

# Conservancy Analysis

*BEACN*

*March 23, 2018*

## Setup

Downloading the data

```
library(Hmisc)
```

```
## Loading required package: lattice
```

```
## Loading required package: survival
```

```
## Loading required package: Formula
```

```
## Loading required package: ggplot2
```

```
##
```

```
## Attaching package: 'Hmisc'
```

```
## The following objects are masked from 'package:base':
```

```
##
```

```
##      format.pval, units
```

```
library(ggplot2)
```

```
library(stringr)
```

```
library(gridExtra)
```

```
library(tidyverse)
```

```
## -- Attaching packages ----- tidyverse 1.2
```

```
## v tibble  1.4.2      v purrr   0.2.4
```

```
## v tidyr   0.7.2      v dplyr   0.7.4
```

```
## v readr   1.1.1      v forcats 0.2.0
```

```
## -- Conflicts ----- tidyverse_conflicts
```

```
## x dplyr::combine() masks gridExtra::combine()
```

```
## x dplyr::filter()  masks stats::filter()
```

```
## x dplyr::lag()     masks stats::lag()
```

```
## x dplyr::src()     masks Hmisc::src()
```

```
## x dplyr::summarize() masks Hmisc::summarize()
```

```
## x dplyr::vars()    masks ggplot2::vars()
```

```
library(knitr)
```

```
library(kableExtra)
```

```
library(plotly)
```

```
##
```

```
## Attaching package: 'plotly'
```

```
## The following object is masked from 'package:Hmisc':
```

```
##
```

```
##      subplot
```

```
## The following object is masked from 'package:ggplot2':
```

```
##
```

```

##      last_plot
## The following object is masked from 'package:stats':
##
##      filter
## The following object is masked from 'package:graphics':
##
##      layout
library(RcppRoll)
library(cowplot)

##
## Attaching package: 'cowplot'
## The following object is masked from 'package:ggplot2':
##
##      ggsave
library(RColorBrewer)

conservancy_names <- function(name) {
  return(paste0("conservancy_", name, ".csv"))
}

ucnrs_names <- function(name) {
  return(paste0("ucnrs_", name, ".csv"))
}

conservancyNames <- c("birds", "herpetofauna", "invertebrates", "mammals", "plants")

ucnrsNames <- c("animal_list", "plant_list")

fullConservancyNames <- conservancy_names(conservancyNames)
fullUCNRSNames <- ucnrs_names(ucnrsNames)

allFiles <- c(fullConservancyNames, fullUCNRSNames)
path <- paste0("./ucnrs_data/", allFiles)

data <- lapply(path, read_csv)

## Parsed with column specification:
## cols(
##   species = col_character()
## )

## Parsed with column specification:
## cols(
##   species = col_character()
## )

## Parsed with column specification:
## cols(
##   Species = col_character()
## )

## Parsed with column specification:

```

```
## cols(
##   species = col_character()
## )
## Parsed with column specification:
## cols(
##   species = col_character()
## )

## Parsed with column specification:
## cols(
##   Reserve = col_character(),
##   Taxon = col_character(),
##   Family = col_character(),
##   `Scientific Name` = col_character(),
##   `Accepted Name` = col_character(),
##   `Common Name` = col_character()
## )

## Warning: Missing column names filled in: 'X17' [17], 'X18' [18],
## 'X19' [19], 'X20' [20], 'X21' [21], 'X22' [22]

## Parsed with column specification:
## cols(
##   .default = col_character(),
##   `Reserve count (values)` = col_integer(),
##   `Reserve count (formula)` = col_integer()
## )

## See spec(...) for full column specifications.
```

```
head(data)
```

```
## [[1]]
## # A tibble: 253 x 1
##   species
##   <chr>
## 1 Aix sponsa
## 2 Anas acuta
## 3 Anas americana
## 4 Anas clypeata
## 5 Anas crecca
## 6 Anas cyanoptera
## 7 Anas discors
## 8 Anas penelope
## 9 Anas platyrhynchos
## 10 Anas strepera
## # ... with 243 more rows
##
## [[2]]
## # A tibble: 44 x 1
##   species
##   <chr>
## 1 Black-bellied slender
## 2 Batrachoseps nigriventris
## 3 Batrachoseps stebbinsi
## 4 Ensatina eschscholtzii croceator
## 5 Bufo boreas
```

```

## 6 Spea hammondii
## 7 Pseudacris regilla
## 8 Rana catesbeiana
## 9 Actinemys marmorata
## 10 Gambelia sila
## # ... with 34 more rows
##
## [[3]]
## # A tibble: 177 x 1
##   Species
##   <chr>
## 1 Lepisma sp.
## 2 Machilinus sp.
## 3 Aeshna multicolor
## 4 Anax junius
## 5 Argia sp.
## 6 Enallagma sp.
## 7 Erythemis collocata
## 8 Libellula saturata
## 9 Plathemis Lydia
## 10 Sympetrum corruptum
## # ... with 167 more rows
##
## [[4]]
## # A tibble: 56 x 1
##   species
##   <chr>
## 1 Didelphis virginiana
## 2 Antrozous pallidus
## 3 Corynorhinus townsendii
## 4 Eptesicus fuscus
## 5 Euderma maculatum
## 6 Lasionycteris noctivagans
## 7 Lasiurus cinereus
## 8 Myotis californicus
## 9 Myotis ciliolabrum
## 10 Myotis evotis
## # ... with 46 more rows
##
## [[5]]
## # A tibble: 964 x 1
##   species
##   <chr>
## 1 Sambucus nigra subsp. caerulea
## 2 Apocynum cannabinum
## 3 Chlorogalum pomeridianum var. pomeridianum
## 4 Hesperoyucca whipplei
## 5 Yucca brevifolia
## 6 Allium burlewii
## 7 Allium fimbriatum var. fimbriatum
## 8 Allium howellii var. howellii
## 9 Allium lacunosum var. davisiae
## 10 Allium peninsulare var. peninsulare
## # ... with 954 more rows

```

```
##
## [[6]]
## # A tibble: 8,922 x 6
##   Reserve   Taxon   Family `Scientific Nam` `Accepted Name` `Common Name`
##   <chr>     <chr>   <chr>   <chr>             <chr>          <chr>
## 1 Angelo C~ Amphi~ Ambys~ Ambystoma graci~ <NA>          Northwestern ~
## 2 Angelo C~ Amphi~ Pleth~ Aneides ferreus <NA>          Clouded salam~
## 3 Angelo C~ Amphi~ Pleth~ Aneides flavipu~ <NA>          Black salaman~
## 4 Angelo C~ Amphi~ Pleth~ Aneides vagrans <NA>          Wandering Sal~
## 5 Angelo C~ Amphi~ Ascaph~ Ascaphus truei   <NA>          Tailed frog
## 6 Angelo C~ Amphi~ Pleth~ Batrachoseps a~ <NA>          California sl~
## 7 Angelo C~ Amphi~ Bufon~ Bufo boreas      <NA>          Western toad
## 8 Angelo C~ Amphi~ Dicam~ Dicamptodon ens~ <NA>          Pacific giant~
## 9 Angelo C~ Amphi~ Pleth~ Ensatina eschsh~ <NA>          Ensatina, Ens~
## 10 Angelo C~ Amphi~ Hyli~ Pseudacris regi~ <NA>          Pacific Tree ~
## # ... with 8,912 more rows
```

## Combining UCNRS and Conservancy into four datasets

```
# Separating out columns of data for conservancy data and removing irrelevant values
```

```
conservancyAnimalData <- bind_rows(data[[1]], data[[2]], data[[3]], data[[4]]) %>%
  distinct(species) %>%
  separate(species, into = c("genus", "species", "sublabel1", "sublabel2"), sep = " ", extra = "merge")
  filter(!(genus %in% c("Tejon", "Undefined"))) %>%
  filter(!is.na(species))
```

```
## Warning: Too few values at 351 locations: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
## 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...
```

```
conservancyPlantData <- data[[5]] %>%
  distinct(species) %>%
  separate(species, into = c("genus", "species", "separator_label", "sublabel"), sep = " ", extra = "me
  filter(!(genus %in% c("Tejon", "Undefined"))) %>%
  filter(!is.na(species))
```

```
## Warning: Too few values at 652 locations: 2, 4, 5, 6, 11, 12, 13, 14, 15,
## 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, ...
```

```
# Loading Plant and Animal data from UCNRS
```

```
ucnrsPlantData <- data[[7]]
ucnrsAnimalData <- data[[6]]
```

```
# Relabeling data
```

```
names(ucnrsPlantData)[7:8] <- c("separator_label", "sublabel")
names(ucnrsAnimalData)[4] <- "scientific_name"
```

```
# Cleaning UCNRS Animal data
```

```
ucnrsAnimalDataSubset <- ucnrsAnimalData %>%
  mutate(scientific_name = gsub("\\(", "", scientific_name),
         scientific_name = gsub("\\)", "", scientific_name),
```

```

    scientific_name = gsub("\\.", "", scientific_name),
    scientific_name = iconv(scientific_name, "utf-8", "ascii", sub=" "),
    Reserve = iconv(Reserve, "utf-8", "ascii", sub="n")) %>%
select(Reserve, scientific_name) %>%
separate(scientific_name, into = c("genus", "species", "sublabel1", "sublabel2"), sep = " ", extra =
mutate(species = tolower(species)) %>%
filter(!is.na(species)) %>%
rename(reserve = Reserve) %>%
mutate(reserve = gsub(" Reserve", "", reserve),
       reserve = gsub(" Marine", "", reserve),
       reserve = gsub(" Desert Research Center", "", reserve),
       reserve = gsub(" Natural", "", reserve),
       reserve = gsub(" History", "", reserve),
       reserve = gsub("Missions", "Mission", reserve),
       reserve = gsub("Landells-Hill", "Landels-Hill", reserve),
       reserve = gsub("Landels Hil", "Landels-Hill", reserve),
       reserve = gsub(" Field Station", "", reserve),
       reserve = gsub(" Santa Monica Mountains", "", reserve),
       reserve = gsub("Sedgewick", "Sedgwick", reserve),
       reserve = gsub("Valentine.*", "Valentine Eastern Sierra", reserve)) %>%
distinct()

```

```

## Warning: Too few values at 8591 locations: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10,
## 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, ...

```

```

# Cleaning UCNRS Plant Data

```

```

ucnrsPlantDataSubset <- ucnrsPlantData %>%
select(Reserve, Genus, Species, separator_label, sublabel) %>%
rename(reserve = Reserve, genus = Genus, species = Species) %>%
filter(!is.na(species)) %>%
mutate(reserve = gsub(" Reserve", "", reserve),
       reserve = gsub(" Marine", "", reserve),
       reserve = gsub(" Desert Research Center", "", reserve),
       reserve = gsub(" Natural", "", reserve),
       reserve = gsub(" History", "", reserve),
       reserve = gsub("Missions", "Mission", reserve),
       reserve = gsub("Landells-Hill", "Landels-Hill", reserve),
       reserve = gsub("Landels Hil", "Landels-Hill", reserve),
       reserve = gsub(" Field Station", "", reserve),
       reserve = gsub(" Santa Monica Mountains", "", reserve),
       reserve = gsub("Sedgewick", "Sedgwick", reserve),
       reserve = gsub("Valentine.*", "Valentine Eastern Sierra", reserve)) %>%
distinct()

# Rename repeated reserves
reserveNames <- sort(unique(c(ucnrsPlantDataSubset$reserve, ucnrsAnimalDataSubset$reserve)))
reserveNames

```

```

## [1] "Angelo Coast Range"      "Blue Oak Ranch"
## [3] "Bodega"                  "Box Springs"
## [5] "Boyd Deep Canyon"       "Burns Pinon Ridge"
## [7] "Carpinteria Salt Marsh"  "Chickering American River"
## [9] "Coal Oil Point"         "Dawson Los Monos Canyon"
## [11] "Elliot Chaparral"       "Emerson Oaks"

```

```
## [13] "Fort Ord" "Hastings"
## [15] "James San Jacinto Mountains" "Jepson Prairie"
## [17] "Kendall-Frost Mission Bay Marsh" "Kenneth S Norris Rancho Marino"
## [19] "Landels-Hill Big Creek" "McLaughlin"
## [21] "Motte Rimrock" "Quail Ridge"
## [23] "Sagehen Creek" "San Joaquin Freshwater Marsh"
## [25] "Santa Cruz Island" "Scripps Coastal"
## [27] "Sedgwick" "SNARL"
## [29] "Stebbins Cold Canyon" "Stunt Ranch"
## [31] "Sweeney Granite Mountains" "Valentine Eastern Sierra"
## [33] "White Mountain Research Center" "Younger Lagoon"
```

```
# Print results
```

```
head(ucnrsAnimalDataSubset)
```

```
## # A tibble: 6 x 5
##   reserve      genus      species      sublabel1 sublabel2
##   <chr>      <chr>      <chr>      <chr>      <chr>
## 1 Angelo Coast Range Ambystoma   gracile    <NA>      <NA>
## 2 Angelo Coast Range Aneides     ferreus    <NA>      <NA>
## 3 Angelo Coast Range Aneides     flavipunctatus <NA>      <NA>
## 4 Angelo Coast Range Aneides     vagrans    <NA>      <NA>
## 5 Angelo Coast Range Ascaphus    truei      <NA>      <NA>
## 6 Angelo Coast Range Batrachoseps attenuatus <NA>      <NA>
```

```
head(ucnrsPlantDataSubset)
```

```
## # A tibble: 6 x 5
##   reserve      genus      species      separator_label sublabel
##   <chr>      <chr>      <chr>      <chr>      <chr>
## 1 Landels-Hill Big Creek Abies     bracteata <NA>      <NA>
## 2 James San Jacinto Mountains Abies     concolor <NA>      <NA>
## 3 Valentine Eastern Sierra Abies     concolor <NA>      <NA>
## 4 Valentine Eastern Sierra Abies     magnifica var.      magnifica
## 5 Bodega      Abronia   latifolia <NA>      <NA>
## 6 Younger Lagoon Abronia   latifolia <NA>      <NA>
```

```
head(conservancyAnimalData)
```

```
## # A tibble: 6 x 4
##   genus species      sublabel1 sublabel2
##   <chr> <chr>      <chr>      <chr>
## 1 Aix   sponsa    <NA>      <NA>
## 2 Anas  acuta     <NA>      <NA>
## 3 Anas  americana <NA>      <NA>
## 4 Anas  clypeata <NA>      <NA>
## 5 Anas  crecca    <NA>      <NA>
## 6 Anas  cyanoptera <NA>      <NA>
```

```
head(conservancyPlantData)
```

```
## # A tibble: 6 x 4
##   genus      species      separator_label sublabel
##   <chr>      <chr>      <chr>      <chr>
## 1 Sambucus   nigra      subsp.      caerulea
## 2 Apocynum   cannabinum <NA>      <NA>
```

```
## 3 Chlorogalum pomeridianum var. pomeridianum
## 4 Hesperoyucca whipplei <NA> <NA>
## 5 Yucca brevifolia <NA> <NA>
## 6 Allium burlewii <NA> <NA>
```

## Match Ratio of Species per Reserve

```
# Find shared genres and species of plants
matchingPlants <- semi_join(ucnrsPlantDataSubset, conservancyPlantData, by = c("genus", "species", "subl
  select(reserve, genus, species, sublabel)

# Calculate how similar plant species composition is by reserve
matchingPlantsCount <- matchingPlants %>%
  group_by(reserve) %>%
  filter(!is.na(reserve)) %>%
  summarize(matching_plant_species = n())

# Find total plant species per reserve
totalPlantsCount <- ucnrsPlantDataSubset %>%
  group_by(reserve) %>%
  filter(!is.na(reserve)) %>%
  summarize(total_plant_species_in_reserve = n())

# Total plant count for conservancy
total_plant_species_in_conservancy <- nrow(conservancyPlantData)

# Create tables comparing proportion of plants in conservancy also in reserve and vice versa
plantsComparisonTable <- left_join(matchingPlantsCount, totalPlantsCount,
  by = "reserve") %>%
  mutate(proportion_matching_plant_species_in_reserve =
    matching_plant_species / total_plant_species_in_reserve) %>%
  mutate(percent_matching_plant_species_in_reserve =
    paste0(format(100 * proportion_matching_plant_species_in_reserve,
      digits = 2), "%")) %>%
  mutate(proportion_matching_plant_species_in_conservancy =
    matching_plant_species / total_plant_species_in_conservancy) %>%
  mutate(percent_matching_plant_species_in_conservancy =
    paste0(format(100 * proportion_matching_plant_species_in_conservancy,
      digits = 1), "%")) %>%
  arrange(desc(proportion_matching_plant_species_in_reserve))

plantsComparisonTableConservancyEmphasis <- plantsComparisonTable %>%
  arrange(desc(proportion_matching_plant_species_in_conservancy)) %>%
  select(reserve, matching_plant_species, total_plant_species_in_reserve,
    percent_matching_plant_species_in_reserve, percent_matching_plant_species_in_conservancy)

plantsComparisonTableShort <- plantsComparisonTable %>%
  select(reserve, matching_plant_species, total_plant_species_in_reserve,
    percent_matching_plant_species_in_reserve, percent_matching_plant_species_in_conservancy)

# Visualize results
plantsComparisonTableViz <- plantsComparisonTableShort %>%
  kable(format = "html", align = "lcccc",
```



```

      col.names = gsub("_", " ", capitalize(colnames(plantsComparisonTableShort)))) %>%
kable_styling

plantsComparisonTableConservancyEmphasisViz <- plantsComparisonTableConservancyEmphasis %>%
  kable(format = "html", align = "lcccc",
        col.names = gsub("_", " ", capitalize(colnames(plantsComparisonTableConservancyEmphasis)))) %>%
  kable_styling

plantsComparisonTableViz

```

Reserve

Matching plant species

Total plant species in reserve

Percent matching plant species in reserve

Percent matching plant species in conservancy

Sedgwick

193

417

46.3%

20.0%

Motte Rimrock

85

192

44.3%

8.8%

Blue Oak Ranch

193

462

41.8%

20.0%

Stebbins Cold Canyon

148

372

39.8%

15.4%

Stunt Ranch

113

296

38.2%

11.7%  
Quail Ridge  
107  
287  
37.3%  
11.1%  
Burns Pinon Ridge  
100  
272  
36.8%  
10.4%  
San Joaquin Freshwater Marsh  
94  
257  
36.6%  
9.8%  
Hastings  
229  
646  
35.4%  
23.8%  
Dawson Los Monos Canyon  
104  
294  
35.4%  
10.8%  
James San Jacinto Mountains  
81  
241  
33.6%  
8.4%  
McLaughlin  
210  
629  
33.4%  
21.8%

Carpinteria Salt Marsh

83

252

32.9%

8.6%

Scripps Coastal

82

265

30.9%

8.5%

Jepson Prairie

121

393

30.8%

12.6%

Fort Ord

51

173

29.5%

5.3%

Sweeney Granite Mountains

147

504

29.2%

15.2%

Landels-Hill Big Creek

141

486

29.0%

14.6%

Elliot Chaparral

104

376

27.7%

10.8%

Boyd Deep Canyon

180  
660  
27.3%  
18.7%  
Kenneth S Norris Rancho Marino  
49  
182  
26.9%  
5.1%  
Coal Oil Point  
38  
151  
25.2%  
3.9%  
Angelo Coast Range  
116  
465  
24.9%  
12.0%  
SNARL  
40  
162  
24.7%  
4.1%  
Bodega  
99  
436  
22.7%  
10.3%  
Valentine Eastern Sierra  
51  
258  
19.8%  
5.3%  
Kendall-Frost Mission Bay Marsh  
9

56

16.1%

0.9%

Younger Lagoon

14

88

15.9%

1.5%

Sagehen Creek

34

218

15.6%

3.5%

Chickering American River

39

456

8.6%

4.0%

plantsComparisonTableConservancyEmphasisViz

Reserve

Matching plant species

Total plant species in reserve

Percent matching plant species in reserve

Percent matching plant species in conservancy

Hastings

229

646

35.4%

23.8%

McLaughlin

210

629

33.4%

21.8%

Sedgwick

193

417  
46.3%  
20.0%  
Blue Oak Ranch  
193  
462  
41.8%  
20.0%  
Boyd Deep Canyon  
180  
660  
27.3%  
18.7%  
Stebbins Cold Canyon  
148  
372  
39.8%  
15.4%  
Sweeney Granite Mountains  
147  
504  
29.2%  
15.2%  
Landels-Hill Big Creek  
141  
486  
29.0%  
14.6%  
Jepson Prairie  
121  
393  
30.8%  
12.6%  
Angelo Coast Range  
116  
465

24.9%  
12.0%  
Stunt Ranch  
113  
296  
38.2%  
11.7%  
Quail Ridge  
107  
287  
37.3%  
11.1%  
Dawson Los Monos Canyon  
104  
294  
35.4%  
10.8%  
Elliot Chaparral  
104  
376  
27.7%  
10.8%  
Burns Pinon Ridge  
100  
272  
36.8%  
10.4%  
Bodega  
99  
436  
22.7%  
10.3%  
San Joaquin Freshwater Marsh  
94  
257  
36.6%

9.8%  
 Motte Rimrock  
 85  
 192  
 44.3%  
 8.8%  
 Carpinteria Salt Marsh  
 83  
 252  
 32.9%  
 8.6%  
 Scripps Coastal  
 82  
 265  
 30.9%  
 8.5%  
 James San Jacinto Mountains  
 81  
 241  
 33.6%  
 8.4%  
 Fort Ord  
 51  
 173  
 29.5%  
 5.3%  
 Valentine Eastern Sierra  
 51  
 258  
 19.8%  
 5.3%  
 Kenneth S Norris Rancho Marino  
 49  
 182  
 26.9%  
 5.1%



SNARL

40

162

24.7%

4.1%

Chickering American River

39

456

8.6%

4.0%

Coal Oil Point

38

151

25.2%

3.9%

Sagehen Creek

34

218

15.6%

3.5%

Younger Lagoon

14

88

15.9%

1.5%

Kendall-Frost Mission Bay Marsh

9

56

16.1%

0.9%

```
# Find shared genres and species of animals
matchingAnimals <- semi_join(ucnrsAnimalDataSubset, conservancyAnimalData, by = c("genus", "species", "sublabel1"))
  select(reserve, genus, species, sublabel = sublabel1)

# Calculate how similar animal species composition is by reserve
matchingAnimalsCount <- matchingAnimals %>%
  group_by(reserve) %>%
  filter(!is.na(reserve)) %>%
  summarize(matching_animal_species = n())
```

```

totalAnimalsCount <- ucnrsAnimalDataSubset %>%
  group_by(reserve) %>%
  filter(!is.na(reserve)) %>%
  summarize(total_animal_species_in_reserve = n())

# Total animal count for conservancy
total_animal_species_in_conservancy <- nrow(conservancyAnimalData)

# Create tables comparing proportion of plants in conservancy also in reserve and vice versa

animalsComparisonTable <- left_join(matchingAnimalsCount, totalAnimalsCount,
                                     by = "reserve") %>%
  mutate(proportion_matching_animal_species_in_reserve =
           matching_animal_species / total_animal_species_in_reserve) %>%
  mutate(percent_matching_animal_species_in_reserve =
           paste0(format(100 * proportion_matching_animal_species_in_reserve,
                        digits = 3), "%")) %>%
  mutate(proportion_matching_animal_species_in_conservancy =
           matching_animal_species / total_animal_species_in_conservancy) %>%
  mutate(percent_matching_animal_species_in_conservancy =
           paste0(format(100 * proportion_matching_animal_species_in_conservancy,
                        digits = 2), "%")) %>%
  arrange(desc(proportion_matching_animal_species_in_reserve))

animalsComparisonTableConservancyEmphasis <- animalsComparisonTable %>%
  arrange(desc(proportion_matching_animal_species_in_conservancy)) %>%
  select(reserve, matching_animal_species, total_animal_species_in_reserve,
         percent_matching_animal_species_in_reserve, percent_matching_animal_species_in_conservancy)

animalsComparisonTableShort <- animalsComparisonTable %>%
  select(reserve, matching_animal_species, total_animal_species_in_reserve,
         percent_matching_animal_species_in_reserve, percent_matching_animal_species_in_conservancy)

# Visualize results
animalsComparisonTableViz <- animalsComparisonTableShort %>%
  kable(format = "html", align = "lcccc",
        col.names = gsub("_", " ", capitalize(colnames(animalsComparisonTableShort)))) %>%
  kable_styling

animalsComparisonTableConservancyEmphasisViz <- animalsComparisonTableConservancyEmphasis %>%
  kable(format = "html", align = "lcccc",
        col.names = gsub("_", " ", capitalize(colnames(animalsComparisonTableConservancyEmphasis)))) %>%
  kable_styling

animalsComparisonTableViz

```

Reserve

Matching animal species

Total animal species in reserve

Percent matching animal species in reserve

Percent matching animal species in conservancy

Dawson Los Monos Canyon

95

125

76.0%

27.0%

Kendall-Frost Mission Bay Marsh

104

151

68.9%

29.5%

Elliot Chaparral

107

158

67.7%

30.4%

Boyd Deep Canyon

207

324

63.9%

58.8%

Carpinteria Salt Marsh

130

205

63.4%

36.9%

Scripps Coastal

118

187

63.1%

33.5%

Box Springs

13

21

61.9%

3.7%

Stunt Ranch

84  
139  
60.4%  
23.9%  
Motte Rimrock  
144  
249  
57.8%  
40.9%  
Blue Oak Ranch  
124  
223  
55.6%  
35.2%  
White Mountain Research Center  
70  
129  
54.3%  
19.9%  
McLaughlin  
194  
361  
53.7%  
55.1%  
Stebbins Cold Canyon  
103  
192  
53.6%  
29.3%  
Santa Cruz Island  
38  
73  
52.1%  
10.8%  
Fort Ord  
18

