassland</li> </ul>	150 m	1220 m	Apr-Jul
<a href="#"><u>Convolvulus simulans</u></a>	small-flowered morning-glory	Convolvulaceae	annual herb			4.2	<ul style="list-style-type: none"> <li>• Chaparral (openings)</li> <li>• Coastal scrub</li> <li>• Valley and foothill grassland</li> </ul>	30 m	740 m	Mar-Jul
<a href="#"><u>Deinandra paniculata</u></a>	paniculate tarplant	Asteraceae	annual herb			4.2	<ul style="list-style-type: none"> <li>• Coastal scrub</li> <li>• Valley and foothill grassland</li> <li>• Vernal pools</li> </ul>	25 m	940 m	(Mar)Apr-Nov(Dec)
<a href="#"><u>Dudleya multicaulis</u></a>	many-stemmed dudleya	Crassulaceae	perennial herb			1B.2	<ul style="list-style-type: none"> <li>• Chaparral</li> <li>• Coastal scrub</li> <li>• Valley and foothill grassland</li> </ul>	15 m	790 m	Apr-Jul
<a href="#"><u>Dudleya stolonifera</u></a>	Laguna Beach dudleya	Crassulaceae	perennial stoloniferous herb	FT	CT	1B.1	<ul style="list-style-type: none"> <li>• Cismontane woodland</li> <li>• Coastal scrub</li> <li>• Valley and foothill grassland</li> </ul>	10 m	260 m	May-Jul
<a href="#"><u>Eryngium aristulatum var. parishii</u></a>	San Diego button-celery	Apiaceae	annual / perennial herb	FE	CE	1B.1	<ul style="list-style-type: none"> <li>• Coastal scrub</li> <li>• Valley and foothill grassland</li> <li>• Vernal pools</li> </ul>	20 m	620 m	Apr-Jun
<a href="#"><u>Helianthus nuttallii ssp. parishii</u></a>	Los Angeles sunflower	Asteraceae	perennial rhizomatous herb			1A	<ul style="list-style-type: none"> <li>• Marshes and swamps (coastal salt and freshwater)</li> </ul>	10 m	1525 m	Aug-Oct
<a href="#"><u>Hordeum intercedens</u></a>	vernal barley	Poaceae	annual herb			3.2	<ul style="list-style-type: none"> <li>• Coastal dunes</li> <li>• Coastal scrub</li> <li>• Valley and foothill grassland (saline flats and depressions)</li> </ul>	5 m	1000 m	Mar-Jun

<a href="#"><u>Juglans californica</u></a>	Southern California black walnut	Juglandaceae	perennial deciduous tree			4.2	<ul style="list-style-type: none"> <li>• Vernal pools</li> <li>• Chaparral</li> <li>• Cismontane woodland</li> <li>• Coastal scrub</li> <li>• Riparian woodland</li> </ul>	50 m	900 m	Mar-Aug
<a href="#"><u>Juncus acutus ssp. leopoldii</u></a>	southwestern spiny rush	Juncaceae	perennial rhizomatous herb			4.2	<ul style="list-style-type: none"> <li>• Coastal dunes (mesic)</li> <li>• Meadows and seeps (alkaline seeps)</li> <li>• Marshes and swamps (coastal salt)</li> </ul>	3 m	900 m	(Mar)May-Jun
<a href="#"><u>Lasthenia glabrata ssp. coulteri</u></a>	Coulter's goldfields	Asteraceae	annual herb			1B.1	<ul style="list-style-type: none"> <li>• Marshes and swamps (coastal salt)</li> <li>• Playas</li> <li>• Vernal pools</li> </ul>	1 m	1220 m	Feb-Jun
<a href="#"><u>Lepidium virginicum var. robinsonii</u></a>	Robinson's pepper-grass	Brassicaceae	annual herb			4.3	<ul style="list-style-type: none"> <li>• Chaparral</li> <li>• Coastal scrub</li> </ul>	1 m	885 m	Jan-Jul
<a href="#"><u>Nama stenocarpa</u></a>	mud nama	Namaceae	annual / perennial herb			2B.2	<ul style="list-style-type: none"> <li>• Marshes and swamps (lake margins, riverbanks)</li> </ul>	5 m	500 m	Jan-Jul
<a href="#"><u>Nasturtium gambelii</u></a>	Gambel's water cress	Brassicaceae	perennial rhizomatous herb	FE	CT	1B.1	<ul style="list-style-type: none"> <li>• Marshes and swamps (freshwater or brackish)</li> <li>• Coastal scrub</li> <li>• Meadows and seeps</li> </ul>	5 m	330 m	Apr-Oct
<a href="#"><u>Navarretia prostrata</u></a>	prostrate vernal pool navarretia	Polemoniaceae	annual herb			1B.1	<ul style="list-style-type: none"> <li>• Valley and foothill grassland (alkaline)</li> <li>• Vernal pools</li> </ul>	3 m	1210 m	Apr-Jul
<a href="#"><u>Nemacaulis denudata var. denudata</u></a>	coast woolly-heads	Polygonaceae	annual herb			1B.2	<ul style="list-style-type: none"> <li>• Coastal dunes</li> </ul>	0 m	100 m	Apr-Sep
<a href="#"><u>Orcuttia californica</u></a>	California Orcutt grass	Poaceae	annual herb	FE	CE	1B.1	<ul style="list-style-type: none"> <li>• Vernal pools</li> </ul>	15 m	660 m	Apr-Aug
<a href="#"><u>Phacelia hubbyi</u></a>	Hubby's phacelia	Hydrophyllaceae	annual herb			4.2	<ul style="list-style-type: none"> <li>• Chaparral</li> <li>• Coastal scrub</li> <li>• Valley and foothill grassland</li> </ul>	0 m	1000 m	Apr-Jul
<a href="#"><u>Phacelia ramosissima var. australitoralis</u></a>	south coast branching phacelia	Hydrophyllaceae	perennial herb			3.2	<ul style="list-style-type: none"> <li>• Chaparral</li> <li>• Coastal dunes</li> <li>• Coastal</li> </ul>	5 m	300 m	Mar-Aug

