

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 -----
```

```
## 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 -----
```

```
## 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~ Hyliid~ 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%

33.5%

Sweeney Granite Mountains

115

572

20.1%

32.7%

Elliot Chaparral

107

158

67.7%

30.4%

Kendall-Frost Mission Bay Marsh

104

151

68.9%

29.5%

Stebbins Cold Canyon

103

192

53.6%

29.3%

Valentine Eastern Sierra

103

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

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1076

24.3%

19.9%

Quail Ridge

253

1076

23.5%

19.2%

Stebbins Cold Canyon

251

564

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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
0

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
Packeria
breweri
NA
NA
0
plant
Packeria
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

Pooecetes

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

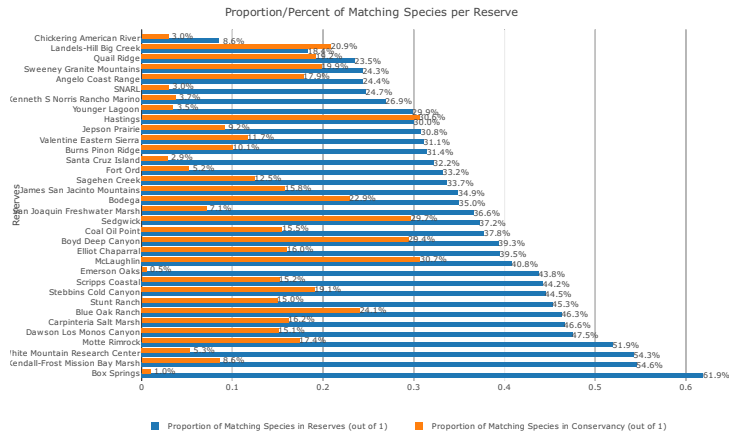
margins <- list(l = 200, r = 0, b = 0, t = 40, pad = 0.5)

# 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)

```



```
speciesComparisonSubset <- speciesComparison %>%
  mutate(rank_reserve_match = 35 - row_number(proportion_matching_species_in_reserve)) %>%
  mutate(rank_conservancy_match = 35 - row_number(proportion_matching_species_in_conservancy)) %>%
  mutate_if(is.factor, as.character) %>%
  filter((rank_reserve_match < 11) | (rank_conservancy_match < 11))

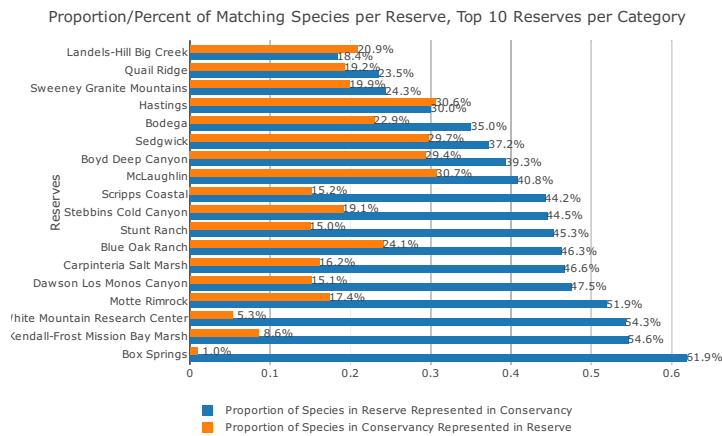
speciesComparisonSubset$reserve <-
  factor(speciesComparisonSubset$reserve,
    levels = unique(speciesComparisonSubset$reserve)[order(speciesComparisonSubset$proportion_matching_species_in_reserve,
      decreasing = TRUE)])

speciesComparisonSubset %>%
  plot_ly(y = ~reserve,
    x = ~proportion_matching_species_in_reserve,
    type = "bar",
    name = "Proportion of Species in Reserve Represented in Conservancy",
    orientation = "h",
    width = 800,
    height = 500) %>%
  add_trace(x = ~proportion_matching_species_in_conservancy,
    name = "Proportion of Species in Conservancy Represented in Reserve") %>%
  layout(title = "Proportion/Percent of Matching Species per Reserve, Top 10 Reserves per Category",
    yaxis = list(title = "Reserves", b = 20),
    xaxis = list(title = ""),
    barmode = "group",
    autosize = FALSE,
    margin = list(l = 200, r = 0, b = 0, t = 40, pad = 0.5),
```