35  
51.4%  
5.1%  
Younger Lagoon  
32  
66  
48.5%  
9.1%  
Sagehen Creek  
130  
269  
48.3%  
36.9%  
Bodega  
203  
427  
47.5%  
57.7%  
Emerson Oaks  
7  
16  
43.8%  
2.0%  
Valentine Eastern Sierra  
103  
237  
43.5%  
29.3%  
Coal Oil Point  
166  
389  
42.7%  
47.2%  
James San Jacinto Mountains  
127  
355

35.8%

36.1%

Sedgwick

198

633

31.3%

56.2%

Hastings

174

697

25.0%

49.4%

Angelo Coast Range

119

497

23.9%

33.8%

Burns Pinon Ridge

33

151

21.9%

9.4%

Sweeney Granite Mountains

115

572

20.1%

32.7%

Quail Ridge

146

789

18.5%

41.5%

Landels-Hill Big Creek

134

1012

13.2%

38.1%

animalsComparisonTableConservancyEmphasisViz

Reserve

Matching animal species

Total animal species in reserve

Percent matching animal species in reserve

Percent matching animal species in conservancy

Boyd Deep Canyon

207

324

63.9%

58.8%

Bodega

203

427

47.5%

57.7%

Sedgwick

198

633

31.3%

56.2%

McLaughlin

194

361

53.7%

55.1%

Hastings

174

697

25.0%

49.4%

Coal Oil Point

166

389

42.7%

47.2%

Quail Ridge

146

789

18.5%

41.5%

Motte Rimrock

144

249

57.8%

40.9%

Landels-Hill Big Creek

134

1012

13.2%

38.1%

Carpinteria Salt Marsh

130

205

63.4%

36.9%

Sagehen Creek

130

269

48.3%

36.9%

James San Jacinto Mountains

127

355

35.8%

36.1%

Blue Oak Ranch

124

223

55.6%

35.2%



Angelo Coast Range

119

497

23.9%

33.8%

Scripps Coastal

118

187

63.1%

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Sweeney Granite Mountains

115

572

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Elliot Chaparral

107

158

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Kendall-Frost Mission Bay Marsh

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151

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Stebbins Cold Canyon

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192

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29.3%

Valentine Eastern Sierra

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237

43.5%

29.3%

Dawson Los Monos Canyon

95  
125  
76.0%  
27.0%  
Stunt Ranch  
84  
139  
60.4%  
23.9%  
White Mountain Research Center  
70  
129  
54.3%  
19.9%  
Santa Cruz Island  
38  
73  
52.1%  
10.8%  
Burns Pinon Ridge  
33  
151  
21.9%  
9.4%  
Younger Lagoon  
32  
66  
48.5%  
9.1%  
Fort Ord  
18  
35  
51.4%  
5.1%  
Box Springs  
13

21

61.9%

3.7%

Emerson Oaks

7

16

43.8%

2.0%

```
# Combine species data
matchingSpecies <- bind_rows("animals" = matchingAnimals,
                             "plants" = matchingPlants,
                             .id = "kingdom")

animalSpeciesDataStandardized <- ucnrsAnimalDataSubset %>%
  select(reserve, genus, species, sublabel = sublabel1)
plantSpeciesDataStandardized <- ucnrsPlantDataSubset %>%
  select(reserve, genus, species, sublabel)

combinedSpeciesData <- bind_rows(animalSpeciesDataStandardized, plantSpeciesDataStandardized)

conservancyAnimalSpeciesDataStandardized <- conservancyAnimalData %>%
  select(genus, species, sublabel = sublabel1)
conservancyPlantSpeciesDataStandardized <- conservancyPlantData %>%
  select(genus, species, sublabel)

conservancyCombinedSpeciesData <- bind_rows("animal" = conservancyAnimalSpeciesDataStandardized,
                                             "plant" = conservancyPlantSpeciesDataStandardized,
                                             .id = "kingdom")

# Calculate matching species count
matchingSpeciesCount <- matchingSpecies %>%
  group_by(reserve) %>%
  filter(!is.na(reserve)) %>%
  summarize(matching_species = n())

totalSpeciesCount <- combinedSpeciesData %>%
  group_by(reserve) %>%
  filter(!is.na(reserve)) %>%
  summarize(total_species_in_reserve = n())

total_species_in_conservancy <- nrow(conservancyCombinedSpeciesData)

# Create tables comparing proportion of plants in conservancy also in reserve and vice versa

speciesComparisonTable <- left_join(matchingSpeciesCount, totalSpeciesCount,
                                     by = "reserve") %>%
  mutate(proportion_matching_species_in_reserve =
           matching_species / total_species_in_reserve) %>%
  mutate(percent_matching_species_in_reserve =
           paste0(format(100 * proportion_matching_species_in_reserve,
```

```

      digits = 2), "%")) %>%
mutate(proportion_matching_species_in_conservancy =
      matching_species / total_species_in_conservancy) %>%
mutate(percent_matching_species_in_conservancy =
      paste0(format(100 * proportion_matching_species_in_conservancy,
      digits = 1), "%")) %>%
arrange(desc(proportion_matching_species_in_reserve))

speciesComparisonTableConservancyEmphasis <- speciesComparisonTable %>%
  arrange(desc(proportion_matching_species_in_conservancy)) %>%
  select(reserve, matching_species, total_species_in_reserve,
    percent_matching_species_in_reserve, percent_matching_species_in_conservancy)

speciesComparisonTableShort <- speciesComparisonTable %>%
  select(reserve, matching_species, total_species_in_reserve,
    percent_matching_species_in_reserve, percent_matching_species_in_conservancy)

# Visualize results
speciesComparisonTableViz <- speciesComparisonTableShort %>%
  kable(format = "html", align = "lcccc",
    col.names = gsub("_", " ", capitalize(colnames(speciesComparisonTableShort)))) %>%
  kable_styling

speciesComparisonTableConservancyEmphasisViz <- speciesComparisonTableConservancyEmphasis %>%
  kable(format = "html", align = "lcccc",
    col.names = gsub("_", " ", capitalize(colnames(speciesComparisonTableConservancyEmphasis)))) %>%
  kable_styling

speciesComparisonTableViz

```

Reserve

Matching species

Total species in reserve

Percent matching species in reserve

Percent matching species in conservancy

Box Springs

13

21

61.9%

1.0%

Kendall-Frost Mission Bay Marsh

113

207

54.6%

8.6%

White Mountain Research Center

70  
129  
54.3%  
5.3%  
Motte Rimrock  
229  
441  
51.9%  
17.4%  
Dawson Los Monos Canyon  
199  
419  
47.5%  
15.1%  
Carpinteria Salt Marsh  
213  
457  
46.6%  
16.2%  
Blue Oak Ranch  
317  
685  
46.3%  
24.1%  
Stunt Ranch  
197  
435  
45.3%  
15.0%  
Stebbins Cold Canyon  
251  
564  
44.5%  
19.1%  
Scripps Coastal  
200

452  
44.2%  
15.2%  
Emerson Oaks  
7  
16  
43.8%  
0.5%  
McLaughlin  
404  
990  
40.8%  
30.7%  
Elliot Chaparral  
211  
534  
39.5%  
16.0%  
Boyd Deep Canyon  
387  
984  
39.3%  
29.4%  
Coal Oil Point  
204  
540  
37.8%  
15.5%  
Sedgwick  
391  
1050  
37.2%  
29.7%  
San Joaquin Freshwater Marsh  
94  
257

36.6%  
7.1%  
Bodega  
302  
863  
35.0%  
22.9%  
James San Jacinto Mountains  
208  
596  
34.9%  
15.8%  
Sagehen Creek  
164  
487  
33.7%  
12.5%  
Fort Ord  
69  
208  
33.2%  
5.2%  
Santa Cruz Island  
38  
118  
32.2%  
2.9%  
Burns Pinon Ridge  
133  
423  
31.4%  
10.1%  
Valentine Eastern Sierra  
154  
495  
31.1%

11.7%  
Jepson Prairie  
121  
393  
30.8%  
9.2%  
Hastings  
403  
1343  
30.0%  
30.6%  
Younger Lagoon  
46  
154  
29.9%  
3.5%  
Kenneth S Norris Rancho Marino  
49  
182  
26.9%  
3.7%  
SNARL  
40  
162  
24.7%  
3.0%  
Angelo Coast Range  
235  
962  
24.4%  
17.9%  
Sweeney Granite Mountains  
262  
1076  
24.3%  
19.9%



Quail Ridge

253

1076

23.5%

19.2%

Landels-Hill Big Creek

275

1498

18.4%

20.9%

Chickering American River

39

456

8.6%

3.0%

speciesComparisonTableConservancyEmphasisViz

Reserve

Matching species

Total species in reserve

Percent matching species in reserve

Percent matching species in conservancy

McLaughlin

404

990

40.8%

30.7%

Hastings

403

1343

30.0%

30.6%

Sedgwick

391

1050

37.2%

29.7%

Boyd Deep Canyon

387

984

39.3%

29.4%

Blue Oak Ranch

317

685

46.3%

24.1%

Bodega

302

863

35.0%

22.9%

Landels-Hill Big Creek

275

1498

18.4%

20.9%

Sweeney Granite Mountains

262

1076

24.3%

19.9%

Quail Ridge

253

1076

23.5%

19.2%

Stebbins Cold Canyon

251

564

44.5%

19.1%

Angelo Coast Range

235  
962  
24.4%  
17.9%  
Motte Rimrock  
229  
441  
51.9%  
17.4%  
Carpinteria Salt Marsh  
213  
457  
46.6%  
16.2%  
Elliot Chaparral  
211  
534  
39.5%  
16.0%  
James San Jacinto Mountains  
208  
596  
34.9%  
15.8%  
Coal Oil Point  
204  
540  
37.8%  
15.5%  
Scripps Coastal  
200  
452  
44.2%  
15.2%  
Dawson Los Monos Canyon  
199

419  
47.5%  
15.1%  
Stunt Ranch  
197  
435  
45.3%  
15.0%  
Sagehen Creek  
164  
487  
33.7%  
12.5%  
Valentine Eastern Sierra  
154  
495  
31.1%  
11.7%  
Burns Pinon Ridge  
133  
423  
31.4%  
10.1%  
Jepson Prairie  
121  
393  
30.8%  
9.2%  
Kendall-Frost Mission Bay Marsh  
113  
207  
54.6%  
8.6%  
San Joaquin Freshwater Marsh  
94  
257

36.6%

7.1%

White Mountain Research Center

70

129

54.3%

5.3%

Fort Ord

69

208

33.2%

5.2%

Kenneth S Norris Rancho Marino

49

182

26.9%

3.7%

Younger Lagoon

46

154

29.9%

3.5%

SNARL

40

162

24.7%

3.0%

Chickering American River

39

456

8.6%

3.0%

Santa Cruz Island

38

118

32.2%

2.9%

Box Springs

13

21

61.9%

1.0%

Emerson Oaks

7

16

43.8%

0.5%

```
# Combine the species, animal, and plant data
```

```
animalsComparisonTableStd <- animalsComparisonTable
names(animalsComparisonTableStd) <- names(speciesComparisonTable)
plantsComparisonTableStd <- plantsComparisonTable
names(plantsComparisonTableStd) <- names(speciesComparisonTable)

allComparisonTable <- bind_rows("species" = speciesComparisonTable,
                                "animals" = animalsComparisonTableStd,
                                "plants" = plantsComparisonTableStd,
                                .id = "kingdom") %>%
  arrange(desc(kingdom, matching_species))

allComparisonTableShort <- allComparisonTable %>%
  select(kingdom, reserve, matching_species, total_species_in_reserve,
         percent_matching_species_in_reserve, percent_matching_species_in_conservancy)

allComparisonTableViz <- allComparisonTableShort %>%
  kable(format = "html", align = "llcccc",
        col.names = gsub("_", " ", capitalize(colnames(allComparisonTableShort)))) %>%
  kable_styling

allComparisonTableViz
```

Kingdom

Reserve

Matching species

Total species in reserve

Percent matching species in reserve

Percent matching species in conservancy

species

Box Springs

13

21  
61.9%  
1.0%  
species  
Kendall-Frost Mission Bay Marsh  
113  
207  
54.6%  
8.6%  
species  
White Mountain Research Center  
70  
129  
54.3%  
5.3%  
species  
Motte Rimrock  
229  
441  
51.9%  
17.4%  
species  
Dawson Los Monos Canyon  
199  
419  
47.5%  
15.1%  
species  
Carpinteria Salt Marsh  
213  
457  
46.6%  
16.2%  
species  
Blue Oak Ranch  
317

685  
46.3%  
24.1%  
species  
Stunt Ranch  
197  
435  
45.3%  
15.0%  
species  
Stebbins Cold Canyon  
251  
564  
44.5%  
19.1%  
species  
Scripps Coastal  
200  
452  
44.2%  
15.2%  
species  
Emerson Oaks  
7  
16  
43.8%  
0.5%  
species  
McLaughlin  
404  
990  
40.8%  
30.7%  
species  
Elliot Chaparral  
211



534  
39.5%  
16.0%  
species  
Boyd Deep Canyon  
387  
984  
39.3%  
29.4%  
species  
Coal Oil Point  
204  
540  
37.8%  
15.5%  
species  
Sedgwick  
391  
1050  
37.2%  
29.7%  
species  
San Joaquin Freshwater Marsh  
94  
257  
36.6%  
7.1%  
species  
Bodega  
302  
863  
35.0%  
22.9%  
species  
James San Jacinto Mountains  
208

596  
34.9%  
15.8%  
species  
Sagehen Creek  
164  
487  
33.7%  
12.5%  
species  
Fort Ord  
69  
208  
33.2%  
5.2%  
species  
Santa Cruz Island  
38  
118  
32.2%  
2.9%  
species  
Burns Pinon Ridge  
133  
423  
31.4%  
10.1%  
species  
Valentine Eastern Sierra  
154  
495  
31.1%  
11.7%  
species  
Jepson Prairie  
121

393  
30.8%  
9.2%  
species  
Hastings  
403  
1343  
30.0%  
30.6%  
species  
Younger Lagoon  
46  
154  
29.9%  
3.5%  
species  
Kenneth S Norris Rancho Marino  
49  
182  
26.9%  
3.7%  
species  
SNARL  
40  
162  
24.7%  
3.0%  
species  
Angelo Coast Range  
235  
962  
24.4%  
17.9%  
species  
Sweeney Granite Mountains  
262

1076  
24.3%  
19.9%  
species  
Quail Ridge  
253  
1076  
23.5%  
19.2%  
species  
Landels-Hill Big Creek  
275  
1498  
18.4%  
20.9%  
species  
Chickering American River  
39  
456  
8.6%  
3.0%  
plants  
Sedgwick  
193  
417  
46.3%  
20.0%  
plants  
Motte Rimrock  
85  
192  
44.3%  
8.8%  
plants  
Blue Oak Ranch  
193

462  
41.8%  
20.0%  
plants  
Stebbins Cold Canyon  
148  
372  
39.8%  
15.4%  
plants  
Stunt Ranch  
113  
296  
38.2%  
11.7%  
plants  
Quail Ridge  
107  
287  
37.3%  
11.1%  
plants  
Burns Pinon Ridge  
100  
272  
36.8%  
10.4%  
plants  
San Joaquin Freshwater Marsh  
94  
257  
36.6%  
9.8%  
plants  
Hastings  
229

646  
 35.4%  
 23.8%  
 plants  
 Dawson Los Monos Canyon  
 104  
 294  
 35.4%  
 10.8%  
 plants  
 James San Jacinto Mountains  
 81  
 241  
 33.6%  
 8.4%  
 plants  
 McLaughlin  
 210  
 629  
 33.4%  
 21.8%  
 plants  
 Carpinteria Salt Marsh  
 83  
 252  
 32.9%  
 8.6%  
 plants  
 Scripps Coastal  
 82  
 265  
 30.9%  
 8.5%  
 plants  
 Jepson Prairie  
 121

393  
30.8%  
12.6%  
plants  
Fort Ord  
51  
173  
29.5%  
5.3%  
plants  
Sweeney Granite Mountains  
147  
504  
29.2%  
15.2%  
plants  
Landels-Hill Big Creek  
141  
486  
29.0%  
14.6%  
plants  
Elliot Chaparral  
104  
376  
27.7%  
10.8%  
plants  
Boyd Deep Canyon  
180  
660  
27.3%  
18.7%  
plants  
Kenneth S Norris Rancho Marino  
49

182  
26.9%  
5.1%  
plants  
Coal Oil Point  
38  
151  
25.2%  
3.9%  
plants  
Angelo Coast Range  
116  
465  
24.9%  
12.0%  
plants  
SNARL  
40  
162  
24.7%  
4.1%  
plants  
Bodega  
99  
436  
22.7%  
10.3%  
plants  
Valentine Eastern Sierra  
51  
258  
19.8%  
5.3%  
plants  
Kendall-Frost Mission Bay Marsh  
9



56  
16.1%  
0.9%  
plants  
Younger Lagoon  
14  
88  
15.9%  
1.5%  
plants  
Sagehen Creek  
34  
218  
15.6%  
3.5%  
plants  
Chickering American River  
39  
456  
8.6%  
4.0%  
animals  
Dawson Los Monos Canyon  
95  
125  
76.0%  
27.0%  
animals  
Kendall-Frost Mission Bay Marsh  
104  
151  
68.9%  
29.5%  
animals  
Elliot Chaparral  
107

158  
67.7%  
30.4%  
animals  
Boyd Deep Canyon  
207  
324  
63.9%  
58.8%  
animals  
Carpinteria Salt Marsh  
130  
205  
63.4%  
36.9%  
animals  
Scripps Coastal  
118  
187  
63.1%  
33.5%  
animals  
Box Springs  
13  
21  
61.9%  
3.7%  
animals  
Stunt Ranch  
84  
139  
60.4%  
23.9%  
animals  
Motte Rimrock  
144

249

57.8%

40.9%

animals

Blue Oak Ranch

124

223

55.6%

35.2%

animals

White Mountain Research Center

70

129

54.3%

19.9%

animals

McLaughlin

194

361

53.7%

55.1%

animals

Stebbins Cold Canyon

103

192

53.6%

29.3%

animals

Santa Cruz Island

38

73

52.1%

10.8%

animals

Fort Ord

18

35  
51.4%  
5.1%  
animals  
Younger Lagoon  
32  
66  
48.5%  
9.1%  
animals  
Sagehen Creek  
130  
269  
48.3%  
36.9%  
animals  
Bodega  
203  
427  
47.5%  
57.7%  
animals  
Emerson Oaks  
7  
16  
43.8%  
2.0%  
animals  
Valentine Eastern Sierra  
103  
237  
43.5%  
29.3%  
animals  
Coal Oil Point  
166

389

42.7%

47.2%

animals

James San Jacinto Mountains

127

355

35.8%

36.1%

animals

Sedgwick

198

633

31.3%

56.2%

animals

Hastings

174

697

25.0%

49.4%

animals

Angelo Coast Range

119

497

23.9%

33.8%

animals

Burns Pinon Ridge

33

151

21.9%

9.4%

animals

Sweeney Granite Mountains

115

572

20.1%

32.7%

animals

Quail Ridge

146

789

18.5%

41.5%

animals

Landels-Hill Big Creek

134

1012

13.2%

38.1%

## Species Uniqueness Count

```
# Find places where each matched species shows up in other reserves
```

```
matchingPlantsArranged <- matchingPlants %>%  
  arrange(genus, species, sublabel, reserve)
```

```
matchingPlantsReserves <- matchingPlantsArranged %>%  
  group_by(genus, species, sublabel) %>%  
  summarize(count = n())
```

```
# Add names of reserves each species is represented in at end:
```

```
matchingPlantsArranged$reserve_list <- ""
```

```
matchingPlantsArranged$reserve_list[1] <- paste0(matchingPlantsArranged$reserve[1])
```

```
idx = 2
```

```
idx_max = nrow(matchingPlantsArranged)
```

```
while(idx < idx_max) {
```

```
  n = 1
```

```
  while((setequal(matchingPlantsArranged[idx, 2:4], matchingPlantsArranged[(idx - 1), 2:4])) & (idx < i
```

```
    n = n + 1
```

```
    idx = idx + 1
```

```
  }
```

```
  matchingPlantsArranged$reserve_list[(idx - n):(idx - 1)] <-
```

```
    paste(matchingPlantsArranged$reserve[(idx - n):(idx - 1)], collapse = ", ")
```

```
  idx = idx + 1
```

```
}
```

```

matchingPlantsArranged$reserve_list[idx_max] <-
  paste(matchingPlantsArranged$reserve[idx_max])

# Combine the data

matchingPlantsReservesCombined <- matchingPlantsArranged %>%
  distinct(genus, species, sublabel, reserve_list) %>%
  right_join(matchingPlantsReserves, by = c("genus", "species", "sublabel")) %>%
  arrange(count, genus, species)

matchingPlantsReservesCombined

```

```

## # A tibble: 603 x 5
##   genus      species      sublabel  reserve_list      count
##   <chr>      <chr>      <chr>      <chr>          <int>
## 1 Acamptopappus sphaerocephalus hirtellus  Sweeney Granite Moun~ 1
## 2 Amsinckia    intermedia    <NA>      Landels-Hill Big Cre~ 1
## 3 Arctostaphylos pungens      <NA>      James San Jacinto Mo~ 1
## 4 Artemisia    tridentata    tridentata  SNARL              1
## 5 Artemisia    tridentata    vaseyana    Valentine Eastern Si~ 1
## 6 Asclepias     erosa        <NA>      Sweeney Granite Moun~ 1
## 7 Astragalus   didymocarpus didymocarpus Sweeney Granite Moun~ 1
## 8 Astragalus   oxyphysus     <NA>      Landels-Hill Big Cre~ 1
## 9 Berberis     aquifolium    dictyota    Blue Oak Ranch       1
## 10 Brickellia  nevinii       <NA>      Stunt Ranch          1
## # ... with 593 more rows

```

*# Find places where each matched species shows up in other reserves*

```

matchingAnimalsArranged <- matchingAnimals %>%
  arrange(genus, species, sublabel, reserve)

matchingAnimalsReserves <- matchingAnimalsArranged %>%
  group_by(genus, species, sublabel) %>%
  summarize(count = n())

# Add names of reserves each species is represented in at end:

matchingAnimalsArranged$reserve_list <- ""

matchingAnimalsArranged$reserve_list[1] <- paste0(matchingAnimalsArranged$reserve[1])
idx = 2
idx_max = nrow(matchingAnimalsArranged)

while(idx < idx_max) {
  n = 1
  while((setequal(matchingAnimalsArranged[idx, 2:4], matchingAnimalsArranged[(idx - 1), 2:4])) & (idx <
    n = n + 1
    idx = idx + 1
  })
  matchingAnimalsArranged$reserve_list[(idx - n):(idx - 1)] <-
    paste(matchingAnimalsArranged$reserve[(idx - n):(idx - 1)], collapse = ", ")
  idx = idx + 1
}

```

```

matchingAnimalsArranged$reserve_list[idx_max] <-
  paste(matchingAnimalsArranged$reserve[idx_max])

# Combine the data

matchingAnimalsReservesCombined <- matchingAnimalsArranged %>%
  distinct(genus, species, sublabel, reserve_list) %>%
  right_join(matchingAnimalsReserves, by = c("genus", "species", "sublabel")) %>%
  filter(!is.na(species)) %>%
  arrange(count, genus, species)

matchingAnimalsReservesCombined

## # A tibble: 319 x 5
##   genus      species      sublabel      reserve_list      count
##   <chr>      <chr>      <chr>      <chr>      <int>
## 1 Ammospermophilus leucurus <NA>      Boyd Deep Canyon      1
## 2 Aythya      marila      <NA>      Bodega      1
## 3 Charadrius   montanus    <NA>      Coal Oil Point      1
## 4 Coccyzus     americanus  <NA>      McLaughlin      1
## 5 Crotalus     scutulatus  <NA>      Sweeney Granite Mount~ 1
## 6 Dipodomys    panamintinus <NA>      Valentine Eastern Sie~ 1
## 7 Odocoileus   hemionus    californicus Sweeney Granite Mount~ 1
## 8 Onychomys    torridus    <NA>      Boyd Deep Canyon      1
## 9 Perognathus  longimembris <NA>      Boyd Deep Canyon      1
## 10 Picoides    scalaris    <NA>      Boyd Deep Canyon      1
## # ... with 309 more rows

# Find places where each matched species shows up in other reserves

matchingSpeciesCountByReserve <- bind_rows("animal" = matchingAnimalsReservesCombined,
                                             "plant" = matchingPlantsReservesCombined,
                                             .id = "kingdom")

uniquePlants <- conservancyPlantData %>%
  anti_join(ucnrsPlantDataSubset, by = c("genus", "species", "sublabel")) %>%
  select(genus, species, sublabel) %>%
  mutate(count = 0)

uniqueAnimals <- conservancyAnimalData %>%
  anti_join(ucnrsAnimalDataSubset, by = c("genus", "species", "sublabel1")) %>%
  select(genus, species, sublabel = sublabel1) %>%
  mutate(count = 0) %>% distinct()

uniqueSpecies <- bind_rows("animal" = uniqueAnimals, "plant" = uniquePlants, .id = "kingdom")

matchingSpeciesWithUnique <- bind_rows(matchingSpeciesCountByReserve, uniqueSpecies) %>%
  filter(!is.na(species)) %>% distinct() %>%
  arrange(count, kingdom, genus, species, sublabel)

#Compute Number and Ratio of Rare and Unique Species

totalSpecies <- nrow(matchingSpeciesWithUnique)
totalAnimals <- matchingSpeciesWithUnique %>%