<a href="#"><u>Phacelia stellaris</u></a>	Brand's star phacelia	Hydrophyllaceae	annual herb	1B.1	scrub • Marshes and swamps (coastal salt)  • Coastal dunes • Coastal scrub  • Chaparral •	1 m	400 m	Mar-Jun
<a href="#"><u>Quercus engelmannii</u></a>	Engelmann oak	Fagaceae	perennial deciduous tree	4.2	Cismontane woodland • Riparian woodland • Valley and foothill grassland	50 m	1300 m	Mar-Jun
<a href="#"><u>Ribes divaricatum var. parishii</u></a>	Parish's gooseberry	Grossulariaceae	perennial deciduous shrub	1A	• Riparian woodland	65 m	300 m	Feb-Apr
<a href="#"><u>Romneya coulteri</u></a>	Coulter's matilija poppy	Papaveraceae	perennial rhizomatous herb	4.2	• Chaparral • Coastal scrub	20 m	1200 m	Mar-Jul(Aug)
<a href="#"><u>Sagittaria sanfordii</u></a>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	1B.2	• Marshes and swamps (assorted shallow freshwater)  • Chaparral •	0 m	650 m	May-Oct(Nov)
<a href="#"><u>Senecio aphanactis</u></a>	chaparral ragwort	Asteraceae	annual herb	2B.2	Cismontane woodland • Coastal scrub  • Chaparral • Coastal scrub • Lower	15 m	800 m	Jan-Apr(May)
<a href="#"><u>Sidalcea neomexicana</u></a>	salt spring checkerbloom	Malvaceae	perennial herb	2B.2	montane coniferous forest • Mojavean desert scrub • Playas	15 m	1530 m	Mar-Jun
<a href="#"><u>Suaeda esteroa</u></a>	estuary seablite	Chenopodiaceae	perennial herb	1B.2	• Marshes and swamps (coastal salt)	0 m	5 m	(May)Jul-Oct(Jan)
<a href="#"><u>Symphotrichum defoliatum</u></a>	San Bernardino aster	Asteraceae	perennial rhizomatous herb	1B.2	• Cismontane woodland • Coastal scrub • Lower montane coniferous forest • Meadows and seeps • Marshes and swamps • Valley and foothill grassland (vernally mesic)	2 m	2040 m	Jul-Nov(Dec)

**Suggested Citation**

California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 17 March 2021].

**Search the Inventory**[Simple Search](#)[Advanced Search](#)[Glossary](#)**Information**[About the Inventory](#)[About the Rare Plant Program](#)[CNPS Home Page](#)[About CNPS](#)[Join CNPS](#)**Contributors**[The Calflora Database](#)[The California Lichen Society](#)[California Natural Diversity Database](#)[The Jepson Flora Project](#)[The Consortium of California Herbaria](#)[CalPhotos](#)**Questions and Comments**[rareplants@cnps.org](mailto:rareplants@cnps.org)

© Copyright 2010-2018 California Native Plant Society. All rights reserved.