```

legend = list(orientation = "h",
              x = 0, b = 0)) %>%
add_annotations(x = speciesComparisonSubset$proportion_matching_species_in_conservancy,
               y = speciesComparisonSubset$reserve,
               text = speciesComparisonSubset$percent_matching_species_in_conservancy,
               xref = "x", yref = "y",
               showarrow = TRUE, arrowhead = 4, arrowsize = .01,
               ax = 20, ay = -4.5) %>%
add_annotations(x = speciesComparisonSubset$proportion_matching_species_in_reserve,
               y = speciesComparisonSubset$reserve,
               text = speciesComparisonSubset$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
```



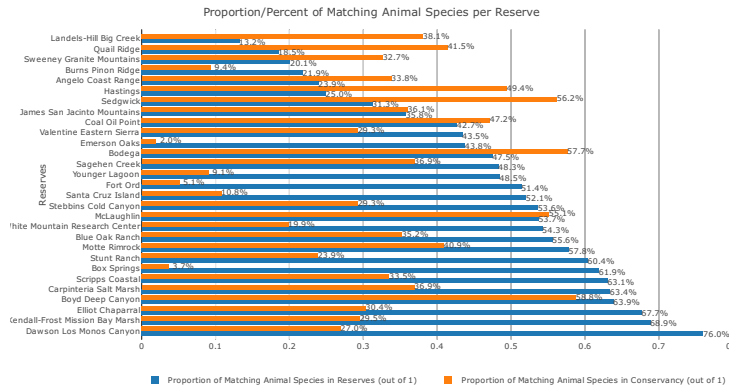
```

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 = ""),
         bargroup = "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)
```

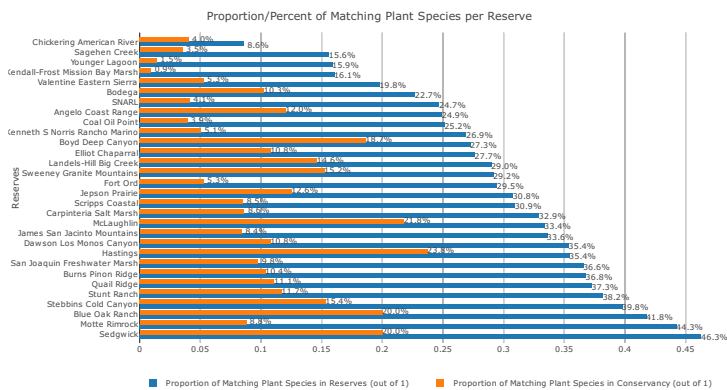
```
# Plot % species present in each reserve that are also in the conservancy
```

```
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 = ""),
    bargmode = "group",
```

```

autosize = FALSE,
margin = margins,
legend = list(orientation = "h",
              x = 0, b = 0)) %>%
add_annotatons(x = plantsComparison$proportion_matching_species_in_reserve,
              y = plantsComparison$reserve,
              text = plantsComparison$percent_matching_species_in_reserve,
              xref = "x", yref = "y",
              showarrow = TRUE, arrowhead = 4, arrowsize = .01,
              ax = 20, ay = 4) %>%
add_annotatons(x = plantsComparison$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)

```



Prepare and otherwise Spread data for plotly use

```

speciesCounts <- speciesComparisonAllReserveNumbers %>%
  select(category, number_of_reserves, number_of_species_found_in_n_or_fewer_reserves,
         percent_of_species_found_in_n_or_fewer_reserves) %>%
  filter(category == "species") %>%
  select(-category)

speciesCountsDisaggregated <- speciesComparisonAllReserveNumbers %>%
  select(category, number_of_reserves, number_of_species_found_in_n_or_fewer_reserves) %>%
  filter(category %in% c("plants", "animals")) %>%
  spread(category, number_of_species_found_in_n_or_fewer_reserves,
         sep = "_number_of_species_found_in_n_or_fewer_reserves_") %>%

```

```

left_join(speciesCounts, by = "number_of_reserves")

speciesCountsDisaggregated$category_number_of_species_found_in_n_or_fewer_reserves_plants[which(speciesCountsDisaggregated$category_number_of_species_found_in_n_or_fewer_reserves_plants[which(is.na(speciesCountsDisaggregated$number_of_species_found_in_n_or_fewer_reserves_plants))]) = 0] = NA

# Set margins
margins <- list(l = 50, r = 0, b = 50, t = 30, pad = 0.5)

# Plot % species present in each reserve that are also in the conservancy
speciesCountsDisaggregated %>%
  plot_ly(x = ~number_of_reserves,
          y = ~number_of_species_found_in_n_or_fewer_reserves,
          type = "scatter",
          mode = "lines",
          fill = "tozeroy",
          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)

```