```



```

filter(kingdom == "animal") %>%
nrow()

rareOrUniqueSpecies <- matchingSpeciesWithUnique %>% filter(count < 4)

totalRareOrUniqueSpecies <- nrow(rareOrUniqueSpecies)
totalUniqueSpecies <- nrow(uniqueSpecies)

ratioRareOrUniqueSpecies <- totalRareOrUniqueSpecies / totalSpecies
ratioUniqueSpecies <- totalUniqueSpecies / totalSpecies

# Make a table for presentation

rareOrUniqueComparisonTable <- tibble(variable = c("Unique Species (in no other reserve)",
                                                "Rare or Unique Species (in < 4 reserves)",
                                                "Total Species in Conservancy"),
                                     number = c(totalUniqueSpecies,
                                                totalRareOrUniqueSpecies,
                                                totalSpecies),
                                     ratio = c(ratioUniqueSpecies,
                                                ratioRareOrUniqueSpecies,
                                                1))

speciesComparisonTableViz <- kable(rareOrUniqueComparisonTable,
                                  format = "html", align = "lcc",
                                  col.names = capitalize(colnames(rareOrUniqueComparisonTable))) %>%
  kable_styling

speciesComparisonTableViz

Variable
Number
Ratio
Unique Species (in no other reserve)
395
0.2999241
Rare or Unique Species (in < 4 reserves)
750
0.5694761
Total Species in Conservancy
1317
1.0000000

speciesBrokenDown <- kable(matchingSpeciesWithUnique,
                           format = "html", align = "lcc",
                           col.names = gsub("_", " ", capitalize(colnames(matchingSpeciesWithUnique)))) %>%
  kable_styling
speciesBrokenDown

```

Kingdom  
Genus  
Species  
Sublabel  
Reserve list  
Count  
animal  
Aeronautes  
vauxi  
NA  
NA  
0  
animal  
Ammospermophilus  
nelsoni  
NA  
NA  
0  
animal  
Antilocapra  
americana  
americana  
NA  
0  
animal  
Batrachoseps  
stebbinsi  
NA  
NA  
0  
animal  
Black-bellied  
slender  
NA  
NA  
0

animal  
Cervus  
canadensis  
nelsoni  
NA  
0  
animal  
Colinus  
virginianus  
NA  
NA  
0  
animal  
Crotalus  
oreganus  
NA  
NA  
0  
animal  
Ensatina  
eschscholtzii  
croceater  
NA  
0  
animal  
Falco  
peregrinus  
anatum  
NA  
0  
animal  
Gambelia  
sila  
NA  
NA  
0

animal  
Hydroprogne  
caspia  
NA  
NA  
0  
animal  
Hylocichla  
mustelina  
NA  
NA  
0  
animal  
Hypsiglena  
ochrorhyncha  
NA  
NA  
0  
animal  
Lampropeltis  
getula  
californiae  
NA  
0  
animal  
Masticophis  
flagellum  
piceus  
NA  
0  
animal  
Masticophis  
flagellum  
ruddockii  
NA  
0

animal  
Mus  
musculu  
NA  
NA  
0  
animal  
Myadestes  
townsendii  
NA  
NA  
0  
animal  
Neotoma  
bryanti  
NA  
NA  
0  
animal  
Neotoma  
macrotis  
NA  
NA  
0  
animal  
Perognathus  
alticolus  
inexpectatus  
NA  
0  
animal  
Peromyscus  
boyli  
NA  
NA  
0

animal  
Phrynosoma  
platyrhinos  
calidiarum  
NA  
0  
animal  
Pituophis  
catenifer  
deserticola  
NA  
0  
animal  
Porzana  
Carolina  
NA  
NA  
0  
animal  
Recurvirostra  
american  
NA  
NA  
0  
animal  
Sceloporus  
graciosus  
gracilis  
NA  
0  
animal  
Sciurus  
griseu  
NA  
NA  
0

animal  
Setophaga  
coronata  
coronata  
NA  
0  
animal  
Setophaga  
petechia  
brewsteri  
NA  
0  
animal  
Strix  
occidentalis  
occidentalis  
NA  
0  
animal  
Vulpes  
macrotis  
mutica  
NA  
0  
animal  
Xantusia  
vigilis  
vigilis  
NA  
0  
plant  
Abronia  
pogonantha  
NA  
NA  
0

plant  
Acer  
negundo  
NA  
NA  
0  
plant  
Acmispon  
americanus  
americanus  
NA  
0  
plant  
Acmispon  
argophyllus  
argophyllus  
NA  
0  
plant  
Acmispon  
brachycarpus  
NA  
NA  
0  
plant  
Acmispon  
glaber  
glaber  
NA  
0  
plant  
Acmispon  
grandiflorus  
grandiflorus  
NA  
0



plant  
Acmispon  
nevadensis  
nevadensis  
NA  
0  
plant  
Acmispon  
procumbens  
procumbens  
NA  
0  
plant  
Acmispon  
strigosus  
NA  
NA  
0  
plant  
Acmispon  
wrangelianus  
NA  
NA  
0  
plant  
Adenostoma  
fasciculatum  
fasciculatum  
NA  
0  
plant  
Agoseris  
heterophylla  
cryptopleura  
NA  
0

plant  
Allenrolfea  
occidentalis  
NA  
NA  
0  
plant  
Allium  
howellii  
howellii  
NA  
0  
plant  
Allium  
lacunosum  
davisiae  
NA  
0  
plant  
Allium  
peninsulare  
peninsulare  
NA  
0  
plant  
Allophyllum  
gilioides  
gilioides  
NA  
0  
plant  
Alyssum  
simplex  
NA  
NA  
0

plant  
Ambrosia  
salsola  
salsola  
NA  
0  
plant  
Ammannia  
robusta  
NA  
NA  
0  
plant  
Amsinckia  
douglasiana  
NA  
NA  
0  
plant  
Amsinckia  
eastwoodiae  
NA  
NA  
0  
plant  
Amsinckia  
retrorsa  
NA  
NA  
0  
plant  
Amsinckia  
tessellata  
gloriosa  
NA  
0

plant  
Amsinckia  
vernica  
NA  
NA  
0  
plant  
Androsace  
elongata  
acuta  
NA  
0  
plant  
Arctostaphylos  
glandulosa  
mollis  
NA  
0  
plant  
Arctostaphylos  
parryana  
parryana  
NA  
0  
plant  
Aristida  
divaricata  
NA  
NA  
0  
plant  
Aristida  
ternipes  
gentilis  
NA  
0

plant

*Artemisia*

*arbuscula*

*arbuscula*

NA

0

plant

*Astragalus*

*douglasii*

*douglasii*

NA

0

plant

*Astragalus*

*lentiginosus*

*idriensis*

NA

0

plant

*Astragalus*

*lentiginosus*

*nigricalycis*

NA

0

plant

*Astragalus*

*trichopodus*

*phoxus*

NA

0

plant

*Athysanus*

*unilateralis*

NA

NA

0

plant

Atriplex

argentea

expansa

NA

0

plant

Atriplex

coronata

NA

NA

0

plant

Atriplex

serenana

serenana

NA

0

plant

Baccharis

glutinosa

NA

NA

0

plant

Baccharis

salicifolia

salicifolia

NA

0

plant

Balsamorhiza

deltoidea

NA

NA

0

plant  
Bloomeria  
crocea  
montana  
NA  
0  
plant  
Boechera  
pulchra  
NA  
NA  
0  
plant  
Boechera  
retrofracta  
NA  
NA  
0  
plant  
Boechera  
xylopoda  
NA  
NA  
0  
plant  
Bolboschoenus  
maritimus  
paludosus  
NA  
0  
plant  
Brodiaea  
coronaria  
NA  
NA  
0

plant  
Brodiaea  
terrestris  
kernensis  
NA  
0  
plant  
Bromus  
arizonicus  
NA  
NA  
0  
plant  
Bromus  
berteroanus  
NA  
NA  
0  
plant  
Bromus  
carinatus  
marginatus  
NA  
0  
plant  
Calandrinia  
menziesii  
NA  
NA  
0  
plant  
Callitriche  
sp.  
NA  
NA  
0



plant  
 Calochortus  
 palmeri  
 palmeri  
 NA  
 0  
 plant  
 Calochortus  
 striatus  
 NA  
 NA  
 0  
 plant  
 Calystegia  
 occidentalis  
 Calystegia macrostegia  
 NA  
 0  
 plant  
 Camissonia  
 pusilla  
 NA  
 NA  
 0  
 plant  
 Camissoniopsis  
 hirtella  
 NA  
 NA  
 0  
 plant  
 Camissoniopsis  
 pallida  
 hallii  
 NA  
 0

plant  
 Camissoniopsis  
 pallida  
 pallida  
 NA  
 0  
 plant  
 Cardamine  
 pachystigma  
 NA  
 NA  
 0  
 plant  
 Carduus  
 pycnocephalus  
 pycnocephalus  
 NA  
 0  
 plant  
 Carex  
 hassei  
 NA  
 NA  
 0  
 plant  
 Castilleja  
 chromosa  
 NA  
 NA  
 0  
 plant  
 Castilleja  
 subinclusa  
 subinclusa  
 NA  
 0

plant  
Caulanthus  
amplexicaulis  
NA  
NA  
0  
plant  
Caulanthus  
anceps  
NA  
NA  
0  
plant  
Caulanthus  
californicus  
NA  
NA  
0  
plant  
Caulanthus  
coulteri  
NA  
NA  
0  
plant  
Caulanthus  
lemmonii  
NA  
NA  
0  
plant  
Ceanothus  
cuneatus  
vestitus  
NA  
0

plant  
Ceanothus  
integerrimus  
macrothyrsus  
NA  
0  
plant  
Ceanothus  
vestitus  
NA  
NA  
0  
plant  
Celtis  
reticulata  
NA  
NA  
0  
plant  
Centaurea  
benedicta  
NA  
NA  
0  
plant  
Centromadia  
fitchii  
NA  
NA  
0  
plant  
Centromadia  
pungens  
pungens  
NA  
0

plant  
Cephalanthus  
occidentalis  
NA  
NA  
0  
plant  
Cercocarpus  
ledifolius  
intermontanus  
NA  
0  
plant  
Chaenactis  
glabriuscula  
megacephala  
NA  
0  
plant  
Chaenactis  
santolinoides  
NA  
NA  
0  
plant  
Chaenactis  
xantiana  
NA  
NA  
0  
plant  
Chenopodium  
berlandieri  
zsackei  
NA  
0

plant  
Chenopodium  
desiccatum  
NA  
NA  
0  
plant  
Chenopodium  
rubrum  
humile  
NA  
0  
plant  
Chenopodium  
vulvaria  
NA  
NA  
0  
plant  
Chorizanthe  
spinosa  
NA  
NA  
0  
plant  
Chorizanthe  
xanti  
xanti  
NA  
0  
plant  
Chylismia  
claviformis  
claviformis  
NA  
0

plant  
Cicuta  
douglasii  
NA  
NA  
0  
plant  
Clarkia  
cylindrica  
clavicularpa  
NA  
0  
plant  
Clarkia  
heterandra  
NA  
NA  
0  
plant  
Clarkia  
purpurea  
viminea  
NA  
0  
plant  
Clarkia  
speciosa  
polyantha  
NA  
0  
plant  
Clarkia  
speciosa  
speciosa  
NA  
0

plant  
Clarkia  
tembloriensis  
calientensis  
NA  
0  
plant  
Clarkia  
williamsonii  
NA  
NA  
0  
plant  
Clarkia  
xantiana  
xantiana  
NA  
0  
plant  
Claytonia  
exigua  
glauca  
NA  
0  
plant  
Claytonia  
perfoliata  
intermontana  
NA  
0  
plant  
Collinsia  
bartsiiifolia  
bartsiiifolia  
NA  
0



plant  
Collinsia  
bartsiiifolia  
davidsonii  
NA  
0  
plant  
Collinsia  
callosa  
NA  
NA  
0  
plant  
Collinsia  
tinctoria  
NA  
NA  
0  
plant  
Convolvulus  
simulans  
NA  
NA  
0  
plant  
Cordylanthus  
rigidus  
brevibracteatus  
NA  
0  
plant  
Crepis  
acuminata  
NA  
NA  
0

plant  
Crepis  
occidentalis  
pumila  
NA  
0  
plant  
Crocanthemum  
scoparium  
vulgare  
NA  
0  
plant  
Croton  
setiger  
NA  
NA  
0  
plant  
Crypsis  
alopecuroides  
NA  
NA  
0  
plant  
Cryptantha  
barbigera  
barbigera  
NA  
0  
plant  
Cryptantha  
circumscissa  
circumscissa  
NA  
0

plant  
Cryptantha  
micrantha  
lepida  
NA  
0  
plant  
Cryptantha  
mohavensis  
NA  
NA  
0  
plant  
Cryptantha  
muricata  
muricata  
NA  
0  
plant  
Cryptantha  
nevadensis  
rigida  
NA  
0  
plant  
Cryptantha  
oxygona  
NA  
NA  
0  
plant  
Cryptantha  
sparsiflora  
NA  
NA  
0

plant  
Cuscuta  
californica  
papillosa  
NA  
0  
plant  
Deinandra  
pallida  
NA  
NA  
0  
plant  
Delphinium  
gypsophilum  
NA  
NA  
0  
plant  
Delphinium  
hansenii  
kernense  
NA  
0  
plant  
Delphinium  
parishii  
NA  
NA  
0  
plant  
Delphinium  
parryi  
purpureum  
NA  
0

plant  
Delphinium  
umbraculorum  
NA  
NA  
0  
plant  
Descurainia  
pinnata  
brachycarpa  
NA  
0  
plant  
Drymocallis  
glandulosa  
glandulosa  
NA  
0  
plant  
Dudleya  
abramsii  
calicicola  
NA  
0  
plant  
Dudleya  
cymosa  
cymosa  
NA  
0  
plant  
Dudleya  
cymosa  
pumila  
NA  
0

plant  
Eastwoodia  
elegans  
NA  
NA  
0  
plant  
Eleocharis  
bella  
NA  
NA  
0  
plant  
Elymus  
cinereus  
NA  
NA  
0  
plant  
Elymus  
condensatus  
NA  
NA  
0  
plant  
Elymus  
elymoides  
californicus  
NA  
0  
plant  
Elymus  
stebbinsii  
NA  
NA  
0

plant  
Elymus  
Xhansanii  
NA  
NA  
0  
plant  
Encelia  
actoni  
NA  
NA  
0  
plant  
Enemion  
occidentale  
NA  
NA  
0  
plant  
Epilobium  
ciliatum  
Glandulosum  
NA  
0  
plant  
Epilobium  
foliosum  
NA  
NA  
0  
plant  
Eremalche  
parryi  
kernensis  
NA  
0

plant  
Eremogone  
macradenia  
arcuifolia  
NA  
0  
plant  
Eremothera  
boothii  
decorticans  
NA  
0  
plant  
Eriastrum  
densifolium  
densifolium  
NA  
0  
plant  
Eriastrum  
densifolium  
elongatum  
NA  
0  
plant  
Eriastrum  
pluriflorum  
NA  
NA  
0  
plant  
Eriastrum  
sapphirinum  
sapphirinum  
NA  
0



plant  
Eriastrum  
signatum  
NA  
NA  
0  
plant  
Eriastrum  
tracyi  
NA  
NA  
0  
plant  
Ericameria  
linearifolia  
Ericameria cooperi  
NA  
0  
plant  
Ericameria  
nauseosa  
ceruminosa  
NA  
0  
plant  
Ericameria  
nauseosa  
hololeuca  
NA  
0  
plant  
Ericameria  
nauseosa  
mohavensis  
NA  
0

plant  
Erigeron  
canadensis  
NA  
NA  
0  
plant  
Eriodictyon  
parryi  
NA  
NA  
0  
plant  
Eriogonum  
callistum  
NA  
NA  
0  
plant  
Eriogonum  
cithariforme  
agninum  
NA  
0  
plant  
Eriogonum  
clavatum  
NA  
NA  
0  
plant  
Eriogonum  
deflexum  
baratum  
NA  
0

plant  
Eriogonum  
gossypinum  
NA  
NA  
0  
plant  
Eriogonum  
gracillimum  
NA  
NA  
0  
plant  
Eriogonum  
inerme  
hispidulum  
NA  
0  
plant  
Eriogonum  
microthecum  
simpsonii  
NA  
0  
plant  
Eriogonum  
nudum  
pubiflorum  
NA  
0  
plant  
Eriogonum  
ordii  
NA  
NA  
0

plant  
Eriogonum  
roseum  
NA  
NA  
0  
plant  
Eriophyllum  
ambiguum  
ambiguum  
NA  
0  
plant  
Eriophyllum  
lanatum  
hallii  
NA  
0  
plant  
Erythranthe  
sierrae  
NA  
NA  
0  
plant  
Eschscholzia  
lemmonii  
kernensis  
NA  
0  
plant  
Eschscholzia  
lemmonii  
lemmonii  
NA  
0

plant  
Eulobus  
californicus  
NA  
NA  
0  
plant  
Euphorbia  
albomarginata  
NA  
NA  
0  
plant  
Euphorbia  
ocellata  
arenicola  
NA  
0  
plant  
Euphorbia  
ocellata  
ocellata  
NA  
0  
plant  
Euphorbia  
polycarpa  
NA  
NA  
0  
plant  
Euphorbia  
serpyllifolia  
serpyllifolia  
NA  
0

plant  
Festuca  
bromoides  
NA  
NA  
0  
plant  
Festuca  
microstachys  
NA  
NA  
0  
plant  
Festuca  
myuros  
NA  
NA  
0  
plant  
Festuca  
octoflora  
NA  
NA  
0  
plant  
Festuca  
perennis  
NA  
NA  
0  
plant  
Frangula  
californica  
cuspidata  
NA  
0

plant  
Frangula  
californica  
tomentella  
NA  
0  
plant  
Fraseria  
neglecta  
NA  
NA  
0  
plant  
Fraxinus  
latifolia  
velutina  
NA  
0  
plant  
Fremontodendron  
californicum  
NA  
NA  
0  
plant  
Fritillaria  
striata  
NA  
NA  
0  
plant  
Galium  
hallii  
NA  
NA  
0

plant  
Gilia  
achilleifolia  
multicaulis  
NA  
0  
plant  
Gilia  
brecciarum  
brecciarum  
NA  
0  
plant  
Gilia  
brecciarum  
neglecta  
NA  
0  
plant  
Gilia  
capitata  
staminea  
NA  
0  
plant  
Gilia  
jacens  
NA  
NA  
0  
plant  
Gilia  
leptantha  
pinetorum  
NA  
0



plant  
Gilia  
minor  
NA  
NA  
0  
plant  
Gilia  
modocensis  
NA  
NA  
0  
plant  
Gilia  
ochroleuca  
bizonata  
NA  
0  
plant  
Gilia  
ochroleuca  
vivida  
NA  
0  
plant  
Githopsis  
tenella  
NA  
NA  
0  
plant  
Glycyrrhiza  
lepidota  
NA  
NA  
0

plant  
Halogeton  
glomeratus  
NA  
NA  
0  
plant  
Helianthella  
californica  
nevadensis  
NA  
0  
plant  
Heliotropium  
curassavicum  
oculatum  
NA  
0  
plant  
Hemizonella  
minima  
NA  
NA  
0  
plant  
Hesperomecon  
linearis  
NA  
NA  
0  
plant  
Heterotheca  
villosa  
minor  
NA  
0

plant  
Hollisteria  
lanata  
NA  
NA  
0  
plant  
Hosackia  
crassifolia  
crassifolia  
NA  
0  
plant  
Hosackia  
oblongifolia  
oblongifolia  
NA  
0  
plant  
Hulsea  
heterochroma  
NA  
NA  
0  
plant  
Hypericum  
scouleri  
NA  
NA  
0  
plant  
Isocoma  
acradenia  
bracteosa  
NA  
0

plant  
 Iva  
 axillaris  
 NA  
 NA  
 0  
 plant  
 Ivesia  
 santolinoides  
 NA  
 NA  
 0  
 plant  
 Juncus  
 balticus  
 ater  
 NA  
 0  
 plant  
 Juncus  
 torreyi  
 NA  
 NA  
 0  
 plant  
 Juncus  
 triformis  
 NA  
 NA  
 0  
 plant  
 Keckiella  
 breviflora  
 breviflora  
 NA  
 0

plant  
Keckiella  
ternata  
septentrionalis  
NA  
0  
plant  
Koeleria  
gerardii  
NA  
NA  
0  
plant  
Kopsiopsis  
strobilacea  
NA  
NA  
0  
plant  
Laennecia  
coulteri  
NA  
NA  
0  
plant  
Lasthenia  
microglossa  
NA  
NA  
0  
plant  
Layia  
leucopappa  
NA  
NA  
0

plant  
Layia  
pentachaeta  
albida  
NA  
0  
plant  
Layia  
pentachaeta  
pentachaeta  
NA  
0  
plant  
Lepidium  
dictyotum  
NA  
NA  
0  
plant  
Lepidium  
fremontii  
NA  
NA  
0  
plant  
Lepidium  
virginicum  
menziesii  
NA  
0  
plant  
Lepidium  
virginicum  
virginicum  
NA  
0

plant  
Leptosiphon  
aureus  
aureus  
NA  
0  
plant  
Leptosiphon  
bicolor  
NA  
NA  
0  
plant  
Leptosiphon  
bolanderi  
NA  
NA  
0  
plant  
Leptosiphon  
ciliatus  
NA  
NA  
0  
plant  
Leptosiphon  
liniflorus  
NA  
NA  
0  
plant  
Leptosiphon  
nudatus  
NA  
NA  
0

plant  
Leptosiphon  
parviflorus  
NA  
NA  
0  
plant  
Leptosiphon  
pygmaeus  
continentalis  
NA  
0  
plant  
Leptosyne  
bigelovii  
NA  
NA  
0  
plant  
Leptosyne  
calliopsidea  
NA  
NA  
0  
plant  
Leptosyne  
douglasii  
NA  
NA  
0  
plant  
Lessingia  
glandulifera  
peirsonii  
NA  
0



plant  
Lessingia  
pectinata  
tenuipes  
NA  
0  
plant  
Linanthus  
dichotomus  
dichotomus  
NA  
0  
plant  
Linanthus  
parryae  
NA  
NA  
0  
plant  
Lithophragma  
bolanderi  
NA  
NA  
0  
plant  
Lithophragma  
parviflorum  
parviflorum  
NA  
0  
plant  
Lupinus  
benthamii  
NA  
NA  
0

plant  
Lupinus  
formosus  
formosus  
NA  
0  
plant  
Lupinus  
microcarpus  
horizontalis  
NA  
0  
plant  
Lupinus  
peirsonii  
NA  
NA  
0  
plant  
Malacothrix  
saxatilis  
commutata  
NA  
0  
plant  
Marah  
fabacea  
NA  
NA  
0  
plant  
Marah  
horrida  
NA  
NA  
0

plant  
Matricaria  
discoidea  
NA  
NA  
0  
plant  
Matricaria  
occidentalis  
NA  
NA  
0  
plant  
Mentzelia  
pectinata  
NA  
NA  
0  
plant  
Micranthes  
californica  
NA  
NA  
0  
plant  
Microseris  
sylvatica  
NA  
NA  
0  
plant  
Mimulus  
constrictus  
NA  
NA  
0

plant  
Mimulus  
inconspicuus  
NA  
NA  
0  
plant  
Mimulus  
pictus  
NA  
NA  
0  
plant  
Monardella  
breweri  
lanceolata  
NA  
0  
plant  
Monardella  
linoides  
oblonga  
NA  
0  
plant  
Monolepis  
nuttalliana  
NA  
NA  
0  
plant  
Monolopia  
lanceolata  
NA  
NA  
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plant  
Monolopia  
stricta  
NA  
NA  
0  
plant  
Mucronea  
perfoliata  
NA  
NA  
0  
plant  
Muhlenbergia  
utilis  
NA  
NA  
0  
plant  
Nama  
californicum  
NA  
NA  
0  
plant  
Navarretia  
setiloba  
NA  
NA  
0  
plant  
Nemophila  
parviflora  
quercifolia  
NA  
0

plant  
Nemophila  
pulchella  
pulchella  
NA  
0  
plant  
Oenothera  
deltoides  
cognata  
NA  
0  
plant  
Olea  
europaea  
NA  
NA  
0  
plant  
Opuntia  
basilaris  
treleasei  
NA  
0  
plant  
Packera  
breweri  
NA  
NA  
0  
plant  
Packera  
ionophylla  
NA  
NA  
0

plant  
Papaver  
heterophyllum  
NA  
NA  
0  
plant  
Pectocarya  
anisocarpa  
NA  
NA  
0  
plant  
Penstemon  
grinnellii  
scrophularioides  
NA  
0  
plant  
Penstemon  
laetus  
laetus  
NA  
0  
plant  
Pentagramma  
pallida  
NA  
NA  
0  
plant  
Perideridia  
pringlei  
NA  
NA  
0

plant  
Peritoma  
arborea  
globosa  
NA  
0  
plant  
Persicaria  
lapathifolia  
NA  
NA  
0  
plant  
Persicaria  
punctata  
NA  
NA  
0  
plant  
Phacelia  
cicutaria  
cicutaria  
NA  
0  
plant  
Phacelia  
congdonii  
NA  
NA  
0  
plant  
Phacelia  
imbricata  
imbricata  
NA  
0



plant  
Phoradendron  
bolleanum  
NA  
NA  
0  
plant  
Phoradendron  
leucarpum  
macrophyllum  
NA  
0  
plant  
Phoradendron  
leucarpum  
tomentosum  
NA  
0  
plant  
Pickeringia  
montana  
montana  
NA  
0  
plant  
Plagiobothrys  
canescens  
canescens  
NA  
0  
plant  
Plagiobothrys  
fulvus  
campestris  
NA  
0

plant  
Plantago  
ovata  
fastigiata  
NA  
0  
plant  
Pluchea  
odorata  
odorata  
NA  
0  
plant  
Poa  
cusickii  
epilis  
NA  
0  
plant  
Polygonum  
majus  
NA  
NA  
0  
plant  
Polypogon  
viridis  
NA  
NA  
0  
plant  
Potamogeton  
foliosus  
foliosus  
NA  
0

plant  
Proboscidea  
louisianica  
louisianica  
NA  
0  
plant  
Prosopis  
velutina  
NA  
NA  
0  
plant  
Prunus  
subcordata  
NA  
NA  
0  
plant  
Pseudobahia  
peirsonii  
NA  
NA  
0  
plant  
Pseudognaphalium  
californicum  
NA  
NA  
0  
plant  
Pseudognaphalium  
luteoalbum  
NA  
NA  
0

plant  
Pseudognaphalium  
stramineum  
NA  
NA  
0  
plant  
Quercus  
<d7>alvordiana  
NA  
NA  
0  
plant  
Quercus  
garryana  
breweri  
NA  
0  
plant  
Quercus  
garryana  
semota  
NA  
0  
plant  
Quercus  
Xmorehaus  
NA  
NA  
0  
plant  
Ranunculus  
aquatilis  
aquatilis  
NA  
0

plant  
Ranunculus  
californicus  
californicus  
NA  
0  
plant  
Ranunculus  
canus  
ludovicianus  
NA  
0  
plant  
Ranunculus  
cymbalaria  
NA  
NA  
0  
plant  
Rhus  
aromatica  
NA  
NA  
0  
plant  
Ribes  
menziesii  
ixoderme  
NA  
0  
plant  
Ribes  
quercetorum  
NA  
NA  
0

plant  
Ribes  
roezlii  
roezlii  
NA  
0  
plant  
Rumex  
californicus  
NA  
NA  
0  
plant  
Rumex  
stenophyllus  
NA  
NA  
0  
plant  
Salix  
lasiandra  
lasiandra  
NA  
0  
plant  
Saltugilia  
australis  
NA  
NA  
0  
plant  
Schoenoplectus  
acutus  
occidentalis  
NA  
0

plant  
Schoenoplectus  
pungens  
longispicatus  
NA  
0  
plant  
Scrophularia  
desertorum  
NA  
NA  
0  
plant  
Secale  
cereale  
NA  
NA  
0  
plant  
Sidalcea  
sparsifolia  
NA  
NA  
0  
plant  
Sidotheca  
trilobata  
NA  
NA  
0  
plant  
Silene  
laciniata  
californica  
NA  
0

plant  
Sisyrinchium  
idahoense  
occidentale  
NA

0  
plant  
Solanum  
rostratum  
NA

NA  
0

plant  
Spergularia  
bosconi  
NA

NA  
0

plant  
Stephanomeria  
pauciflora  
NA

NA  
0

plant  
Stipa  
cernua  
NA

NA  
0

plant  
Stipa  
hymenoides  
NA

NA  
0



plant  
 Stipa  
 lemmonii  
 NA  
 NA  
 0  
 plant  
 Stipa  
 speciosa  
 NA  
 NA  
 0  
 plant  
 Streptanthus  
 cordatus  
 cordatus  
 NA  
 0  
 plant  
 Syntrichopappus  
 lemmonii  
 NA  
 NA  
 0  
 plant  
 Tetrapteron  
 graciliflorum  
 NA  
 NA  
 0  
 plant  
 Tetrapteron  
 palmeri  
 NA  
 NA  
 0

plant  
Thermopsis  
californica  
argentata  
NA  
0  
plant  
Thysanocarpus  
curvipes  
curvipes  
NA  
0  
plant  
Toxicoscordion  
venenosum  
venenosum  
NA  
0  
plant  
Trichostema  
ovatum  
NA  
NA  
0  
plant  
Trifolium  
variegatum  
major  
NA  
0  
plant  
Triteleia  
ixioides  
scabra  
NA  
0

plant  
Turritis  
glabra  
NA  
NA  
0  
plant  
Ulmus  
alata  
NA  
NA  
0  
plant  
Verbena  
lasiostachys  
scabrida  
NA  
0  
plant  
Viola  
purpurea  
aurea  
NA  
0  
plant  
Viola  
purpurea  
purpurea  
NA  
0  
plant  
Woodsia  
oregana  
NA  
NA  
0

animal

*Ammospermophilus*

*leucurus*

NA

Boyd Deep Canyon

1

animal

*Aythya*

*marila*

NA

Bodega

1

animal

*Charadrius*

*montanus*

NA

Coal Oil Point

1

animal

*Coccyzus*

*americanus*

NA

McLaughlin

1

animal

*Crotalus*

*scutulatus*

NA

Sweeney Granite Mountains

1

animal

*Dipodomys*

*panamintinus*

NA

Valentine Eastern Sierra

1

animal  
Odocoileus  
hemionus  
californicus  
Sweeney Granite Mountains  
1  
animal  
Onychomys  
torridus  
NA  
Boyd Deep Canyon  
1  
animal  
Perognathus  
longimembris  
NA  
Boyd Deep Canyon  
1  
animal  
Picoides  
scalaris  
NA  
Boyd Deep Canyon  
1  
animal  
Plestiodon  
gilberti  
NA  
Quail Ridge  
1  
animal  
Pyrocephalus  
rubinus  
NA  
Sweeney Granite Mountains  
1

animal  
Setophaga  
coronata  
auduboni  
Sagehen Creek  
1  
animal  
Setophaga  
magnolia  
NA  
Coal Oil Point  
1  
animal  
Streptopelia  
decaocto  
NA  
Sedgwick  
1  
animal  
Tantilla  
hobartsmithi  
NA  
Sweeney Granite Mountains  
1  
animal  
Toxostoma  
lecontei  
NA  
Boyd Deep Canyon  
1  
animal  
Vireo  
bellii  
NA  
Boyd Deep Canyon  
1

plant  
Acamptopappus  
sphaerocephalus  
hirtellus  
Sweeney Granite Mountains  
1  
plant  
Amsinckia  
intermedia  
NA  
Landels-Hill Big Creek  
1  
plant  
Arctostaphylos  
pungens  
NA  
James San Jacinto Mountains  
1  
plant  
Artemisia  
tridentata  
tridentata  
SNARL  
1  
plant  
Artemisia  
tridentata  
vaseyana  
Valentine Eastern Sierra  
1  
plant  
Asclepias  
erosa  
NA  
Sweeney Granite Mountains  
1

plant  
Astragalus  
didymocarpus  
didymocarpus  
Sweeney Granite Mountains  
1  
plant  
Astragalus  
oxyphysus  
NA  
Landels-Hill Big Creek  
1  
plant  
Berberis  
aquifolium  
dictyota  
Blue Oak Ranch  
1  
plant  
Brickellia  
nevinii  
NA  
Stunt Ranch  
1  
plant  
Caesalpinia  
gilliesii  
NA  
Sweeney Granite Mountains  
1  
plant  
California  
macrophylla  
NA  
Sedgwick  
1



plant  
Calochortus  
invenustus  
NA  
Boyd Deep Canyon  
1  
plant  
Calycadenia  
multiglandulosa  
NA  
McLaughlin  
1  
plant  
Camissonia  
campestris  
campestris  
Burns Pinon Ridge  
1  
plant  
Camissonia  
contorta  
NA  
Hastings  
1  
plant  
Camissonia  
kernensis  
gilmanii  
Burns Pinon Ridge  
1  
plant  
Castilleja  
applegatei  
pinetorum  
Valentine Eastern Sierra  
1

plant  
Caulanthus  
lasiophyllus  
NA  
Landels-Hill Big Creek  
1  
plant  
Cirsium  
scariosum  
NA  
Sagehen Creek  
1  
plant  
Clarkia  
cylindrica  
cylindrica  
Sedgwick  
1  
plant  
Claytonia  
exigua  
exigua  
Boyd Deep Canyon  
1  
plant  
Claytonia  
rubra  
NA  
Sagehen Creek  
1  
plant  
Collinsia  
childii  
NA  
Hastings  
1

plant  
Cordylanthus  
rigidus  
rigidus  
Blue Oak Ranch  
1  
plant  
Cornus  
sericea  
occidentalis  
Sedgwick  
1  
plant  
Cryptantha  
echinella  
NA  
Boyd Deep Canyon  
1  
plant  
Cryptantha  
pterocarya  
pterocarya  
Burns Pinon Ridge  
1  
plant  
Delphinium  
gracilentum  
NA  
Valentine Eastern Sierra  
1  
plant  
Ehrendorferia  
chrysantha  
NA  
Elliot Chaparral  
1

plant

Eleocharis

acicularis

acicularis

Jepson Prairie

1

plant

Eleocharis

rostellata

NA

Bodega

1

plant

Elymus

triticoides

NA

Hastings

1

plant

Ephedra

nevadensis

NA

Sweeney Granite Mountains

1

plant

Ephedra

viridis

NA

Sweeney Granite Mountains

1

plant

Eriastrum

densifolium

austromontanum

Boyd Deep Canyon

1

plant  
 Eriastrum  
 densifolium  
 mohavense  
 Burns Pinon Ridge  
 1  
 plant  
 Ericameria  
 cooperi  
 cooperi  
 Sweeney Granite Mountains  
 1  
 plant  
 Eriodictyon  
 crassifolium  
 NA  
 Elliot Chaparral  
 1  
 plant  
 Eriodictyon  
 trichocalyx  
 trichocalyx  
 Boyd Deep Canyon  
 1  
 plant  
 Eriogonum  
 angulosum  
 NA  
 Hastings  
 1  
 plant  
 Eriogonum  
 nudum  
 pauciflorum  
 Boyd Deep Canyon  
 1

plant  
Eriogonum  
palmerianum  
NA  
Sweeney Granite Mountains  
1  
plant  
Eriogonum  
umbellatum  
munzii  
Boyd Deep Canyon  
1  
plant  
Eriogonum  
viridescens  
NA  
Burns Pinon Ridge  
1  
plant  
Eriogonum  
wrightii  
trachygonum  
Blue Oak Ranch  
1  
plant  
Eriophyllum  
ambiguum  
paleaceum  
Boyd Deep Canyon  
1  
plant  
Eriophyllum  
pringlei  
NA  
Sweeney Granite Mountains  
1

plant

Eucalyptus

camaldulensis

NA

Motte Rimrock

1

plant

Galium

andrewsii

intermedium

Stunt Ranch

1

plant

Gilia

aliquanta

aliquanta

Sweeney Granite Mountains

1

plant

Gilia

latiflora

davyi

Burns Pinon Ridge

1

plant

Gilia

latiflora

latiflora

Sweeney Granite Mountains

1

plant

Gilia

tricolor

diffusa

Quail Ridge

1

plant  
Gilia  
tricolor  
tricolor  
Boyd Deep Canyon  
1  
plant  
Githopsis  
diffusa  
robusta  
Blue Oak Ranch  
1  
plant  
Grindelia  
camporum  
NA  
Coal Oil Point  
1  
plant  
Helenium  
bigelovii  
NA  
McLaughlin  
1  
plant  
Herniaria  
hirsuta  
cinerea  
Stunt Ranch  
1  
plant  
Heterotheca  
sessiliflora  
echioides  
Sedgwick  
1



plant

Holocarpha

heermannii

NA

Sedgwick

1

plant

Hydrocotyle

ranunculoides

NA

Bodega

1

plant

Hydrophyllum

occidentale

NA

Chickering American River

1

plant

Juglans

regia

NA

Hastings

1

plant

Juncus

oxymeris

NA

McLaughlin

1

plant

Juncus

saximontanus

NA

Sagehen Creek

1

plant

*Juncus*

*textilis*

NA

Carpinteria Salt Marsh

1

plant

*Keckiella*

*breviflora*

*glabrisepala*

McLaughlin

1

plant

*Krascheninnikovia*

*lanata*

NA

Sweeney Granite Mountains

1

plant

*Lemna*

*gibba*

NA

Carpinteria Salt Marsh

1

plant

*Lemna*

*minuta*

NA

San Joaquin Freshwater Marsh

1

plant

*Lepidospartum*

*squamatum*

NA

Burns Pinon Ridge

1

plant  
Logfia  
depressa  
NA  
Boyd Deep Canyon  
1  
plant  
Logfia  
filaginoides  
NA  
Boyd Deep Canyon  
1  
plant  
Logfia  
gallica  
NA  
Landels-Hill Big Creek  
1  
plant  
Lomatium  
dasycarpum  
tomentosum  
McLaughlin  
1  
plant  
Lomatium  
dissectum  
multifidum  
Valentine Eastern Sierra  
1  
plant  
Lomatium  
mohavense  
NA  
Boyd Deep Canyon  
1

plant  
Lupinus  
albifrons  
albifrons  
Fort Ord  
1  
plant  
Lupinus  
chamissonis  
NA  
Bodega  
1  
plant  
Lupinus  
latifolius  
parishii  
James San Jacinto Mountains  
1  
plant  
Malacothamnus  
fremontii  
NA  
McLaughlin  
1  
plant  
Malacothrix  
californica  
NA  
Sedgwick  
1  
plant  
Malacothrix  
coulteri  
NA  
Sweeney Granite Mountains  
1

plant  
Melia  
azedarach  
NA  
Sweeney Granite Mountains  
1  
plant  
Melica  
stricta  
NA  
Valentine Eastern Sierra  
1  
plant  
Microsteris  
gracilis  
NA  
Sedgwick  
1  
plant  
Mimulus  
torreyi  
NA  
Chickering American River  
1  
plant  
Minuartia  
pusilla  
NA  
Hastings  
1  
plant  
Mirabilis  
multiflora  
pubescens  
Boyd Deep Canyon  
1

plant  
Myosurus  
minimus  
NA  
Jepson Prairie  
1  
plant  
Najas  
marina  
NA  
Sedgwick  
1  
plant  
Nemophila  
pulchella  
fremontii  
Sedgwick  
1  
plant  
Oenothera  
californica  
californica  
Boyd Deep Canyon  
1  
plant  
Orobanche  
parishii  
parishii  
Sweeney Granite Mountains  
1  
plant  
Osmorhiza  
brachypoda  
NA  
Hastings  
1

plant  
Pediomelum  
californicum  
NA  
Boyd Deep Canyon  
1  
plant  
Penstemon  
incertus  
NA  
Burns Pinon Ridge  
1  
plant  
Phacelia  
davidsonii  
NA  
Elliot Chaparral  
1  
plant  
Phacelia  
egena  
NA  
Landels-Hill Big Creek  
1  
plant  
Phacelia  
imbricata  
patula  
Boyd Deep Canyon  
1  
plant  
Phacelia  
tanacetifolia  
NA  
McLaughlin  
1

plant  
Pholisma  
arenarium  
NA  
Sweeney Granite Mountains  
1  
plant  
Pinus  
monophylla  
NA  
Sweeney Granite Mountains  
1  
plant  
Plagiobothrys  
acanthocarpus  
NA  
Sedgwick  
1  
plant  
Polygonum  
aviculare  
depressum  
Scripps Coastal  
1  
plant  
Polystichum  
imbricans  
curtum  
James San Jacinto Mountains  
1  
plant  
Populus  
trichocarpa  
NA  
Angelo Coast Range  
1



plant  
Pseudostellaria  
jamesiana  
NA  
Sagehen Creek  
1  
plant  
Quercus  
john-tuckeri  
NA  
Hastings  
1  
plant  
Quercus  
wislizeni  
wislizeni  
Quail Ridge  
1  
plant  
Ribes  
malvaceum  
malvaceum  
Sedgwick  
1  
plant  
Rumex  
violascens  
NA  
Boyd Deep Canyon  
1  
plant  
Ruppia  
cirrhosa  
NA  
Sweeney Granite Mountains  
1

plant  
Sanicula  
graveolens  
NA  
Chickering American River  
1  
plant  
Silene  
verecunda  
NA  
Hastings  
1  
plant  
Solidago  
velutina  
californica  
Boyd Deep Canyon  
1  
plant  
Stachys  
rigida  
rigida  
James San Jacinto Mountains  
1  
plant  
Stephanomeria  
virgata  
pleurocarpa  
Boyd Deep Canyon  
1  
plant  
Symphoricarpos  
rotundifolius  
parishii  
Boyd Deep Canyon  
1

plant  
Tetradymia  
stenolepis  
NA  
Sweeney Granite Mountains  
1  
plant  
Viola  
purpurea  
quercetorum  
Boyd Deep Canyon  
1  
plant  
Viola  
sheltonii  
NA  
Angelo Coast Range  
1  
plant  
Vitis  
girdiana  
NA  
Boyd Deep Canyon  
1  
plant  
Washingtonia  
filifera  
NA  
Boyd Deep Canyon  
1  
plant  
Zannichellia  
palustris  
NA  
Sedgwick  
1

animal  
Alectoris  
chukar  
NA  
Motte Rimrock, Sweeney Granite Mountains  
2  
animal  
Batrachoseps  
nigriventris  
NA  
Elliot Chaparral, Sedgwick  
2  
animal  
Callisaurus  
draconoides  
NA  
Boyd Deep Canyon, Sweeney Granite Mountains  
2  
animal  
Cardellina  
pusilla  
NA  
Landels-Hill Big Creek, Sagehen Creek  
2  
animal  
Geothlypis  
tolmiei  
NA  
Landels-Hill Big Creek, Sagehen Creek  
2  
animal  
Melospiza  
georgiana  
NA  
Bodega, Coal Oil Point  
2

animal

Myotis

ciliolabrum

NA

Boyd Deep Canyon, Sagehen Creek

2

animal

Oreothlypis

celata

NA

Landels-Hill Big Creek, Sagehen Creek

2

animal

Oreothlypis

ruficapilla

NA

Landels-Hill Big Creek, Sagehen Creek

2

animal

Otus

flammeolus

NA

Sagehen Creek, Sweeney Granite Mountains

2

animal

Pituophis

catenifer

catenifer

Angelo Coast Range, Quail Ridge

2

animal

Quiscalus

mexicanus

NA

Sedgwick, Sweeney Granite Mountains

2

animal  
Sayornis  
phoebe  
NA  
Bodega, Valentine Eastern Sierra  
2  
animal  
Sceloporus  
magister  
NA  
Boyd Deep Canyon, Sweeney Granite Mountains  
2  
animal  
Setophaga  
nigrescens  
NA  
Landels-Hill Big Creek, Sagehen Creek  
2  
animal  
Setophaga  
occidentalis  
NA  
Landels-Hill Big Creek, Sagehen Creek  
2  
animal  
Setophaga  
townsendi  
NA  
Landels-Hill Big Creek, Sagehen Creek  
2  
animal  
Spea  
hammondii  
NA  
Dawson Los Monos Canyon, Elliot Chaparral  
2

animal

Thamnophis

couchii

NA

Landels-Hill Big Creek, Sagehen Creek

2

plant

Abies

concolor

NA

James San Jacinto Mountains, Valentine Eastern Sierra

2

plant

Allium

burlewii

NA

Boyd Deep Canyon, James San Jacinto Mountains

2

plant

Amsinckia

tessellata

tessellata

Boyd Deep Canyon, Sweeney Granite Mountains

2

plant

Asclepias

californica

NA

Blue Oak Ranch, Sedgwick

2

plant

Atriplex

canescens

canescens

Boyd Deep Canyon, Burns Pinon Ridge

2

plant

Atriplex

polycarpa

NA

Boyd Deep Canyon, Sweeney Granite Mountains

2

plant

Avena

sativa

NA

Hastings, San Joaquin Freshwater Marsh

2

plant

Calocedrus

decurrens

NA

Angelo Coast Range, James San Jacinto Mountains

2

plant

Calochortus

kennedyi

kennedyi

Burns Pinon Ridge, Sweeney Granite Mountains

2

plant

Calochortus

venustus

NA

Blue Oak Ranch, McLaughlin

2

plant

Calystegia

malacophylla

pedicellata

Blue Oak Ranch, Sedgwick

2



plant  
 Calystegia  
 occidentalis  
 fulcrata  
 Boyd Deep Canyon, James San Jacinto Mountains  
 2  
 plant  
 Camissonia  
 strigulosa  
 NA  
 Bodega, Fort Ord  
 2  
 plant  
 Ceanothus  
 cuneatus  
 cuneatus  
 Blue Oak Ranch, Sedgwick  
 2  
 plant  
 Centrostegia  
 thurberi  
 NA  
 Burns Pinon Ridge, Sweeney Granite Mountains  
 2  
 plant  
 Chaenactis  
 glabriuscula  
 glabriuscula  
 Boyd Deep Canyon, Sedgwick  
 2  
 plant  
 Chaenactis  
 glabriuscula  
 heterocarpha  
 McLaughlin, Stebbins Cold Canyon  
 2

plant

Chenopodium

atrovirens

NA

Chickering American River, Valentine Eastern Sierra

2

plant

Chenopodium

fremontii

NA

Boyd Deep Canyon, Sweeney Granite Mountains

2

plant

Chorizanthe

watsonii

NA

Burns Pinon Ridge, Sweeney Granite Mountains

2

plant

Cirsium

occidentale

venustum

Hastings, McLaughlin

2

plant

Clarkia

purpurea

purpurea

Blue Oak Ranch, McLaughlin

2

plant

Collinsia

heterophylla

heterophylla

Landels-Hill Big Creek, Stunt Ranch

2

plant

Cornus

glabrata

NA

McLaughlin, Stebbins Cold Canyon

2

plant

Cylindropuntia

echinocarpa

NA

Boyd Deep Canyon, Burns Pinon Ridge

2

plant

Delphinium

hesperium

NA

Blue Oak Ranch, Quail Ridge

2

plant

Draba

cuneifolia

NA

Boyd Deep Canyon, Sweeney Granite Mountains

2

plant

Eremalche

exilis

NA

Boyd Deep Canyon, Sweeney Granite Mountains

2

plant

Eriogonum

elongatum

elongatum

Sedgwick, Stunt Ranch

2

plant  
 Eriogonum  
 fasciculatum  
 foliolosum  
 Carpinteria Salt Marsh, Stunt Ranch  
 2  
 plant  
 Eriogonum  
 plumatella  
 NA  
 Burns Pinon Ridge, Sweeney Granite Mountains  
 2  
 plant  
 Eriogonum  
 wrightii  
 subscaposum  
 Boyd Deep Canyon, Chickering American River  
 2  
 plant  
 Erysimum  
 capitatum  
 capitatum  
 Boyd Deep Canyon, Sedgwick  
 2  
 plant  
 Fraxinus  
 latifolia  
 NA  
 Angelo Coast Range, McLaughlin  
 2  
 plant  
 Fraxinus  
 velutina  
 NA  
 Boyd Deep Canyon, Dawson Los Monos Canyon  
 2

plant

Fritillaria

pinetorum

NA

SNARL, Valentine Eastern Sierra

2

plant

Galium

bolanderi

NA

McLaughlin, Stebbins Cold Canyon

2

plant

Gilia

capitata

abrotanifolia

James San Jacinto Mountains, Stunt Ranch

2

plant

Gutierrezia

californica

NA

Blue Oak Ranch, Stebbins Cold Canyon

2

plant

Hesperocnide

tenella

NA

Bodega, Fort Ord

2

plant

Hordeum

murinum

glaucum

Boyd Deep Canyon, McLaughlin

2

plant

Hydrocotyle

verticillata

NA

Bodega, Jepson Prairie

2

plant

Lasthenia

gracilis

NA

Burns Pinon Ridge, Sedgwick

2

plant

Lessingia

glandulifera

glandulifera

Boyd Deep Canyon, James San Jacinto Mountains

2

plant

Loeflingia

squarrosa

NA

Hastings, Motte Rimrock

2

plant

Loeseliastrum

matthewsii

NA

Burns Pinon Ridge, Sweeney Granite Mountains

2

plant

Loeseliastrum

schottii

NA

Boyd Deep Canyon, Sweeney Granite Mountains

2

plant

Lomatium

dasycarpum

dasycarpum

Blue Oak Ranch, McLaughlin

2

plant

Lomatium

nevadense

NA

Sagehen Creek, SNARL

2

plant

Lupinus

excubitus

austromontanus

Boyd Deep Canyon, James San Jacinto Mountains

2

plant

Lycium

cooperi

NA

Burns Pinon Ridge, Sweeney Granite Mountains

2

plant

Mentzelia

affinis

NA

Boyd Deep Canyon, Burns Pinon Ridge

2

plant

Micropus

californicus

californicus

Blue Oak Ranch, McLaughlin

2

plant

Microseris

douglasii

douglasii

Jepson Prairie, Sedgwick

2

plant

Mimulus

androsaceus

NA

Burns Pinon Ridge, Hastings

2

plant

Mimulus

bolanderi

NA

Hastings, McLaughlin

2

plant

Mimulus

congdonii

NA

Elliot Chaparral, Hastings

2

plant

Mirabilis

laevis

villosa

Boyd Deep Canyon, Burns Pinon Ridge

2

plant

Nemophila

menziesii

menziesii

Boyd Deep Canyon, Fort Ord

2



plant

Oenothera

elata

hookeri

Bodega, James San Jacinto Mountains

2

plant

Orobanche

californica

feudgei

Sedgwick, Valentine Eastern Sierra

2

plant

Paspalum

distichum

NA

Jepson Prairie, San Joaquin Freshwater Marsh

2

plant

Penstemon

speciosus

NA

Chickering American River, Valentine Eastern Sierra

2

plant

Phacelia

ciliata

NA

Blue Oak Ranch, Hastings

2

plant

Phacelia

curvipes

NA

Burns Pinon Ridge, Sweeney Granite Mountains

2

plant

*Phacelia*

*fremontii*

NA

Boyd Deep Canyon, Sweeney Granite Mountains

2

plant

*Phacelia*

*ramosissima*

NA

Hastings, Motte Rimrock

2

plant

*Phalaris*

*canariensis*

NA

Hastings, San Joaquin Freshwater Marsh

2

plant

*Plagiobothrys*

*arizonicus*

NA

Boyd Deep Canyon, Sweeney Granite Mountains

2

plant

*Polypodium*

*calirhiza*

NA

Blue Oak Ranch, Bodega

2

plant

*Potentilla*

*biennis*

NA

SNARL, Valentine Eastern Sierra

2

plant  
Potentilla  
gracilis  
elmeri  
SNARL, Valentine Eastern Sierra  
2  
plant  
Prunus  
emarginata  
NA  
James San Jacinto Mountains, Valentine Eastern Sierra  
2  
plant  
Pseudognaphalium  
thermale  
NA  
Boyd Deep Canyon, Dawson Los Monos Canyon  
2  
plant  
Rumex  
hymenosepalus  
NA  
Burns Pinon Ridge, Sweeney Granite Mountains  
2  
plant  
Salvia  
carduacea  
NA  
Boyd Deep Canyon, Sedgwick  
2  
plant  
Salvia  
dorrii  
pilosa  
Burns Pinon Ridge, Sweeney Granite Mountains  
2

plant

Schismus

arabicus

NA

Jepson Prairie, Sedgwick

2

plant

Schoenoplectus

americanus

NA

Boyd Deep Canyon, San Joaquin Freshwater Marsh

2

plant

Sisyrinchium

halophilum

NA

SNARL, Sweeney Granite Mountains

2

plant

Solanum

umbelliferum

NA

Blue Oak Ranch, Hastings

2

plant

Sporobolus

airoides

NA

Boyd Deep Canyon, Jepson Prairie

2

plant

Stephanomeria

cichoriacea

NA

Landels-Hill Big Creek, Sedgwick

2

plant  
 Stephanomeria  
 exigua  
 coronaria  
 Carpinteria Salt Marsh, Landels-Hill Big Creek  
 2  
 plant  
 Stephanomeria  
 exigua  
 exigua  
 Burns Pinon Ridge, Valentine Eastern Sierra  
 2  
 plant  
 Stephanomeria  
 virgata  
 virgata  
 Scripps Coastal, Sedgwick  
 2  
 plant  
 Suaeda  
 nigra  
 NA  
 Boyd Deep Canyon, Kendall-Frost Mission Bay Marsh  
 2  
 plant  
 Symphoricarpos  
 albus  
 laevigatus  
 Angelo Coast Range, Blue Oak Ranch  
 2  
 plant  
 Syntrichopappus  
 fremontii  
 NA  
 Burns Pinon Ridge, Sweeney Granite Mountains  
 2

plant  
 Tauschia  
 hartwegii  
 NA  
 Blue Oak Ranch, Hastings  
 2  
 plant  
 Tauschia  
 parishii  
 NA  
 Boyd Deep Canyon, James San Jacinto Mountains  
 2  
 plant  
 Tetradymia  
 canescens  
 NA  
 SNARL, Valentine Eastern Sierra  
 2  
 plant  
 Trifolium  
 depauperatum  
 amplectens  
 Blue Oak Ranch, Sedgwick  
 2  
 plant  
 Veronica  
 anagallis-aquatica  
 NA  
 Carpinteria Salt Marsh, San Joaquin Freshwater Marsh  
 2  
 plant  
 Vicia  
 hassei  
 NA  
 Hastings, Sedgwick  
 2

plant  
Yucca  
brevifolia  
NA  
Burns Pinon Ridge, Sweeney Granite Mountains  
2  
animal  
Actinemys  
marmorata  
NA  
Angelo Coast Range, Elliot Chaparral, Fort Ord  
3  
animal  
Anas  
penelope  
NA  
Bodega, Carpinteria Salt Marsh, Coal Oil Point  
3  
animal  
Botaurus  
lentiginosus  
NA  
Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point  
3  
animal  
Bubulcus  
ibis  
NA  
Boyd Deep Canyon, McLaughlin, Sedgwick  
3  
animal  
Campylorhynchus  
brunneicapillus  
NA  
Boyd Deep Canyon, Motte Rimrock, Scripps Coastal  
3

animal

Chen

rossii

NA

Bodega, Carpinteria Salt Marsh, Motte Rimrock

3

animal

Corynorhinus

townsendii

NA

McLaughlin, Quail Ridge, Santa Cruz Island

3

animal

Euderma

maculatum

NA

McLaughlin, Sweeney Granite Mountains, White Mountain Research Center

3

animal

Gambelia

wislizenii

NA

Boyd Deep Canyon, Elliot Chaparral, Sweeney Granite Mountains

3

animal

Gymnorhinus

cynocephalus

NA

Boyd Deep Canyon, Sweeney Granite Mountains, White Mountain Research Center

3

animal

Leptotyphlops

humilis

NA

Elliot Chaparral, Motte Rimrock, Sweeney Granite Mountains

3



animal

Mniotilta

varia

NA

Bodega, Coal Oil Point, Hastings

3

animal

Numenius

phaeopus

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point

3

animal

Tamias

merriami

NA

Hastings, James San Jacinto Mountains, Sedgwick

3

plant

Ailanthus

altissima

NA

McLaughlin, Quail Ridge, Stunt Ranch

3

plant

Allium

fimbriatum

fimbriatum

Boyd Deep Canyon, Burns Pinon Ridge, McLaughlin

3

plant

Ambrosia

acanthicarpa

NA

Boyd Deep Canyon, Burns Pinon Ridge, San Joaquin Freshwater Marsh

3

plant

Ancistrocarphus

filagineus

NA

McLaughlin, Motte Rimrock, Sedgwick

3

plant

Anisocoma

acaulis

NA

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Aristida

adscensionis

NA

Boyd Deep Canyon, Sedgwick, Sweeney Granite Mountains

3

plant

Arundo

donax

NA

Carpinteria Salt Marsh, San Joaquin Freshwater Marsh, Stunt Ranch

3

plant

Astragalus

purshii

tinctus

SNARL, Sweeney Granite Mountains, Valentine Eastern Sierra

3

plant

Azolla

filiculoides

NA

Bodega, Hastings, Jepson Prairie

3

plant

Berula

erecta

NA

Bodega, Carpinteria Salt Marsh, Hastings

3

plant

Brassica

tournefortii

NA

Boyd Deep Canyon, Scripps Coastal, Sweeney Granite Mountains

3

plant

Carex

subfusca

NA

Angelo Coast Range, Boyd Deep Canyon, Sagehen Creek

3

plant

Ceanothus

cordulatus

NA

Chickering American River, James San Jacinto Mountains, Valentine Eastern Sierra

3

plant

Chaenactis

fremontii

NA

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Chaenactis

stevioides

NA

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Chlorogalum

pomeridianum

pomeridianum

Blue Oak Ranch, McLaughlin, Sedgwick

3

plant

Chorizanthe

brevicornu

brevicornu

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Claytonia

perfoliata

mexicana

Elliot Chaparral, Jepson Prairie, Sedgwick

3

plant

Claytonia

perfoliata

perfoliata

Coal Oil Point, Dawson Los Monos Canyon, Jepson Prairie

3

plant

Collinsia

parviflora

NA

Chickering American River, Sagehen Creek, Valentine Eastern Sierra

3

plant

Corethrogyne

filaginifolia

NA

Boyd Deep Canyon, Landels-Hill Big Creek, San Joaquin Freshwater Marsh

3

plant

Cryptantha

simulans

NA

Chickering American River, James San Jacinto Mountains, SNARL

3

plant

Dendromecon

rigida

NA

Dawson Los Monos Canyon, Elliot Chaparral, Sedgwick

3

plant

Elymus

elymoides

elymoides

Boyd Deep Canyon, SNARL, Valentine Eastern Sierra

3

plant

Elymus

glaucus

glaucus

Blue Oak Ranch, Bodega, Jepson Prairie

3

plant

Elymus

trachycaulus

trachycaulus

James San Jacinto Mountains, McLaughlin, Sweeney Granite Mountains

3

plant

Eriogonum

baileyi

baileyi

Sedgwick, SNARL, Valentine Eastern Sierra

3

plant

Eriogonum

pusillum

NA

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Eriogonum

saxatile

NA

Boyd Deep Canyon, Burns Pinon Ridge, James San Jacinto Mountains

3

plant

Ficus

carica

NA

Angelo Coast Range, Jepson Prairie, Quail Ridge

3

plant

Forestiera

pubescens

NA

Boyd Deep Canyon, Motte Rimrock, Sweeney Granite Mountains

3

plant

Galium

andrewsii

andrewsii

Boyd Deep Canyon, McLaughlin, Sedgwick

3

plant

Galium

angustifolium

angustifolium

Boyd Deep Canyon, Sedgwick, Stunt Ranch

3

plant

*Gilia*

*ochroleuca*

*exilis*

Boyd Deep Canyon, James San Jacinto Mountains, Sedgwick

3

plant

*Gilia*

*sinuata*

NA

Burns Pinon Ridge, James San Jacinto Mountains, Sweeney Granite Mountains

3

plant

*Helianthus*

*annuus*

NA

Burns Pinon Ridge, Carpinteria Salt Marsh, Motte Rimrock

3

plant

*Hordeum*

*brachyantherum*

*californicum*

San Joaquin Freshwater Marsh, Scripps Coastal, Valentine Eastern Sierra

3

plant

*Hordeum*

*depressum*

NA

Angelo Coast Range, Carpinteria Salt Marsh, Jepson Prairie

3

plant

*Juncus*

*bufonius*

*congestus*

Bodega, Elliot Chaparral, Jepson Prairie

3

plant

*Juncus*

*ensifolius*

NA

Angelo Coast Range, Blue Oak Ranch, Sagehen Creek

3

plant

*Juncus*

*phaeocephalus*

NA

Coal Oil Point, Kenneth S Norris Rancho Marino, McLaughlin

3

plant

*Juncus*

*rugulosus*

NA

Carpinteria Salt Marsh, Hastings, James San Jacinto Mountains

3

plant

*Lagophylla*

*ramosissima*

NA

Hastings, Quail Ridge, Stebbins Cold Canyon

3

plant

*Larrea*

*tridentata*

NA

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

*Layia*

*glandulosa*

NA

Burns Pinon Ridge, Sedgwick, Sweeney Granite Mountains

3



plant

Lemna

minor

NA

Blue Oak Ranch, Carpinteria Salt Marsh, Hastings

3

plant

Malacothrix

clevelandii

NA

Elliot Chaparral, Hastings, McLaughlin

3

plant

Malacothrix

glabrata

NA

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Malvella

leprosa

NA

Carpinteria Salt Marsh, Jepson Prairie, San Joaquin Freshwater Marsh

3

plant

Medicago

lupulina

NA

Blue Oak Ranch, Bodega, Chickering American River

3

plant

Mentzelia

albicaulis

NA

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Mentzelia

dispersa

NA

Boyd Deep Canyon, Chickering American River, McLaughlin

3

plant

Mentzelia

veatchiana

NA

Burns Pinon Ridge, Hastings, Sweeney Granite Mountains

3

plant

Mimulus

moschatus

NA

Angelo Coast Range, Chickering American River, James San Jacinto Mountains

3

plant

Mirabilis

laevis

crassifolia

Dawson Los Monos Canyon, San Joaquin Freshwater Marsh, Scripps Coastal

3

plant

Muhlenbergia

asperifolia

NA

Boyd Deep Canyon, SNARL, Sweeney Granite Mountains

3

plant

Muilla

maritima

NA

Boyd Deep Canyon, Elliot Chaparral, Jepson Prairie

3

plant

Nama

demissum

demissum

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Nemophila

spatulata

NA

Chickering American River, James San Jacinto Mountains, Sagehen Creek

3

plant

Opuntia

basilaris

basilaris

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Pectocarya

linearis

ferocula

Boyd Deep Canyon, Burns Pinon Ridge, San Joaquin Freshwater Marsh

3

plant

Penstemon

centranthifolius

NA

Boyd Deep Canyon, James San Jacinto Mountains, Landels-Hill Big Creek

3

plant

Phacelia

douglasii

NA

Fort Ord, Hastings, Landels-Hill Big Creek

3

plant

Pholistoma

auritum

auritum

Fort Ord, Sedgwick, Stunt Ranch

3

plant

Pholistoma

membranaceum

NA

Boyd Deep Canyon, Hastings, Sweeney Granite Mountains

3

plant

Pinus

lambertiana

NA

Angelo Coast Range, James San Jacinto Mountains, Landels-Hill Big Creek

3

plant

Plectritis

ciliosa

NA

Hastings, Sedgwick, Stebbins Cold Canyon

3

plant

Prosopis

glandulosa

torreyana

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

Prunus

fasciculata

fasciculata

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

*Prunus*

*virginiana*

*demissa*

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon

3

plant

*Purshia*

*tridentata*

*glandulosa*

Boyd Deep Canyon, Burns Pinon Ridge, Sweeney Granite Mountains

3

plant

*Ribes*

*nevadense*

NA

Boyd Deep Canyon, Chickering American River, James San Jacinto Mountains

3

plant

*Rorippa*

*curvisiliqua*

NA

Angelo Coast Range, Bodega, Sagehen Creek

3

plant

*Rubus*

*parviflorus*

NA

Angelo Coast Range, James San Jacinto Mountains, Landels-Hill Big Creek

3

plant

*Sambucus*

*nigra*

*caerulea*

Dawson Los Monos Canyon, Elliot Chaparral, Scripps Coastal

3

plant

Scutellaria

siphocampyloides

NA

Boyd Deep Canyon, James San Jacinto Mountains, McLaughlin

3

plant

Sedum

spathulifolium

NA

Angelo Coast Range, Blue Oak Ranch, Landels-Hill Big Creek

3

plant

Solidago

confinis

NA

Carpinteria Salt Marsh, Sedgwick, Sweeney Granite Mountains

3

plant

Tamarix

ramosissima

NA

Boyd Deep Canyon, Motte Rimrock, Sweeney Granite Mountains

3

plant

Tragopogon

dubius

NA

McLaughlin, SNARL, Valentine Eastern Sierra

3

plant

Vicia

americana

americana

Blue Oak Ranch, Bodega, SNARL

3

plant

Xanthium

spinosum

NA

Carpinteria Salt Marsh, Hastings, Sedgwick

3

animal

Anas

discors

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, McLaughlin

4

animal

Anser

albifrons

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, McLaughlin

4

animal

Arizona

elegans

NA

Boyd Deep Canyon, Elliot Chaparral, James San Jacinto Mountains, Sweeney Granite Mountains

4

animal

Asio

flammeus

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point

4

animal

Aythya

valisineria

NA

Bodega, Coal Oil Point, McLaughlin, Sedgwick

4

animal

Bucephala

clangula

NA

Bodega, Carpinteria Salt Marsh, McLaughlin, Quail Ridge

4

animal

Cistothorus

palustris

NA

Bodega, Kendall-Frost Mission Bay Marsh, McLaughlin, Sedgwick

4

animal

Dipodomys

heermanni

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, McLaughlin

4

animal

Gallinago

delicata

NA

Boyd Deep Canyon, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin

4

animal

Gallinula

chloropus

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point

4

animal

Gymnogyps

californianus

NA

Blue Oak Ranch, Hastings, Landels-Hill Big Creek, Sedgwick

4



animal

Icterus

parisorum

NA

Bodega, Boyd Deep Canyon, Hastings, Sweeney Granite Mountains

4

animal

Pheucticus

ludovicianus

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Sweeney Granite Mountains

4

animal

Phrynosoma

blainvillii

NA

Elliot Chaparral, Fort Ord, Motte Rimrock, Scripps Coastal

4

animal

Plegadis

chihi

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, Motte Rimrock

4

animal

Plestiodon

skiltonianus

NA

Angelo Coast Range, Quail Ridge, Sagehen Creek, Scripps Coastal

4

animal

Salvadora

hexalepis

NA

Boyd Deep Canyon, Elliot Chaparral, Motte Rimrock, Sweeney Granite Mountains

4

animal

Vireo

plumbeus

NA

Bodega, Boyd Deep Canyon, Sedgwick, Sweeney Granite Mountains

4

plant

Agoseris

retrorsa

NA

Boyd Deep Canyon, Chickering American River, McLaughlin, Sedgwick

4

plant

Allophyllum

divaricatum

NA

Elliot Chaparral, Landels-Hill Big Creek, McLaughlin, Stebbins Cold Canyon

4

plant

Amsinckia

menziesii

NA

Bodega, Landels-Hill Big Creek, Motte Rimrock, Quail Ridge

4

plant

Antirrhinum

multiflorum

NA

Blue Oak Ranch, Hastings, Landels-Hill Big Creek, Stunt Ranch

4

plant

Apium

graveolens

NA

Carpinteria Salt Marsh, Dawson Los Monos Canyon, San Joaquin Freshwater Marsh, Stunt Ranch

4

plant

Apocynum

cannabinum

NA

Blue Oak Ranch, Jepson Prairie, McLaughlin, Sedgwick

4

plant

Argemone

munita

NA

Boyd Deep Canyon, Burns Pinon Ridge, SNARL, Valentine Eastern Sierra

4

plant

Bassia

hyssopifolia

NA

Boyd Deep Canyon, Carpinteria Salt Marsh, San Joaquin Freshwater Marsh, Scripps Coastal

4

plant

Bowlesia

incana

NA

Blue Oak Ranch, Elliot Chaparral, Hastings, Sedgwick

4

plant

Bromus

arenarius

NA

Blue Oak Ranch, Hastings, McLaughlin, Sedgwick

4

plant

Bromus

sterilis

NA

Burns Pinon Ridge, McLaughlin, Quail Ridge, Stebbins Cold Canyon

4

plant

Carex

praeegracilis

NA

Blue Oak Ranch, Carpinteria Salt Marsh, Jepson Prairie, Sedgwick

4

plant

Castilleja

affinis

affinis

Blue Oak Ranch, Landels-Hill Big Creek, McLaughlin, Scripps Coastal

4

plant

Ceanothus

leucodermis

NA

Boyd Deep Canyon, Elliot Chaparral, James San Jacinto Mountains, Stunt Ranch

4

plant

Cheilanthes

covillei

NA

Burns Pinon Ridge, James San Jacinto Mountains, Motte Rimrock, Sweeney Granite Mountains

4

plant

Cirsium

occidentale

californicum

Boyd Deep Canyon, Dawson Los Monos Canyon, Scripps Coastal, Sedgwick

4

plant

Clarkia

rhomboidea

NA

Blue Oak Ranch, Chickering American River, James San Jacinto Mountains, McLaughlin

4

plant

Croton

californicus

NA

Boyd Deep Canyon, Burns Pinon Ridge, Fort Ord, Motte Rimrock

4

plant

Cucurbita

foetidissima

NA

Dawson Los Monos Canyon, Motte Rimrock, San Joaquin Freshwater Marsh, Sedgwick

4

plant

Cucurbita

palmata

NA

Boyd Deep Canyon, Burns Pinon Ridge, Motte Rimrock, Sweeney Granite Mountains

4

plant

Delphinium

patens

NA

Blue Oak Ranch, Hastings, Quail Ridge, Stebbins Cold Canyon

4

plant

Descurainia

sophia

NA

Burns Pinon Ridge, Hastings, Stebbins Cold Canyon, Sweeney Granite Mountains

4

plant

Dichelostemma

capitatum

capitatum

Elliot Chaparral, Jepson Prairie, McLaughlin, Sedgwick

4

plant

Eleocharis

parishii

NA

Boyd Deep Canyon, McLaughlin, Sagehen Creek, Sweeney Granite Mountains

4

plant

Ericameria

linearifolia

NA

Boyd Deep Canyon, Burns Pinon Ridge, Elliot Chaparral, Sweeney Granite Mountains

4

plant

Eriogonum

davidsonii

NA

Boyd Deep Canyon, Burns Pinon Ridge, James San Jacinto Mountains, Sweeney Granite Mountains

4

plant

Eriogonum

fasciculatum

polifolium

Boyd Deep Canyon, Burns Pinon Ridge, Sedgwick, Sweeney Granite Mountains

4

plant

Eriogonum

maculatum

NA

Boyd Deep Canyon, Burns Pinon Ridge, Elliot Chaparral, Sweeney Granite Mountains

4

plant

Festuca

arundinacea

NA

Bodega, Hastings, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek

4

plant

*Garrya*

*flavescens*

NA

Blue Oak Ranch, Boyd Deep Canyon, Hastings, Sweeney Granite Mountains

4

plant

*Gutierrezia*

*sarothrae*

NA

Boyd Deep Canyon, Elliot Chaparral, Motte Rimrock, Sweeney Granite Mountains

4

plant

*Helianthus*

*gracilentus*

NA

Boyd Deep Canyon, Elliot Chaparral, McLaughlin, Motte Rimrock

4

plant

*Hesperoyucca*

*whipplei*

NA

Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Stunt Ranch

4

plant

*Juncus*

*bufonius*

*occidentalis*

Elliot Chaparral, James San Jacinto Mountains, Jepson Prairie, Sweeney Granite Mountains

4

plant

*Lepidium*

*latifolium*

NA

Blue Oak Ranch, Bodega, Jepson Prairie, McLaughlin

4

plant

Lomatium

californicum

NA

Blue Oak Ranch, McLaughlin, Quail Ridge, Stebbins Cold Canyon

4

plant

Lonicera

interrupta

NA

Dawson Los Monos Canyon, Hastings, McLaughlin, Stebbins Cold Canyon

4

plant

Lupinus

microcarpus

densiflorus

Blue Oak Ranch, McLaughlin, Sedgwick, Stebbins Cold Canyon

4

plant

Lythrum

californicum

NA

Boyd Deep Canyon, Coal Oil Point, Jepson Prairie, Stunt Ranch

4

plant

Malacothrix

floccifera

NA

Angelo Coast Range, Hastings, McLaughlin, Stebbins Cold Canyon

4

plant

Melica

frutescens

NA

Boyd Deep Canyon, Burns Pinon Ridge, Elliot Chaparral, Sweeney Granite Mountains

4



plant

Mentzelia

congesta

NA

Boyd Deep Canyon, James San Jacinto Mountains, SNARL, Valentine Eastern Sierra

4

plant

Mimulus

fremontii

NA

Burns Pinon Ridge, Elliot Chaparral, Hastings, James San Jacinto Mountains

4

plant

Minuartia

californica

NA

Angelo Coast Range, Hastings, Jepson Prairie, McLaughlin

4

plant

Nasturtium

officinale

NA

Angelo Coast Range, Dawson Los Monos Canyon, Landels-Hill Big Creek, Sedgwick

4

plant

Navarretia

pubescens

NA

Blue Oak Ranch, McLaughlin, Quail Ridge, Stebbins Cold Canyon

4

plant

Nemacladus

sigmoideus

NA

Boyd Deep Canyon, Burns Pinon Ridge, James San Jacinto Mountains, Sweeney Granite Mountains

4

plant

Nicotiana

attenuata

NA

Boyd Deep Canyon, Elliot Chaparral, SNARL, Valentine Eastern Sierra

4

plant

Oenothera

californica

avita

Boyd Deep Canyon, Burns Pinon Ridge, SNARL, Sweeney Granite Mountains

4

plant

Orobanche

bulbosa

NA

Hastings, Landels-Hill Big Creek, McLaughlin, Stunt Ranch

4

plant

Pectocarya

penicillata

NA

Elliot Chaparral, Hastings, Motte Rimrock, Sweeney Granite Mountains

4

plant

Pectocarya

setosa

NA

Boyd Deep Canyon, Burns Pinon Ridge, Hastings, Sweeney Granite Mountains

4

plant

Pinus

coulteri

NA

Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, Stunt Ranch

4

plant

*Pinus*

*jeffreyi*

NA

James San Jacinto Mountains, Sagehen Creek, SNARL, Valentine Eastern Sierra

4

plant

*Poa*

*bulbosa*

NA

Angelo Coast Range, Blue Oak Ranch, Sagehen Creek, Stebbins Cold Canyon

4

plant

*Quercus*

*wislizeni*

*frutescens*

Angelo Coast Range, Boyd Deep Canyon, McLaughlin, Stunt Ranch

4

plant

*Sinapis*

*arvensis*

NA

Dawson Los Monos Canyon, Hastings, Scripps Coastal, Stebbins Cold Canyon

4

plant

*Sisymbrium*

*orientale*

NA

Boyd Deep Canyon, Carpinteria Salt Marsh, Motte Rimrock, Scripps Coastal

4

plant

*Stellaria*

*nitens*

NA

Angelo Coast Range, Landels-Hill Big Creek, McLaughlin, Stebbins Cold Canyon

4

plant

Trifolium

albopurpureum

NA

Hastings, Jepson Prairie, Landels-Hill Big Creek, Stebbins Cold Canyon

4

plant

Tropidocarpum

gracile

NA

Hastings, Motte Rimrock, Sedgwick, Stebbins Cold Canyon

4

animal

Amphispiza

bilineata

NA

Boyd Deep Canyon, Burns Pinon Ridge, Hastings, Motte Rimrock, Sedgwick

5

animal

Aspidoscelis

tigris

NA

Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Quail Ridge, Scripps Coastal

5

animal

Aythya

americana

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin

5

animal

Buteo

regalis

NA

Bodega, Boyd Deep Canyon, Hastings, Motte Rimrock, Sweeney Granite Mountains

5

animal

Buteo

swainsoni

NA

Bodega, Boyd Deep Canyon, Hastings, Motte Rimrock, Sweeney Granite Mountains

5

animal

Chaetodipus

californicus

NA

Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Sedgwick

5

animal

Charadrius

semipalmatus

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, Scripps Coastal

5

animal

Chlidonias

niger

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh

5

animal

Chordeiles

minor

NA

Angelo Coast Range, Boyd Deep Canyon, Sagehen Creek, Valentine Eastern Sierra, White Mountain Research Center

5

animal

Cygnus

columbianus

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, McLaughlin

5

animal

Lophodytes

cucullatus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, McLaughlin, Sedgwick

5

animal

Megaceryle

alcyon

NA

Blue Oak Ranch, Carpinteria Salt Marsh, Coal Oil Point, Landels-Hill Big Creek, Sagehen Creek

5

animal

Megascops

kennicottii

NA

James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Sedgwick

5

animal

Patagioenas

fasciata

NA

James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Sedgwick

5

animal

Phalaropus

tricolor

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, Hastings, McLaughlin

5

animal

Picoides

albolarvatus

NA

Boyd Deep Canyon, James San Jacinto Mountains, Sagehen Creek, Sedgwick, Valentine Eastern Sierra

5

animal

Piranga

rubra

NA

Bodega, Coal Oil Point, Hastings, Scripps Coastal, Sweeney Granite Mountains

5

animal

Poecile

gambeli

NA

Boyd Deep Canyon, Hastings, Sagehen Creek, Scripps Coastal, Sedgwick

5

animal

Ursus

americanus

NA

McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Valentine Eastern Sierra

5

plant

Acourtia

microcephala

NA

Dawson Los Monos Canyon, Elliot Chaparral, Motte Rimrock, Sedgwick, Stunt Ranch

5

plant

Amaranthus

blitoides

NA

Hastings, Jepson Prairie, San Joaquin Freshwater Marsh, SNARL, Sweeney Granite Mountains

5

plant

Amelanchier

utahensis

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra

5

plant

Arceuthobium

campylopodum

NA

Blue Oak Ranch, Boyd Deep Canyon, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin

5

plant

Arctostaphylos

glauca

NA

Blue Oak Ranch, Boyd Deep Canyon, Burns Pinon Ridge, Elliot Chaparral, Stunt Ranch

5

plant

Asclepias

eriocarpa

NA

Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, McLaughlin, Sedgwick

5

plant

Chorizanthe

membranacea

NA

Blue Oak Ranch, Hastings, Landels-Hill Big Creek, McLaughlin, Stebbins Cold Canyon

5

plant

Crypsis

schoenoides

NA

Blue Oak Ranch, Jepson Prairie, McLaughlin, San Joaquin Freshwater Marsh, Sedgwick

5

plant

Cryptantha

flaccida



NA

Angelo Coast Range, Blue Oak Ranch, Hastings, McLaughlin, Stebbins Cold Canyon

5

plant

Cystopteris

fragilis

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, James San Jacinto Mountains, Valentine Eastern Sierra

5

plant

Draba

verna

NA

Angelo Coast Range, Hastings, Quail Ridge, Sagehen Creek, Stebbins Cold Canyon

5

plant

Emmenanthe

penduliflora

penduliflora

Boyd Deep Canyon, McLaughlin, Sedgwick, Stunt Ranch, Sweeney Granite Mountains

5

plant

Erigeron

foliosus

foliosus

Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Sedgwick, Stunt Ranch

5

plant

Eschscholzia

caespitosa

NA

Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Stebbins Cold Canyon

5

plant

Eucrypta

chrysanthemifolia

chrysanthemifolia

Carpinteria Salt Marsh, Dawson Los Monos Canyon, Scripps Coastal, Sedgwick, Stunt Ranch

5

plant

Euphorbia

spathulata

NA

Hastings, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

5

plant

Gayophytum

diffusum

parviflorum

Boyd Deep Canyon, Chickering American River, James San Jacinto Mountains, SNARL, Valentine Eastern Sierra

5

plant

Lactuca

saligna

NA

Blue Oak Ranch, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Sagehen Creek

5

plant

Lonicera

subspicata

denudata

Boyd Deep Canyon, Dawson Los Monos Canyon, James San Jacinto Mountains, Sedgwick, Stunt Ranch

5

plant

Madia

elegans

NA

Chickering American River, Hastings, Landels-Hill Big Creek, Sagehen Creek, Valentine Eastern Sierra

5

plant

Muhlenbergia

microsperma

NA

Boyd Deep Canyon, Elliot Chaparral, Motte Rimrock, Scripps Coastal, Sweeney Granite Mountains

5

plant

Muhlenbergia

rigens

NA

Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Sedgwick, Sweeney Granite Mountains

5

plant

Nicotiana

quadrivalvis

NA

Elliot Chaparral, Hastings, McLaughlin, Motte Rimrock, Quail Ridge

5

plant

Pellaea

mucronata

mucronata

Angelo Coast Range, Burns Pinon Ridge, Elliot Chaparral, Stunt Ranch, Sweeney Granite Mountains

5

plant

Penstemon

rostriflorus

NA

Boyd Deep Canyon, James San Jacinto Mountains, SNARL, Sweeney Granite Mountains, Valentine Eastern Sierra

5

plant

Pinus

sabiniana

NA

Blue Oak Ranch, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

5

plant

Poa

howellii

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Landels-Hill Big Creek, McLaughlin

5

plant

Ranunculus

hebecarpus

NA

Blue Oak Ranch, Hastings, McLaughlin, Quail Ridge, Stebbins Cold Canyon

5

plant

Robinia

pseudoacacia

NA

Angelo Coast Range, Hastings, McLaughlin, Stunt Ranch, Sweeney Granite Mountains

5

plant

Salix

gooddingii

NA

Boyd Deep Canyon, Dawson Los Monos Canyon, Jepson Prairie, San Joaquin Freshwater Marsh, Sweeney Granite Mountains

5

plant

Sanicula

tuberosa

NA

Blue Oak Ranch, Chickering American River, Hastings, McLaughlin, Quail Ridge

5

plant

Senecio

flaccidus

douglasii

Blue Oak Ranch, Burns Pinon Ridge, Elliot Chaparral, Sedgwick, Stunt Ranch

5

plant

Sisymbrium

officinale

NA

Hastings, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, Stebbins Cold Canyon, Stunt Ranch

5

plant

Sonchus

asper

asper

Blue Oak Ranch, Fort Ord, Jepson Prairie, Stebbins Cold Canyon, Sweeney Granite Mountains

5

plant

Stachys

albens

NA

Jepson Prairie, McLaughlin, Motte Rimrock, Stunt Ranch, Valentine Eastern Sierra

5

plant

Stylocline

gnaphaloides

NA

Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Motte Rimrock, Scripps Coastal

5

plant

Verbascum

thapsus

NA

Angelo Coast Range, Chickering American River, James San Jacinto Mountains, McLaughlin, SNARL

5

plant

Veronica

persica

NA

Hastings, Jepson Prairie, Landels-Hill Big Creek, Quail Ridge, Stebbins Cold Canyon

5

plant

*Vitis*

*californica*

NA

Angelo Coast Range, Blue Oak Ranch, McLaughlin, Quail Ridge, Stebbins Cold Canyon

5

animal

*Accipiter*

*gentilis*

NA

Angelo Coast Range, Boyd Deep Canyon, James San Jacinto Mountains, Landels-Hill Big Creek, Sagehen Creek, Valentine Eastern Sierra

6

animal

*Agelaius*

*tricolor*

NA

Bodega, Coal Oil Point, Hastings, McLaughlin, Motte Rimrock, Sedgwick

6

animal

*Anniella*

*pulchra*

NA

Boyd Deep Canyon, Fort Ord, Kendall-Frost Mission Bay Marsh, Scripps Coastal, Sedgwick, Younger Lagoon

6

animal

*Aythya*

*affinis*

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Sedgwick

6

animal

*Aythya*

*collaris*

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Sedgwick, NA

6

animal

Buteo

lagopus

NA

Bodega, Coal Oil Point, James San Jacinto Mountains, Motte Rimrock, Sweeney Granite Mountains, White Mountain Research Center

6

animal

Calidris

alpina

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin

6

animal

Charina

bottae

NA

Angelo Coast Range, Blue Oak Ranch, Quail Ridge, Sagehen Creek, Stebbins Cold Canyon, Valentine Eastern Sierra

6

animal

Chen

caerulescens

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, McLaughlin, Motte Rimrock, Sagehen Creek

6

animal

Dipodomys

agilis

NA

Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, James San Jacinto Mountains, Sedgwick, Stunt Ranch

6

animal

Egretta

thula

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, Scripps Coastal

6

animal

Elgaria

multicarinata

NA

Angelo Coast Range, Dawson Los Monos Canyon, Fort Ord, Kendall-Frost Mission Bay Marsh, Quail Ridge, Scripps Coastal

6

animal

Himantopus

mexicanus

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin

6

animal

Lampropeltis

zonata

NA

Elliot Chaparral, James San Jacinto Mountains, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick

6

animal

Larus

philadelphia

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Scripps Coastal

6

animal

Limnodromus

scolopaceus

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings

6

animal



Passerina

caerulea

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Kendall-Frost Mission Bay Marsh, Sagehen Creek, Sedgwick

6

animal

Passerina

cyanea

NA

Bodega, Coal Oil Point, Landels-Hill Big Creek, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

6

animal

Phalaropus

lobatus

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Scripps Coastal

6

animal

Phasianus

colchicus

NA

Angelo Coast Range, Bodega, Hastings, James San Jacinto Mountains, McLaughlin, Motte Rimrock

6

animal

Progne

subis

NA

Bodega, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, Motte Rimrock

6

animal

Puma

concolor

NA

Box Springs, Boyd Deep Canyon, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon

6

animal

Rallus

limicola

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Sagehen Creek, Sedgwick

6

animal

Sphyrapicus

nuchalis

NA

Hastings, James San Jacinto Mountains, Quail Ridge, Sedgwick, Sweeney Granite Mountains, Valentine Eastern Sierra

6

animal

Spilogale

gracilis

NA

Blue Oak Ranch, Dawson Los Monos Canyon, McLaughlin, Quail Ridge, Sedgwick, Sweeney Granite Mountains

6

animal

Sterna

forsteri

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, Scripps Coastal

6

animal

Sus

scrofa

NA

Angelo Coast Range, Blue Oak Ranch, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Younger Lagoon

6

animal

Sylvilagus

audubonii

NA

Boyd Deep Canyon, Dawson Los Monos Canyon, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick

6

animal

Thamnophis

sirtalis

NA

Angelo Coast Range, Elliot Chaparral, Quail Ridge, Sagehen Creek, Sedgwick, Younger Lagoon

6

animal

Tringa

solitaria

NA

Boyd Deep Canyon, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, Sedgwick, Sweeney Granite Mountains

6

animal

Vulpes

vulpes

NA

Bodega, McLaughlin, Quail Ridge, Sagehen Creek, Sweeney Granite Mountains, Younger Lagoon

6

animal

Xanthocephalus

xanthocephalus

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Motte Rimrock, Sweeney Granite Mountains, Valentine Eastern Sierra

6

plant

Calyptridium

monandrum

NA

Burns Pinon Ridge, Elliot Chaparral, Hastings, James San Jacinto Mountains, Motte Rimrock, Sweeney Granite Mountains

6

plant

Cardamine

californica

NA

Angelo Coast Range, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, Quail Ridge, Scripps Coastal

6

plant

Chenopodium

album

NA

Bodega, Hastings, Jepson Prairie, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal

6

plant

Claytonia

parviflora

parviflora

Blue Oak Ranch, Boyd Deep Canyon, Elliot Chaparral, McLaughlin, Stebbins Cold Canyon, Sweeney Granite Mountains

6

plant

Collomia

grandiflora

NA

Blue Oak Ranch, Chickering American River, Hastings, James San Jacinto Mountains, Sagehen Creek, Valentine Eastern Sierra

6

plant

Cryptantha

microstachys

NA

Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Stunt Ranch

6

plant

Dudleya

lanceolata

NA

Hastings, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stunt Ranch

6

plant

*Echinochloa*

*crus-galli*

NA

Angelo Coast Range, Carpinteria Salt Marsh, Hastings, Jepson Prairie, McLaughlin, San Joaquin Freshwater Marsh

6

plant

*Euthamia*

*occidentalis*

NA

Carpinteria Salt Marsh, Dawson Los Monos Canyon, Jepson Prairie, McLaughlin, San Joaquin Freshwater Marsh, Stebbins Cold Canyon

6

plant

*Juncus*

*bufonius*

*bufonius*

Blue Oak Ranch, Bodega, Jepson Prairie, Scripps Coastal, Sedgwick, Sweeney Granite Mountains

6

plant

*Juniperus*

*californica*

NA

Blue Oak Ranch, Burns Pinon Ridge, McLaughlin, Motte Rimrock, Sedgwick, Sweeney Granite Mountains

6

plant

*Lithophragma*

*heterophyllum*

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Landels-Hill Big Creek, McLaughlin, Stebbins Cold Canyon

6

plant

*Lupinus*

*sparsiflorus*

NA

Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Motte Rimrock, Sedgwick, Sweeney Granite Mountains

6

plant

Mimulus

floribundus

NA

Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, Motte Rimrock, SNARL

6

plant

Pinus

ponderosa

NA

Angelo Coast Range, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge

6

plant

Psilocarphus

tenellus

NA

Elliot Chaparral, Hastings, Landels-Hill Big Creek, Quail Ridge, Sedgwick, Stebbins Cold Canyon

6

plant

Pteridium

aquilinum

pubescens

Bodega, Chickering American River, Dawson Los Monos Canyon, Fort Ord, Stunt Ranch, Younger Lagoon

6

plant

Quercus

douglasii

NA

Blue Oak Ranch, Hastings, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

6

plant

Rumex

conglomeratus

NA

Carpinteria Salt Marsh, Dawson Los Monos Canyon, Hastings, Kenneth S Norris Rancho Marino, San Joaquin Freshwater Marsh, Scripps Coastal

6

plant

Rumex

salicifolius

NA

Carpinteria Salt Marsh, Dawson Los Monos Canyon, Hastings, McLaughlin, Sagehen Creek, Younger Lagoon

6

plant

Spergularia

marina

NA

Carpinteria Salt Marsh, Coal Oil Point, Jepson Prairie, Landels-Hill Big Creek, San Joaquin Freshwater Marsh, Scripps Coastal

6

plant

Thysanocarpus

laciniatus

NA

Boyd Deep Canyon, Hastings, Landels-Hill Big Creek, Sedgwick, Stunt Ranch, Sweeney Granite Mountains

6

plant

Torilis

nodosa

NA

Hastings, Jepson Prairie, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

6

plant

Tribulus

terrestris

NA

Boyd Deep Canyon, Burns Pinon Ridge, Hastings, SNARL, Stunt Ranch, Sweeney Granite Mountains

6

plant

Trifolium

cyathiferum

NA

Angelo Coast Range, Blue Oak Ranch, James San Jacinto Mountains, Jepson Prairie, Sagehen Creek, Valentine Eastern Sierra

6

plant

Trifolium

gracilentum

NA

Bodega, Hastings, Landels-Hill Big Creek, McLaughlin, Sedgwick, Stebbins Cold Canyon

6

plant

Trifolium

wormskioldii

NA

Bodega, Hastings, McLaughlin, Sagehen Creek, SNARL, Valentine Eastern Sierra

6

plant

Typha

domingensis

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Motte Rimrock, San Joaquin Freshwater Marsh, Sweeney Granite Mountains

6

plant

Xanthium

strumarium

NA

Carpinteria Salt Marsh, Coal Oil Point, Jepson Prairie, McLaughlin, San Joaquin Freshwater Marsh, Sedgwick

6

animal

Aechmophorus

clarkii

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Quail Ridge, Scripps Coastal



7

animal

Aix

sponsa

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, McLaughlin

7

animal

Anas

strepera

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, McLaughlin, Quail Ridge, Valentine Eastern Sierra

7

animal

Ardea

alba

NA

Blue Oak Ranch, Bodega, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Scripps Coastal, Sedgwick

7

animal

Calidris

mauri

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Scripps Coastal

7

animal

Calidris

minutilla

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, Scripps Coastal, Sweeney Granite Mountains

7

animal

Chordeiles

acutipennis

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Elliot Chaparral, Motte Rimrock, Sweeney Granite Mountains

7

animal

Empidonax

oberholseri

NA

Bodega, Boyd Deep Canyon, James San Jacinto Mountains, Motte Rimrock, Sagehen Creek, Sedgwick, Sweeney Granite Mountains

7

animal

Gavia

immer

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Scripps Coastal

7

animal

Larus

occidentalis

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, Santa Cruz Island, Scripps Coastal

7

animal

Masticophis

lateralis

NA

Boyd Deep Canyon, James San Jacinto Mountains, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Younger Lagoon

7

animal

Mergus

merganser

NA

Angelo Coast Range, Carpinteria Salt Marsh, Hastings, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick

7

animal

Numenius

americanus

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, Motte Rimrock, Scripps Coastal

7

animal

Rana

catesbeiana

NA

Blue Oak Ranch, Elliot Chaparral, James San Jacinto Mountains, McLaughlin, Quail Ridge, Sedgwick, Younger Lagoon

7

animal

Rhinocheilus

lecontei

NA

Boyd Deep Canyon, Elliot Chaparral, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

7

plant

Anemopsis

californica

NA

Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Jepson Prairie, Motte Rimrock, San Joaquin Freshwater Marsh, Sweeney Granite Mountains

7

plant

Castilleja

exserta

exserta

Blue Oak Ranch, Dawson Los Monos Canyon, Jepson Prairie, McLaughlin, Scripps Coastal, Sedgwick, Stunt Ranch

7

plant

Cercocarpus

betuloides

betuloides

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Burns Pinon Ridge, McLaughlin, Sedgwick, Stunt Ranch

7

plant

Clarkia

purpurea

quadrivulnera

Blue Oak Ranch, Dawson Los Monos Canyon, Landels-Hill Big Creek, McLaughlin, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

7

plant

Deschampsia

danthonioides

NA

Angelo Coast Range, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Sagehen Creek

7

plant

Epilobium

minutum

NA

Angelo Coast Range, Blue Oak Ranch, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

7

plant

Erodium

brachycarpum

NA

Angelo Coast Range, Blue Oak Ranch, Fort Ord, Hastings, Jepson Prairie, Sedgwick, Stebbins Cold Canyon

7

plant

Frankenia

salina

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, Jepson Prairie, Kendall-Frost Mission Bay Marsh, San Joaquin Freshwater Marsh, Scripps Coastal

7

plant

Galium

parisiense

NA

Angelo Coast Range, Blue Oak Ranch, Carpinteria Salt Marsh, Hastings, McLaughlin, Quail Ridge, Stebbins Cold Canyon

7

plant

Githopsis

specularioides

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Stebbins Cold Canyon

7

plant

Helenium

puberulum

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Sedgwick

7

plant

Heterotheca

grandiflora

NA

Carpinteria Salt Marsh, Coal Oil Point, Fort Ord, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stunt Ranch

7

plant

Hordeum

marinum

gussoneanum

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Jepson Prairie, McLaughlin, Sedgwick, Stebbins Cold Canyon

7

plant

Lamium

amplexicaule

NA

Blue Oak Ranch, Carpinteria Salt Marsh, Hastings, McLaughlin, San Joaquin Freshwater Marsh, Sedgwick, Stebbins Cold Canyon

7

plant

Lathyrus

vestitus

vestitus

Blue Oak Ranch, Fort Ord, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

7

plant

Layia

platyglossa

NA

Blue Oak Ranch, Bodega, Fort Ord, Hastings, McLaughlin, Motte Rimrock, Sedgwick

7

plant

Lupinus

microcarpus

microcarpus

Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Jepson Prairie, McLaughlin, Sedgwick, Sweeney Granite Mountains

7

plant

Mimulus

pilosus

NA

Angelo Coast Range, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, James San Jacinto Mountains, Motte Rimrock, Sweeney Granite Mountains

7

plant

Minuartia

douglasii

NA

Blue Oak Ranch, Burns Pinon Ridge, Hastings, Landels-Hill Big Creek, McLaughlin, Sedgwick, Stebbins Cold Canyon

7

plant

Pellaea

andromedifolia

NA

Blue Oak Ranch, Hastings, McLaughlin, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

7

plant

Plagiobothrys

tenellus

NA

Blue Oak Ranch, Bodega, Fort Ord, Hastings, McLaughlin, Motte Rimrock, Stebbins Cold Canyon

7

plant

Populus

fremontii

fremontii

Blue Oak Ranch, Boyd Deep Canyon, Jepson Prairie, San Joaquin Freshwater Marsh, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

7

plant

Quercus

kelloggii

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge

7

plant

Quercus

lobata

NA

Blue Oak Ranch, Hastings, Jepson Prairie, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

7

plant

Sanicula

bipinnata

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

7

plant

Sisymbrium

altissimum

NA

Boyd Deep Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Motte Rimrock, SNARL, Stebbins Cold Canyon

7

plant

Solanum

xanti

NA

Boyd Deep Canyon, Elliot Chaparral, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Valentine Eastern Sierra

7

plant

Torilis

arvensis

NA

Angelo Coast Range, Blue Oak Ranch, Jepson Prairie, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

7

plant

Triteleia

laxa

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Hastings, McLaughlin, Quail Ridge, Stebbins Cold Canyon

7

plant

Yabea

microcarpa

NA

Angelo Coast Range, Bodega, Hastings, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

7

animal

Anas



acuta

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock

8

animal

Anas

clypeata

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Valentine Eastern Sierra

8

animal

Coluber

constrictor

NA

Angelo Coast Range, Fort Ord, McLaughlin, Sagehen Creek, Santa Cruz Island, Sedgwick, Stebbins Cold Canyon, Younger Lagoon

8

animal

Lasionycteris

noctivagans

NA

Angelo Coast Range, Hastings, McLaughlin, Quail Ridge, Sagehen Creek, Santa Cruz Island, Sedgwick, Valentine Eastern Sierra

8

animal

Meleagris

gallopavo

NA

Blue Oak Ranch, Bodega, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

8

animal

Myotis

yumanensis

NA

Blue Oak Ranch, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Valentine Eastern Sierra, Younger Lagoon

8

animal

Oreoscoptes

montanus

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Motte Rimrock, Sedgwick, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

8

animal

Oxyura

jamaicensis

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Scripps Coastal, Sedgwick

8

animal

Pipilo

chlorurus

NA

Bodega, Hastings, James San Jacinto Mountains, Motte Rimrock, Sagehen Creek, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

8

animal

Pipistrellus

hesperus

NA

Boyd Deep Canyon, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, White Mountain Research Center, Younger Lagoon

8

animal

Podiceps

auritus

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Scripps Coastal

8

animal

Podiceps

nigricollis

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Scripps Coastal

8

animal

Sitta

pygmaea

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, James San Jacinto Mountains, Landels-Hill Big Creek, Sagehen Creek, Sedgwick, White Mountain Research Center

8

animal

Spizella

atrogularis

NA

Box Springs, Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Motte Rimrock, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

8

animal

Spizella

breweri

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Motte Rimrock, Sagehen Creek, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

8

animal

Tringa

melanoleuca

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Sedgwick

8

plant

Achyrachaena

mollis

NA

Blue Oak Ranch, Hastings, Jepson Prairie, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

8

plant

Aesculus

californica

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Stebbins Cold Canyon, Younger Lagoon

8

plant

Amaranthus

albus

NA

Boyd Deep Canyon, Burns Pinon Ridge, Hastings, James San Jacinto Mountains, Jepson Prairie, Quail Ridge, San Joaquin Freshwater Marsh, Sweeney Granite Mountains

8

plant

Aquilegia

formosa

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, SNARL, Sweeney Granite Mountains, Valentine Eastern Sierra

8

plant

Astragalus

gambelianus

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Sedgwick, Stebbins Cold Canyon

8

plant

Athysanus

pusillus

NA

Angelo Coast Range, Blue Oak Ranch, Chickering American River, Hastings, McLaughlin, Quail Ridge, Stebbins Cold Canyon, Sweeney Granite Mountains

8

plant

*Bromus*

*carinatus*

*carinatus*

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Fort Ord, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Valentine Eastern Sierra

8

plant

*Castilleja*

*attenuata*

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Jepson Prairie, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

8

plant

*Chenopodium*

*murale*

NA

Boyd Deep Canyon, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Hastings, McLaughlin, San Joaquin Freshwater Marsh, Scripps Coastal, Sweeney Granite Mountains

8

plant

*Clarkia*

*unguiculata*

NA

Blue Oak Ranch, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

8

plant

*Clematis*

*lasiantha*

NA

Blue Oak Ranch, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

8

plant

*Clematis*

ligusticifolia

NA

Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin

8

plant

Datisca

glomerata

NA

Angelo Coast Range, Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Stebbins Cold Canyon, Stunt Ranch

8

plant

Eriophyllum

confertiflorum

confertiflorum

Blue Oak Ranch, Boyd Deep Canyon, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Scripps Coastal, Stunt Ranch

8

plant

Lamarckia

aurea

NA

Blue Oak Ranch, Hastings, Landels-Hill Big Creek, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stunt Ranch

8

plant

Lithophragma

affine

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Jepson Prairie, Quail Ridge

8

plant

Lomatium

utriculatum

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Jepson Prairie, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

8

plant

Madia

gracilis

NA

Angelo Coast Range, Blue Oak Ranch, Chickering American River, Hastings, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Sedgwick

8

plant

Melica

californica

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Stebbins Cold Canyon

8

plant

Orobanche

fasciculata

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin

8

plant

Pedicularis

densiflora

NA

Angelo Coast Range, Blue Oak Ranch, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Stebbins Cold Canyon

8

plant

Pentagramma

triangularis

triangularis

Angelo Coast Range, Blue Oak Ranch, Dawson Los Monos Canyon, Elliot Chaparral, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains

8

plant

Platanus

racemosa

NA

Blue Oak Ranch, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, Motte Rimrock, San Joaquin Freshwater Marsh, Sedgwick, Stunt Ranch

8

plant

Quercus

chrysolepis

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Sweeney Granite Mountains

8

plant

Rigiopappus

leptocladus

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

8

plant

Schismus

barbatus

NA

Boyd Deep Canyon, Burns Pinon Ridge, Elliot Chaparral, Hastings, Motte Rimrock, San Joaquin Freshwater Marsh, Sedgwick, Sweeney Granite Mountains

8

plant

Scutellaria

tuberosa

NA

Angelo Coast Range, Blue Oak Ranch, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Stebbins Cold Canyon

8

plant

Selaginella

bigelovii



NA

Blue Oak Ranch, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, Motte Rimrock, Stunt Ranch

8

plant

*Sisymbrium*

*irio*

NA

Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Elliot Chaparral, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sweeney Granite Mountains

8

plant

*Trifolium*

*repens*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Chickering American River, Jepson Prairie, Kenneth S Norris Rancho Marino, Valentine Eastern Sierra

8

plant

*Urtica*

*dioica*

*holosericea*

Bodega, Dawson Los Monos Canyon, James San Jacinto Mountains, Jepson Prairie, McLaughlin, San Joaquin Freshwater Marsh, Sweeney Granite Mountains, Valentine Eastern Sierra

8

plant

*Urtica*

*urens*

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, San Joaquin Freshwater Marsh, Stunt Ranch

8

animal

*Aechmophorus*

*occidentalis*

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Quail Ridge, Scripps Coastal

9

animal

Anas

cyanoptera

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Sedgwick, Sweeney Granite Mountains

9

animal

Antrozous

pallidus

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Hastings, McLaughlin, Quail Ridge, Santa Cruz Island, White Mountain Research Center, Younger Lagoon

9

animal

Bassariscus

astutus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick

9

animal

Bucephala

albeola

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Quail Ridge, Sedgwick

9

animal

Geococcyx

californianus

NA

Boyd Deep Canyon, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, McLaughlin, Motte Rimrock, Sedgwick, Sweeney Granite Mountains

9

animal

Myotis

evotis

NA

Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Santa Cruz Island, Valentine Eastern Sierra, White Mountain Research Center, Younger Lagoon

9

animal

Pelecanus

erythrorhynchos

NA

Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Hastings, McLaughlin, Motte Rimrock, Sedgwick, Valentine Eastern Sierra

9

animal

Sialia

currucoides

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, James San Jacinto Mountains, Motte Rimrock, Sagehen Creek, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

9

animal

Stellula

calliope

NA

Boyd Deep Canyon, Coal Oil Point, Hastings, James San Jacinto Mountains, Motte Rimrock, Sedgwick, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

9

animal

Taxidea

taxus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, White Mountain Research Center, Younger Lagoon

9

animal

Zonotrichia

albicollis

NA

Angelo Coast Range, Bodega, Coal Oil Point, Hastings, Landels-Hill Big Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

9

plant

Acer

macrophyllum

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

9

plant

Aphanes

occidentalis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Hastings, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

9

plant

Barbarea

orthoceras

NA

Blue Oak Ranch, Bodega, Chickering American River, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Stebbins Cold Canyon

9

plant

Conium

maculatum

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Fort Ord, Hastings, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, San Joaquin Freshwater Marsh, Stebbins Cold Canyon

9

plant

Elymus

multisetus

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Sedgwick, Sweeney Granite Mountains, Valentine Eastern Sierra

9

plant

Hordeum

murinum

leporinum

Bodega, Carpinteria Salt Marsh, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, San Joaquin Freshwater Marsh, Sedgwick, Stebbins Cold Canyon

9

plant

Koeleria

macrantha

NA

Blue Oak Ranch, Bodega, Fort Ord, Hastings, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick

9

plant

Lepidium

nitidum

NA

Blue Oak Ranch, Bodega, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Sedgwick

9

plant

Phacelia

distans

NA

Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Motte Rimrock, Sweeney Granite Mountains

9

plant

Platystemon

californicus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Burns Pinon Ridge, Dawson Los Monos Canyon, Hastings, McLaughlin, Motte Rimrock, Sedgwick

9

plant

Polypogon

interruptus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Sedgwick

9

plant

*Quercus*

*berberidifolia*

NA

Blue Oak Ranch, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

9

plant

*Salix*

*exigua*

NA

Boyd Deep Canyon, Carpinteria Salt Marsh, Hastings, Jepson Prairie, Motte Rimrock, San Joaquin Freshwater Marsh, SNARL, Stebbins Cold Canyon, Sweeney Granite Mountains

9

plant

*Solanum*

*douglasii*

NA

Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Stunt Ranch

9

plant

*Symphoricarpos*

*mollis*

NA

Blue Oak Ranch, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

9

plant

*Trichostema*

*lanceolatum*

NA

Angelo Coast Range, Blue Oak Ranch, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sedgwick, Stunt Ranch

9

plant

Trifolium

ciliolatum

NA

Blue Oak Ranch, Carpinteria Salt Marsh, Elliot Chaparral, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Sedgwick, Stebbins Cold Canyon

9

animal

Actitis

macularia

NA

Angelo Coast Range, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Motte Rimrock, Quail Ridge, Sweeney Granite Mountains, Valentine Eastern Sierra

10

animal

Anas

americana

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, McLaughlin, Quail Ridge, Sedgwick, Valentine Eastern Sierra

10

animal

Anthus

rubescens

NA

Bodega, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Scripps Coastal, Sedgwick, Valentine Eastern Sierra

10

animal

Asio

otus

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Hastings, Motte Rimrock, Sagehen Creek, Stebbins Cold Canyon, Valentine Eastern Sierra, White Mountain Research Center

10

animal

Empidonax

wrightii

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, James San Jacinto Mountains, Motte Rimrock, Quail Ridge, Sagehen Creek, Stebbins Cold Canyon, Sweeney Granite Mountains, White Mountain Research Center

10

animal

Glaucidium

gnoma

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon

10

animal

Nycticorax

nycticorax

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, Motte Rimrock, Scripps Coastal, Sedgwick, Valentine Eastern Sierra

10

animal

Oreortyx

pictus

NA

Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra

10

animal

Peromyscus

boylii

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Fort Ord, Hastings, James San Jacinto Mountains, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick

10

animal

Peromyscus

californicus

NA



Blue Oak Ranch, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, Sedgwick, Stunt Ranch

10

animal

Peromyscus

truei

NA

Boyd Deep Canyon, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Stunt Ranch, White Mountain Research Center, Younger Lagoon

10

animal

Poocetes

gramineus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Coal Oil Point, Hastings, Motte Rimrock, Sagehen Creek, Sedgwick, Valentine Eastern Sierra, White Mountain Research Center

10

animal

Pseudacris

regilla

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Santa Cruz Island, Scripps Coastal, Sedgwick, Younger Lagoon

10

animal

Tyrannus

vociferans

NA

Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Motte Rimrock, Scripps Coastal, Sedgwick

10

animal

Uta

stansburiana

NA

Dawson Los Monos Canyon, Elliot Chaparral, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Santa Cruz Island, Scripps Coastal, Sedgwick, Sweeney Granite Mountains

10

plant

*Artemisia*

*dracunculus*

NA

Blue Oak Ranch, Boyd Deep Canyon, Burns Pinon Ridge, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sweeney Granite Mountains

10

plant

*Centaurea*

*solstitialis*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Elliot Chaparral, Hastings, Jepson Prairie, McLaughlin, Quail Ridge, Stebbins Cold Canyon, Stunt Ranch

10

plant

*Convolvulus*

*arvensis*

NA

Angelo Coast Range, Carpinteria Salt Marsh, Chickering American River, Dawson Los Monos Canyon, Hastings, Jepson Prairie, McLaughlin, San Joaquin Freshwater Marsh, Sedgwick, Sweeney Granite Mountains

10

plant

*Cotula*

*coronopifolia*

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Jepson Prairie, Landels-Hill Big Creek, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick

10

plant

*Datura*

*wrightii*

NA

Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Dawson Los Monos Canyon, Hastings, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sweeney Granite Mountains

10

plant

*Geranium*

*molle*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Fort Ord, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Stebbins Cold Canyon

10

plant

Lupinus

concinus

NA

Boyd Deep Canyon, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Elliot Chaparral, Fort Ord, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, Sweeney Granite Mountains

10

plant

Lupinus

nanus

NA

Blue Oak Ranch, Bodega, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick

10

plant

Nemophila

pedunculata

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Fort Ord, Hastings, McLaughlin, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Valentine Eastern Sierra

10

plant

Nicotiana

glauc

NA

Blue Oak Ranch, Boyd Deep Canyon, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Hastings, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stunt Ranch

10

plant

Poa

secunda

secunda

Angelo Coast Range, Boyd Deep Canyon, Burns Pinon Ridge, James San Jacinto Mountains, Jepson Prairie, McLaughlin, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

10

plant

Sanicula

bipinnatifida

NA

Angelo Coast Range, Blue Oak Ranch, Dawson Los Monos Canyon, Hastings, Jepson Prairie, McLaughlin, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

10

plant

Scrophularia

californica

NA

Bodega, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Stebbins Cold Canyon, Younger Lagoon

10

plant

Taraxacum

officinale

NA

Angelo Coast Range, Blue Oak Ranch, Chickering American River, Hastings, McLaughlin, Sagehen Creek, Scripps Coastal, SNARL, Stunt Ranch, Valentine Eastern Sierra

10

animal

Aegolius

acadicus

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Santa Cruz Island, Stebbins Cold Canyon, Sweeney Granite Mountains, White Mountain Research Center

11

animal

Anas

crecca

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Sagehen Creek, Sedgwick, Valentine Eastern Sierra

11

animal

Athene

cunicularia

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Elliot Chaparral, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Santa Cruz Island, Sedgwick, Sweeney Granite Mountains

11

animal

Bufo

boreas

NA

Angelo Coast Range, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, James San Jacinto Mountains, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

11

animal

Contopus

cooperi

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Coal Oil Point, Elliot Chaparral, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Scripps Coastal, Sedgwick

11

animal

Diadophis

punctatus

NA

Angelo Coast Range, Boyd Deep Canyon, Elliot Chaparral, James San Jacinto Mountains, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Younger Lagoon

11

animal

Fulica

americana

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Quail Ridge, Sedgwick, Sweeney Granite Mountains

11

animal

Larus

californicus

NA

Angelo Coast Range, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Kendall-Frost Mission Bay Marsh, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Stunt Ranch, Valentine Eastern Sierra

11

animal

Larus

delawarensis

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Stunt Ranch

11

animal

Lepus

californicus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, White Mountain Research Center

11

animal

Melanerpes

lewis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Sedgwick, Sweeney Granite Mountains

11

animal

Mustela

frenata

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, James San Jacinto Mountains, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stunt Ranch, Valentine Eastern Sierra, Younger Lagoon

11

animal

Myotis

californicus

NA

Blue Oak Ranch, Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Valentine Eastern Sierra, Younger Lagoon

11

animal

*Podilymbus*

*podiceps*

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, McLaughlin, Quail Ridge, Sedgwick

11

animal

*Reithrodontomys*

*megalotis*

NA

Blue Oak Ranch, Bodega, Fort Ord, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Sweeney Granite Mountains, Younger Lagoon

11

animal

*Vireo*

*cassinii*

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

11

plant

*Agoseris*

*grandiflora*

NA

Angelo Coast Range, Bodega, Chickering American River, Fort Ord, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Stebbins Cold Canyon, Stunt Ranch

11

plant

*Brickellia*

*californica*

NA

Angelo Coast Range, Boyd Deep Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

11

plant

*Dryopteris*

*arguta*

NA

Angelo Coast Range, Blue Oak Ranch, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

11

plant

*Eleocharis*

*macrostachya*

NA

Blue Oak Ranch, Bodega, Coal Oil Point, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, McLaughlin, Quail Ridge, Sagehen Creek, San Joaquin Freshwater Marsh, Sedgwick

11

plant

*Epilobium*

*brachycarpum*

NA

Angelo Coast Range, Blue Oak Ranch, Hastings, Jepson Prairie, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Valentine Eastern Sierra

11

plant

*Epilobium*

*ciliatum*

*ciliatum*

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Elliot Chaparral, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, SNARL, Stunt Ranch, Sweeney Granite Mountains

11

plant

*Equisetum*

*laevigatum*

NA

Blue Oak Ranch, Carpinteria Salt Marsh, Chickering American River, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Sedgwick, SNARL, Stunt Ranch

11

plant

*Juncus*

*mexicanus*

NA

Burns Pinon Ridge, Coal Oil Point, Dawson Los Monos Canyon, Hastings, Jepson Prairie, Motte Rimrock, Sedgwick, SNARL, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra



11

plant

Mimulus

cardinalis

NA

Angelo Coast Range, Blue Oak Ranch, Carpinteria Salt Marsh, Chickering American River, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Stebbins Cold Canyon, Stunt Ranch

11

plant

Plantago

major

NA

Angelo Coast Range, Blue Oak Ranch, Chickering American River, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, San Joaquin Freshwater Marsh, Sedgwick, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

11

plant

Polypodium

californicum

NA

Angelo Coast Range, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

11

plant

Rhamnus

ilicifolia

NA

Boyd Deep Canyon, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, McLaughlin, Quail Ridge, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains

11

plant

Salsola

tragus

NA

Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Elliot Chaparral, Kendall-Frost Mission Bay Marsh, McLaughlin, San Joaquin Freshwater Marsh, Scripps Coastal, SNARL, Stunt Ranch, Sweeney Granite Mountains

11

plant

Salvia

mellifera

NA

Blue Oak Ranch, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Landels-Hill Big Creek, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stunt Ranch

11

plant

Silybum

marianum

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, San Joaquin Freshwater Marsh, Sedgwick, Stebbins Cold Canyon

11

animal

Amphispiza

belli

NA

Angelo Coast Range, Boyd Deep Canyon, Burns Pinon Ridge, Elliot Chaparral, Hastings, McLaughlin, Quail Ridge, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

12

animal

Baeolophus

inornatus

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon

12

animal

Branta

canadensis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Hastings, McLaughlin, Quail Ridge, Sagehen Creek, Sweeney Granite Mountains

12

animal

Didelphis

virginiana

NA

Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Younger Lagoon

12

animal

Eptesicus

fuscus

NA

Angelo Coast Range, Blue Oak Ranch, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Santa Cruz Island, Sedgwick, Valentine Eastern Sierra, White Mountain Research Center, Younger Lagoon

12

animal

Haliaeetus

leucocephalus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Santa Cruz Island, Sedgwick, Stebbins Cold Canyon

12

animal

Lasiurus

cinereus

NA

Blue Oak Ranch, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Santa Cruz Island, Sedgwick, Sweeney Granite Mountains, White Mountain Research Center, Younger Lagoon

12

animal

Melanerpes

formicivorus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Coal Oil Point, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon

12

animal

Microtus

californicus

NA

Blue Oak Ranch, Boyd Deep Canyon, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Stunt Ranch, Younger Lagoon

12

animal

Petrochelidon

pyrrhonota

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Scripps Coastal, Sedgwick

12

animal

Regulus

satrapa

NA

Angelo Coast Range, Bodega, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

12

animal

Salpinctes

obsoletus

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Hastings, McLaughlin, Motte Rimrock, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

12

animal

Tadarida

brasiliensis

NA

Angelo Coast Range, Bodega, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Santa Cruz Island, Sedgwick, Valentine Eastern Sierra, White Mountain Research Center, Younger Lagoon

12

animal

Urocyon

cinereoargenteus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Valentine Eastern Sierra, Younger Lagoon

12

plant

*Apiastrum*

*angustifolium*

NA

Blue Oak Ranch, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

12

plant

*Cerastium*

*glomeratum*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Elliot Chaparral, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

12

plant

*Chenopodium*

*californicum*

NA

Blue Oak Ranch, Bodega, Burns Pinon Ridge, Coal Oil Point, Dawson Los Monos Canyon, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

12

plant

*Cynodon*

*dactylon*

NA

Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Jepson Prairie, Landels-Hill Big Creek, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

12

plant

*Malva*

*parviflora*

NA

Boyd Deep Canyon, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Hastings, Jepson Prairie, Kendall-Frost Mission Bay Marsh, Kenneth S Norris Rancho Marino, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

12

plant

Plagiobothrys

nothofulvus

NA

Angelo Coast Range, Blue Oak Ranch, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

12

plant

Rafinesquia

californica

NA

Blue Oak Ranch, Boyd Deep Canyon, Burns Pinon Ridge, Elliot Chaparral, Hastings, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

12

plant

Raphanus

sativus

NA

Bodega, Carpinteria Salt Marsh, Coal Oil Point, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick

12

plant

Rubus

ursinus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Hastings, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

12

plant

Salix

laevigata

NA

Angelo Coast Range, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Hastings, Jepson Prairie, McLaughlin, Motte Rimrock, San Joaquin Freshwater Marsh, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

12

animal

Aimophila

ruficeps

NA

Blue Oak Ranch, Box Springs, Boyd Deep Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

13

animal

Calypte

costae

NA

Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, Motte Rimrock, Scripps Coastal, Sedgwick, Sweeney Granite Mountains

13

animal

Catherpes

mexicanus

NA

Blue Oak Ranch, Box Springs, Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, White Mountain Research Center

13

animal

Elanus

leucurus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Box Springs, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Quail Ridge, Scripps Coastal, Sedgwick

13

animal

Empidonax

hammondii

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Hastings, James San Jacinto Mountains, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

13

animal

Empidonax

traillii

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sagehen Creek, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

13

animal

Icterus

bullockii

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Scripps Coastal, Sedgwick, Sweeney Granite Mountains

13

animal

Mephitis

mephitis

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, Younger Lagoon

13

animal

Passer

domesticus

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Scripps Coastal, Sedgwick, Sweeney Granite Mountains

13

animal

Pipilo



crissalis

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, McLaughlin, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

13

animal

Sphyrapicus

ruber

NA

Angelo Coast Range, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra

13

plant

Asclepias

fascicularis

NA

Angelo Coast Range, Blue Oak Ranch, Chickering American River, Dawson Los Monos Canyon, Hastings, Jepson Prairie, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

13

plant

Daucus

pusillus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

13

plant

Distichlis

spicata

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Dawson Los Monos Canyon, Hastings, Jepson Prairie, Kendall-Frost Mission Bay Marsh, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, San Joaquin Freshwater Marsh, Scripps Coastal

13

plant

Hirschfeldia

incana

NA

Boyd Deep Canyon, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Jepson Prairie, McLaughlin, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

13

plant

Juncus

xiphioides

NA

Blue Oak Ranch, Boyd Deep Canyon, Carpinteria Salt Marsh, Hastings, Jepson Prairie, Landels-Hill Big Creek, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

13

plant

Lupinus

succulentus

NA

Blue Oak Ranch, Carpinteria Salt Marsh, Coal Oil Point, Elliot Chaparral, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

13

plant

Rosa

californica

NA

Blue Oak Ranch, Chickering American River, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Jepson Prairie, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

13

plant

Salvia

columbariae

NA

Blue Oak Ranch, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

13

plant

Senecio

vulgaris

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Stebbins Cold Canyon

13

plant

Trifolium

willdenovii

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

13

plant

Uropappus

lindleyi

NA

Blue Oak Ranch, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

13

animal

Aphelocoma

californica

NA

Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick

14

animal

Certhia

americana

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, White Mountain Research Center

14

animal

Cyanocitta

stelleri

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

14

animal

Falco

columbarius

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Scripps Coastal, Sedgwick, Valentine Eastern Sierra

14

animal

Falco

mexicanus

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Elliot Chaparral, Hastings, McLaughlin, Motte Rimrock, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

14

animal

Ixoreus

naevius

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

14

animal

Phalacrocorax

auritus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Burns Pinon Ridge, Carpinteria Salt Marsh, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Santa Cruz Island, Scripps Coastal, Sedgwick, White Mountain Research Center

14

animal

Sceloporus

occidentalis

NA

Angelo Coast Range, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

14

animal

Stelgidopteryx

serripennis

NA

Bodega, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Valentine Eastern Sierra

14

animal

Sylvilagus

bachmani

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Fort Ord, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

14

plant

Bromus

tectorum

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Sedgwick, SNARL, Sweeney Granite Mountains

14

plant

Erodium

botrys

NA

Blue Oak Ranch, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

14

plant

Erodium

moschatum

NA

Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

14

plant

Foeniculum

vulgare

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Fort Ord, Hastings, Jepson Prairie, Landels-Hill Big Creek, San Joaquin Freshwater Marsh, Scripps Coastal, Stebbins Cold Canyon, Stunt Ranch

14

plant

Marrubium

vulgare

NA

Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

14

animal

Ardea

herodias

NA

Bodega, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Valentine Eastern Sierra

15

animal

Callipepla

californica

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, Motte Rimrock, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra

15

animal

Carpodacus

purpureus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra

15

animal

Columba

livia

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

15

animal

Eremophila

alpestris

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Motte Rimrock, Sagehen Creek, Scripps Coastal, Sedgwick, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

15

animal

Geothlypis

trichas

NA

Bodega, Boyd Deep Canyon, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sedgwick, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

15

animal

Icterus

cucullatus

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Motte Rimrock, Santa Cruz Island, Scripps Coastal, Sedgwick, Sweeney Granite Mountains, Valentine Eastern Sierra

15

animal

Lanius

ludovicianus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Elliot Chaparral, Hastings, James San Jacinto Mountains, McLaughlin, Motte Rimrock, Sagehen Creek, Sedgwick, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

15

animal

Lynx

rufus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Dawson Los Monos Canyon, Fort Ord, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stunt Ranch, Valentine Eastern Sierra

15

animal

Mimus

polyglottos

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Santa Cruz Island, Scripps Coastal, Sedgwick, Stunt Ranch

15

animal

Passerculus

sandwichensis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains

15



animal

Phainopepla

nitens

NA

Blue Oak Ranch, Boyd Deep Canyon, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

15

animal

Pipilo

maculatus

NA

Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

15

animal

Procyon

lotor

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Fort Ord, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, Younger Lagoon

15

plant

Artemisia

douglasiana

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Fort Ord, Hastings, Landels-Hill Big Creek, McLaughlin, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

15

plant

Bromus

madritensis

rubens

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, McLaughlin, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

15

plant

Eschscholzia

californica

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

15

plant

Lactuca

serriola

NA

Blue Oak Ranch, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Elliot Chaparral, Hastings, Jepson Prairie, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, San Joaquin Freshwater Marsh, Sedgwick, SNARL, Stebbins Cold Canyon

15

plant

Plantago

erecta

NA

Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

15

plant

Poa

annua

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Hastings, James San Jacinto Mountains, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

15

plant

Pterostegia

drymarioides

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

15

plant

Rumex

crispus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, San Joaquin Freshwater Marsh, Scripps Coastal, Stebbins Cold Canyon, Stunt Ranch

15

plant

Sanicula

crassicaulis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

15

plant

Trifolium

microcephalum

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon

15

animal

Anas

platyrhynchos

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Valentine Eastern Sierra

16

animal

Carduelis

lawrencei

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

16

animal

Carduelis

pinus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

16

animal

Chondestes

grammacus

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra

16

animal

Melospiza

lincolnii

NA

Bodega, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

16

animal

Phalaenoptilus

nuttallii

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra

16

animal

Picoides

villosus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

16

animal

Polioptila

caerulea

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Santa Cruz Island, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, White Mountain Research Center

16

animal

Sitta

canadensis

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Sedgwick, Stunt Ranch, White Mountain Research Center

16

animal

Spermophilus

beecheyi

NA

Blue Oak Ranch, Boyd Deep Canyon, Dawson Los Monos Canyon, Fort Ord, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, Younger Lagoon

16

animal

Tachycineta

bicolor

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra

16

animal

Thomomys

bottae

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Dawson Los Monos Canyon, Fort Ord, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Scripps Coastal, Sedgwick, White Mountain Research Center, Younger Lagoon

16

animal

Toxostoma

redivivum

NA

Angelo Coast Range, Blue Oak Ranch, Boyd Deep Canyon, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Emerson Oaks, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stunt Ranch

16

animal

Troglodytes

aedon

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, White Mountain Research Center

16

plant

Brassica

nigra

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, McLaughlin, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

16

plant

Capsella

bursa-pastoris

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Chickering American River, Dawson Los Monos Canyon, Hastings, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

16

plant

*Centaurea*

*melitensis*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Elliot Chaparral, Fort Ord, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

16

plant

*Cirsium*

*vulgare*

NA

Blue Oak Ranch, Bodega, Chickering American River, Coal Oil Point, Fort Ord, Hastings, James San Jacinto Mountains, Jepson Prairie, Kenneth S Norris Rancho Marino, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, SNARL

16

plant

*Lupinus*

*bicolor*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Coal Oil Point, Elliot Chaparral, Fort Ord, Hastings, James San Jacinto Mountains, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

16

plant

*Melica*

*imperfecta*

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains

16

plant

*Silene*

*gallica*

NA

Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

16

plant

Stellaria

media

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

16

animal

Agelaius

phoeniceus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Sweeney Granite Mountains, Valentine Eastern Sierra

17

animal

Archilochus

alexandri

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

17

animal

Bombycilla

cedrorum

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

17

animal

Canis

latrans

NA



Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Fort Ord, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center, Younger Lagoon

17

animal

Picoides

nuttallii

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

17

animal

Tachycineta

thalassina

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

17

animal

Thryomanes

bewickii

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, White Mountain Research Center

17

animal

Vireo

huttoni

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Emerson Oaks, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

17

plant

Achillea

millefolium

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Fort Ord, Hastings, James San Jacinto Mountains, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Sedgwick, SNARL, Stebbins Cold Canyon, Valentine Eastern Sierra, Younger Lagoon

17

plant

*Avena*

*fatua*

NA

Blue Oak Ranch, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kendall-Frost Mission Bay Marsh, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

17

plant

*Crassula*

*connata*

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

17

plant

*Hypochaeris*

*glabra*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Coal Oil Point, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

17

plant

*Medicago*

*polymorpha*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon

17

plant

*Melilotus*

indicus

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

17

animal

Buteo

lineatus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Emerson Oaks, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stunt Ranch, Valentine Eastern Sierra

18

animal

Catharus

ustulatus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Hastings, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

18

animal

Chamaea

fasciata

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Emerson Oaks, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

18

animal

Charadrius

vociferus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

18

animal

Circus

cyaneus

NA

Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

18

animal

Corvus

brachyrhynchos

NA

Angelo Coast Range, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

18

animal

Peromyscus

maniculatus

NA

Bodega, Boyd Deep Canyon, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center, Younger Lagoon

18

animal

Sayornis

saya

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

18

animal

Sitta

carolinensis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

18

animal

Tyto

alba

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Santa Cruz Island, Scripps Coastal, Sedgwick, Sweeney Granite Mountains

18

plant

Gnaphalium

palustre

NA

Blue Oak Ranch, Boyd Deep Canyon, Burns Pinon Ridge, Chickering American River, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Jepson Prairie, McLaughlin, Motte Rimrock, Sagehen Creek, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, SNARL, Sweeney Granite Mountains, Valentine Eastern Sierra

18

plant

Salix

lasiolepis

NA

Angelo Coast Range, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Younger Lagoon

18

plant

Sisyrinchium

bellum

NA

Blue Oak Ranch, Bodega, Boyd Deep Canyon, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Quail Ridge, San Joaquin Freshwater Marsh, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Younger Lagoon

18

plant

Toxicodendron

diversilobum

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, James San Jacinto Mountains, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

18

animal

Accipiter

striatus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

19

animal

Aeronautes

saxatalis

NA

Blue Oak Ranch, Box Springs, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Valentine Eastern Sierra, White Mountain Research Center

19

animal

Carduelis

tristis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

19

animal

Hirundo

rustica

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

19

animal

Pandion

haliaetus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

19

animal

Picoides

pubescens

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

19

animal

Piranga

ludoviciana

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

19

animal

Sialia

mexicana

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

19

animal

Tyrannus

verticalis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

19

animal

Vireo

gilvus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

19

animal

Zonotrichia

atricapilla

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sagehen Creek, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains

19

plant

Avena

barbata

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kendall-Frost Mission Bay Marsh, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

19

plant

Sonchus

oleraceus



NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains

19

animal

Accipiter

cooperii

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Emerson Oaks, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra

20

animal

Aquila

chrysaetos

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Box Springs, Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

20

animal

Carpodacus

mexicanus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, White Mountain Research Center

20

animal

Molothrus

ater

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

20

animal

Myiarchus

cinerascens

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch

20

animal

Passerella

iliaca

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

20

animal

Sayornis

nigricans

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

20

animal

Selasphorus

rufus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

20

plant

Mimulus

guttatus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Burns Pinon Ridge, Chickering American River, Dawson Los Monos Canyon, Hastings, James San Jacinto Mountains, Jepson Prairie, Kenneth S Norris Rancho Marino, McLaughlin, Motte Rimrock, Sagehen Creek, Scripps Coastal, Sedgwick, SNARL, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

20

animal

Catharus

guttatus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

21

animal

Melospiza

melodia

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

21

animal

Turdus

migratorius

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

21

animal

Zonotrichia

leucophrys

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Sagehen Creek, Scripps Coastal, Sedgwick, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

21

animal

Zonotrichia

leucophrys

NA

White Mountain Research Center

21

plant

Bromus

hordeaceus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

21

animal

Bubo

virginianus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra

22

animal

Calypte

anna

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Box Springs, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains

22

animal

Carduelis

psaltria

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra

22

animal

Cathartes

aura

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Box Springs, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

22

animal

Contopus

sordidulus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

22

animal

Corvus

corax

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

22

animal

Euphagus

cyanocephalus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps

Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

22

animal

Pheucticus

melanocephalus

NA

Angelo Coast Range, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

22

animal

Psaltiriparus

minimus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, White Mountain Research Center

22

animal

Spizella

passerina

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

22

plant

Erodium

cicutarium

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, James San Jacinto Mountains, Jepson Prairie, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

22

plant

Galium

aparine

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Chickering American River, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Jepson Prairie, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

22

plant

Polypogon

monspeliensis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Elliot Chaparral, Hastings, Jepson Prairie, Kendall-Frost Mission Bay Marsh, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

22

animal

Junco

hyemalis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

23

animal

Regulus

calendula

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

23

animal

*Sturnella*

*neglecta*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Box Springs, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

23

animal

*Sturnus*

*vulgaris*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

23

animal

*Zenaida*

*macroura*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

23

animal

*Empidonax*

*difficilis*

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra

24

animal

*Passerina*



amoena

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Box Springs, Boyd Deep Canyon, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

24

plant

Bromus

diandrus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Fort Ord, Hastings, Jepson Prairie, Kendall-Frost Mission Bay Marsh, Kenneth S Norris Rancho Marino, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, San Joaquin Freshwater Marsh, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains

24

animal

Buteo

jamaicensis

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Box Springs, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Emerson Oaks, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra

25

animal

Colaptes

auratus

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Sweeney Granite Mountains, Valentine Eastern Sierra, White Mountain Research Center

25

animal

Falco

sparverius

NA

Angelo Coast Range, Blue Oak Ranch, Bodega, Box Springs, Boyd Deep Canyon, Burns Pinon Ridge, Carpinteria Salt Marsh, Coal Oil Point, Dawson Los Monos Canyon, Elliot Chaparral, Emerson Oaks, Hastings, James San Jacinto Mountains, Kendall-Frost Mission Bay Marsh, Landels-Hill Big Creek, McLaughlin, Motte Rimrock, Quail Ridge, Sagehen Creek, Santa Cruz Island, Scripps Coastal, Sedgwick, Stebbins Cold Canyon, Stunt Ranch, Valentine Eastern Sierra, White Mountain Research Center

26

```
# Calculate Chart of Threshold for Species
```

```
speciesBelowReserveThreshold <- matchingSpeciesWithUnique %>%
  group_by(count) %>%
  rename(number_of_reserves = count) %>%
  summarize(number_of_species_found_in_n_reserves = n()) %>%
  mutate(number_of_species_found_in_n_or_fewer_reserves =
    cumsum(number_of_species_found_in_n_reserves)) %>%
  mutate(proportion_of_species_found_in_n_or_fewer_reserves =
    number_of_species_found_in_n_or_fewer_reserves /
    totalSpecies) %>%
  mutate(percent_of_species_found_in_n_or_fewer_reserves =
    paste0(format(100 * proportion_of_species_found_in_n_or_fewer_reserves,
      digits = 3), "%"))
```

```
speciesBelowReserveThreshold
```

```
## # A tibble: 27 x 5
##   number_of_reserv~ number_of_specie~ number_of_specie~ proportion_of_sp~
##           <dbl>           <int>           <int>           <dbl>
## 1             0             395             395             0.300
## 2             1.00           144             539             0.409
## 3             2.00           115             654             0.497
## 4             3.00            96             750             0.569
## 5             4.00            79             829             0.629
## 6             5.00            58             887             0.674
## 7             6.00            61             948             0.720
## 8             7.00            45             993             0.754
## 9             8.00            48            1041             0.790
## 10            9.00            29            1070             0.812
## # ... with 17 more rows, and 1 more variable:
## #   percent_of_species_found_in_n_or_fewer_reserves <chr>
```

```
# Calculate Chart of Threshold for Animals
```

```
animalsBelowReserveThreshold <- matchingSpeciesWithUnique %>%
  group_by(count, kingdom) %>%
  summarize(number_of_species_found_in_n_reserves = n()) %>%
  filter(kingdom == "animal") %>%
  select(number_of_reserves = count,
    number_of_species_found_in_n_reserves) %>%
  ungroup() %>%
  mutate(number_of_species_found_in_n_or_fewer_reserves =
    cumsum(number_of_species_found_in_n_reserves)) %>%
  mutate(proportion_of_species_found_in_n_or_fewer_reserves =
    number_of_species_found_in_n_or_fewer_reserves /
```

```

      totalAnimals) %>%
mutate(percent_of_species_found_in_n_or_fewer_reserves =
      paste0(format(100 * proportion_of_species_found_in_n_or_fewer_reserves,
        digits = 3), "%"))

```

```
animalsBelowReserveThreshold
```

```

## # A tibble: 27 x 5
##   number_of_reserv~ number_of_specie~ number_of_specie~ proportion_of_sp~
##           <dbl>           <int>           <int>           <dbl>
## 1             0             34             34           0.0963
## 2           1.00             18             52           0.147
## 3           2.00             19             71           0.201
## 4           3.00             14             85           0.241
## 5           4.00             18            103           0.292
## 6           5.00             19            122           0.346
## 7           6.00             32            154           0.436
## 8           7.00             15            169           0.479
## 9           8.00             16            185           0.524
## 10          9.00             12            197           0.558
## # ... with 17 more rows, and 1 more variable:
## #   percent_of_species_found_in_n_or_fewer_reserves <chr>

```

```
# Calculate Chart of Threshold for Plants
```

```

plantsBelowReserveThreshold <- matchingSpeciesWithUnique %>%
  group_by(count, kingdom) %>%
  summarize(number_of_species_found_in_n_reserves = n()) %>%
  filter(kingdom == "plant") %>%
  select(number_of_reserves = count,
    number_of_species_found_in_n_reserves) %>%
  ungroup() %>%
  mutate(number_of_species_found_in_n_or_fewer_reserves =
    cumsum(number_of_species_found_in_n_reserves)) %>%
  mutate(proportion_of_species_found_in_n_or_fewer_reserves =
    number_of_species_found_in_n_or_fewer_reserves /
    total_plant_species_in_conservancy) %>%
  mutate(percent_of_species_found_in_n_or_fewer_reserves =
    paste0(format(100 * proportion_of_species_found_in_n_or_fewer_reserves,
      digits = 3), "%"))

```

```
plantsBelowReserveThreshold
```

```

## # A tibble: 24 x 5
##   number_of_reserv~ number_of_specie~ number_of_specie~ proportion_of_sp~
##           <dbl>           <int>           <int>           <dbl>
## 1             0            361            361           0.374
## 2           1.00            126            487           0.505
## 3           2.00             96            583           0.605
## 4           3.00             82            665           0.690
## 5           4.00             61            726           0.753
## 6           5.00             39            765           0.794
## 7           6.00             29            794           0.824
## 8           7.00             30            824           0.855
## 9           8.00             32            856           0.888

```

```
## 10          9.00          17          873          0.906
## # ... with 14 more rows, and 1 more variable:
## #   percent_of_species_found_in_n_or_fewer_reserves <chr>
# Bind tables, combining by kingdom

speciesComparisonAllReserveNumbers <- bind_rows("species" = speciesBelowReserveThreshold,
                                                "animals" = animalsBelowReserveThreshold,
                                                "plants" = plantsBelowReserveThreshold,
                                                .id = "category")

speciesComparisonAllReserveNumbersShort <- speciesComparisonAllReserveNumbers %>%
  filter(category == "species") %>%
  select(number_of_reserves, number_of_species_found_in_n_reserves,
         number_of_species_found_in_n_or_fewer_reserves, percent_of_species_found_in_n_or_fewer_reserves)

animalsComparisonAllReserveNumbersShort <- speciesComparisonAllReserveNumbers %>%
  filter(category == "animals") %>%
  select(number_of_reserves, number_of_species_found_in_n_reserves,
         number_of_species_found_in_n_or_fewer_reserves, percent_of_species_found_in_n_or_fewer_reserves)

plantsComparisonAllReserveNumbersShort <- speciesComparisonAllReserveNumbers %>%
  filter(category == "plants") %>%
  select(number_of_reserves, number_of_species_found_in_n_reserves,
         number_of_species_found_in_n_or_fewer_reserves, percent_of_species_found_in_n_or_fewer_reserves)

# Make a table for presentation

speciesComparisonAllReserveNumbersViz <- speciesComparisonAllReserveNumbersShort %>%
  kable(format = "html", align = "rccc",
        col.names = gsub("_", " ", capitalize(colnames(speciesComparisonAllReserveNumbersShort)))) %>%
  kable_styling

animalsComparisonAllReserveNumbersViz <- animalsComparisonAllReserveNumbersShort %>%
  kable(format = "html", align = "rccc",
        col.names = gsub("_", " ", capitalize(colnames(animalsComparisonAllReserveNumbersShort)))) %>%
  kable_styling

plantsComparisonAllReserveNumbersViz <- plantsComparisonAllReserveNumbersShort %>%
  kable(format = "html", align = "rccc",
        col.names = gsub("_", " ", capitalize(colnames(plantsComparisonAllReserveNumbersShort)))) %>%
  kable_styling

speciesComparisonAllReserveNumbersViz
```

Number of reserves

Number of species found in n reserves

Number of species found in n or fewer reserves

Percent of species found in n or fewer reserves

0

395

395

30.0%

1

144

539

40.9%

2

115

654

49.7%

3

96

750

56.9%

4

79

829

62.9%

5

58

887

67.4%

6

61

948

72.0%

7

45

993

75.4%

8

48

1041

79.0%

9

29

1070

81.2%

10

29

1099

83.4%

11

31

1130

85.8%

12

24

1154

87.6%

13

22

1176

89.3%

14

15

1191

90.4%

15

24

1215

92.3%

16

22

1237

93.9%

17

14

1251

95.0%

18

14

1265

96.1%

19

13

1278

97.0%

20

9

1287

97.7%

21

6

1293

98.2%

22

13

1306

99.2%

23

5

1311

99.5%

24

3

1314

99.8%

25

2

1316

99.9%

26

1

1317

100.0%

animalsComparisonAllReserveNumbersViz

Number of reserves

Number of species found in n reserves

Number of species found in n or fewer reserves

Percent of species found in n or fewer reserves

0

34

34

9.63%

1

18

52

14.73%

2

19

71

20.11%

3

14

85

24.08%

4

18

103

29.18%

5

19

122

34.56%

6

32

154

43.63%

7

15

169

47.88%

8

16



185  
52.41%  
9  
12  
197  
55.81%  
10  
15  
212  
60.06%  
11  
16  
228  
64.59%  
12  
14  
242  
68.56%  
13  
11  
253  
71.67%  
14  
10  
263  
74.50%  
15  
14  
277  
78.47%  
16  
14  
291  
82.44%  
17  
8

299  
84.70%  
18  
10  
309  
87.54%  
19  
11  
320  
90.65%  
20  
8  
328  
92.92%  
21  
5  
333  
94.33%  
22  
10  
343  
97.17%  
23  
5  
348  
98.58%  
24  
2  
350  
99.15%  
25  
2  
352  
99.72%  
26  
1

353

100.00%

plantsComparisonAllReserveNumbersViz

Number of reserves

Number of species found in n reserves

Number of species found in n or fewer reserves

Percent of species found in n or fewer reserves

0

361

361

37.4%

1

126

487

50.5%

2

96

583

60.5%

3

82

665

69.0%

4

61

726

75.3%

5

39

765

79.4%

6

29

794

82.4%

7

30  
824  
85.5%  
8  
32  
856  
88.8%  
9  
17  
873  
90.6%  
10  
14  
887  
92.0%  
11  
15  
902  
93.6%  
12  
10  
912  
94.6%  
13  
11  
923  
95.7%  
14  
5  
928  
96.3%  
15  
10  
938  
97.3%  
16

8  
946  
98.1%  
17  
6  
952  
98.8%  
18  
4  
956  
99.2%  
19  
2  
958  
99.4%  
20  
1  
959  
99.5%  
21  
1  
960  
99.6%  
22  
3  
963  
99.9%  
24  
1  
964  
100.0%

## Summary Statistics

```
# Create a long-format comparison table should we need it  
  
allComparisonTableLong <- allComparisonTable %>%  
  gather(proportion_matching_species_in_reserve,
```

```

    proportion_matching_species_in_conservancy,
    key = "proportion_type", value = "proportion")

# Order reserve by factors so as to use in plots

speciesComparison <- allComparisonTable %>%
  filter(kingdom == "species")

speciesComparison$reserve <-
  factor(speciesComparison$reserve,
    levels = unique(speciesComparison$reserve)[order(speciesComparison$proportion_matching_species,
      decreasing = TRUE)])

# Set margins

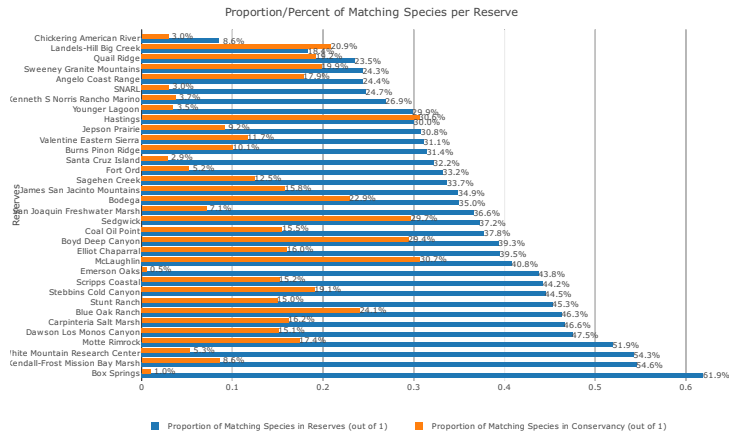
margins <- list(l = 200, r = 0, b = 0, t = 40, pad = 0.5)

# Plot % species present in each reserve that are also in the conservancy

speciesComparison %>%
  plot_ly(y = ~reserve,
    x = ~proportion_matching_species_in_reserve,
    type = "bar",
    name = "Proportion of Matching Species in Reserves (out of 1)",
    orientation = "h",
    width = 1100,
    height = 670) %>%
  add_trace(x = ~proportion_matching_species_in_conservancy,
    name = "Proportion of Matching Species in Conservancy (out of 1)") %>%
  layout(title = "Proportion/Percent of Matching Species per Reserve",
    yaxis = list(title = "Reserves", b = 20),
    xaxis = list(title = ""),

    barmode = "group",
    autosize = FALSE,
    margin = margins,
    legend = list(orientation = "h",
      x = 0, b = 0)) %>%
  add_annotations(x = speciesComparison$proportion_matching_species_in_conservancy,
    y = speciesComparison$reserve,
    text = speciesComparison$percent_matching_species_in_conservancy,
    xref = "x", yref = "y",
    showarrow = TRUE, arrowhead = 4, arrowsize = .01,
    ax = 20, ay = -4.5) %>%
  add_annotations(x = speciesComparison$proportion_matching_species_in_reserve,
    y = speciesComparison$reserve,
    text = speciesComparison$percent_matching_species_in_reserve,
    xref = "x", yref = "y",
    showarrow = TRUE, arrowhead = 4, arrowsize = .01,
    ax = 20, ay = 3)

```



```
# Order reserve by factors so as to use in plots
```

```
animalsComparison <- allComparisonTable %>%
  filter(kingdom == "animals")
```

```
animalsComparison$reserve <-
  factor(animalsComparison$reserve,
    levels = unique(animalsComparison$reserve)[order(animalsComparison$proportion_matching_species,
      decreasing = TRUE)])
```

```
# Set margins
```

```
margins <- list(l = 200, r = 0, b = 0, t = 40, pad = 0.5)
```

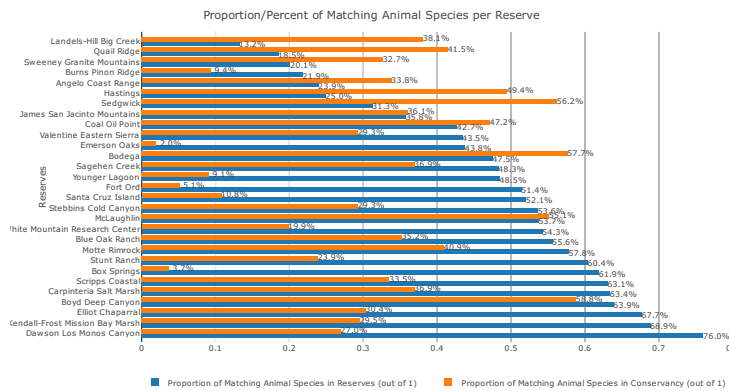
```
# Plot % species present in each reserve that are also in the conservancy
```

```
animalsComparison %>%
  plot_ly(y = ~reserve,
    x = ~proportion_matching_species_in_reserve,
    type = "bar",
    name = "Proportion of Matching Animal Species in Reserves (out of 1)",
    orientation = "h",
    width = 1100,
    height = 600) %>%
  add_trace(x = ~proportion_matching_species_in_conservancy,
    name = "Proportion of Matching Animal Species in Conservancy (out of 1)") %>%
  layout(title = "Proportion/Percent of Matching Animal Species per Reserve",
```

```

yaxis = list(title = "Reserves", r = 50),
xaxis = list(title = ""),
barmode = "group",
autosize = FALSE,
margin = margins,
legend = list(orientation = "h",
              x = 0, b = 0)) %>%
add_annotations(x = animalsComparison$proportion_matching_species_in_reserve,
               y = animalsComparison$reserve,
               text = animalsComparison$percent_matching_species_in_reserve,
               xref = "x", yref = "y",
               showarrow = TRUE, arrowhead = 4, arrowsize = .01,
               ax = 20, ay = 4) %>%
add_annotations(x = animalsComparison$proportion_matching_species_in_conservancy,
               y = animalsComparison$reserve,
               text = animalsComparison$percent_matching_species_in_conservancy,
               xref = "x", yref = "y",
               showarrow = TRUE, arrowhead = 4, arrowsize = .01,
               ax = 20, ay = -5)

```



```
# Order reserve by factors so as to use in plots
```

```
plantsComparison <- allComparisonTable %>%
  filter(kingdom == "plants")
```

```
plantsComparison$reserve <-
  factor(plantsComparison$reserve,
         levels = unique(plantsComparison$reserve)[order(plantsComparison$proportion_matching_species_in_reserve,
                                                           decreasing = TRUE)]])
```



```

# Set margins
margins <- list(l = 200, r = 0, b = 0, t = 40, pad = 0.5)

# Plot % species present in each reserve that are also in the conservancy
plantsComparison %>%
  plot_ly(y = ~reserve,
          x = ~proportion_matching_species_in_reserve,
          type = "bar",
          name = "Proportion of Matching Plant Species in Reserves (out of 1)",
          orientation = "h",
          width = 1100,
          height = 600) %>%
  add_trace(x = ~proportion_matching_species_in_conservancy,
            name = "Proportion of Matching Plant Species in Conservancy (out of 1)") %>%
  layout(title = "Proportion/Percent of Matching Plant Species per Reserve",
         yaxis = list(title = "Reserves", r = 50),
         xaxis = list(title = ""),
         bargroup = "group",
         autosize = FALSE,
         margin = margins,
         legend = list(orientation = "h",
                       x = 0, b = 0)) %>%
  add_annotations(x = plantsComparison$proportion_matching_species_in_reserve,
                 y = plantsComparison$reserve,
                 text = plantsComparison$percent_matching_species_in_reserve,
                 xref = "x", yref = "y",
                 showarrow = TRUE, arrowhead = 4, arrowsize = .01,
                 ax = 20, ay = 4) %>%
  add_annotations(x = plantsComparison$proportion_matching_species_in_conservancy,
                 y = plantsComparison$reserve,
                 text = plantsComparison$percent_matching_species_in_conservancy,
                 xref = "x", yref = "y",
                 showarrow = TRUE, arrowhead = 4, arrowsize = .01,
                 ax = 20, ay = -5)

```



```

    name = "Plant Species Found in X or Fewer Reserves",
    width = 1200,
    height = 500) %>%
add_trace(y = ~category_number_of_species_found_in_n_or_fewer_reserves_animals,
    name = "Animal Species Found in X or Fewer Reserves",
    fill = "tozeroy") %>%
layout(title = "Number of Species in Conservancy Found in X or Fewer Reserves",
    yaxis = list(title = "# of Conservancy Species", b = 20),
    xaxis = list(title = "# of Reserves (X)", dtick = 1),
    autosize = FALSE,
    margin = margins,
    legend = list(orientation = "h", x = 0.01, y = 1)) %>%
add_annotations(x = speciesCountsDisaggregated$number_of_reserves,
    y = speciesCountsDisaggregated$number_of_species_found_in_n_or_fewer_reserves,
    text = speciesCountsDisaggregated$percent_of_species_found_in_n_or_fewer_reserves,
    xref = "x", yref = "y",
    showarrow = TRUE, arrowhead = 7, arrowsize = .001,
    ax = 15, ay = 20) %>%
add_annotations(x = speciesCountsDisaggregated$number_of_reserves,
    y = speciesCountsDisaggregated$number_of_species_found_in_n_or_fewer_reserves,
    text = speciesCountsDisaggregated$number_of_species_found_in_n_or_fewer_reserves,
    xref = "x", yref = "y",
    showarrow = TRUE, arrowhead = 7, arrowsize = .001,
    ax = 5, ay = -20)

```

