State of California
DEPARTMENT OF FISH AND GAME
Wildlife & Habitat Data Analysis Branch

HOW TO READ CALIFORNIA NATURAL DIVERSITY DATABASE ***RareFind* 2** REPORTS

The California Natural Diversity Database (CNDDB) is a computerized inventory of information on the location and condition of California's rare, threatened, endangered, and sensitive plants, animals, and natural communities. This information is available, at cost, from the Department of Fish and Game in the form of computer-generated reports and map overlays. ***RareFind 2* is a PC-based application of the CNDDB.**

DEFINITIONS

The individual species and communities in our inventory are referred to as "elements" in our reports. There are four categories of elements: Special Plants, Special Animals, Natural Communities, and Aquatic Communities. An "element occurrence" is a site which contains a population or stand of a sensitive element. Although the specific definition of an element occurrence differs among the various elements, with few exceptions, most occurrences can be identified by one of the following general definitions.

1. *Plants* - A population or group of populations found within ¼ mile and not separated by significant habitat discontinuities.

2. *Animals With Limited Mobility* (most invertebrates, amphibians, reptiles, small mammals, and resident birds) - The location where a specimen was collected, or observed. This is assumed to represent a sample of a breeding population.

3. *Mobile Animals* - (migratory birds and larger mammals) - The location of breeding areas (including nesting territories, dens, and leks) or parts of the range of a mobile population. This may include roosts, overwintering areas, staging areas, etc.

4. *Mobile Aquatic Animals* - The location where a specimen was collected (taken to represent a sample of a population). It may include other sites upstream and downstream which are not separated by a major habitat discontinuity or a physical barrier.

5. *Terrestrial Natural Communities* - A documented location of a stand of vegetation or non-plant-dominated community element (e.g.,alkali playa or desert dune). As with plants, nearby sites are included if they fall within ¼ mile.

6. *Aquatic Natural Communities* - A documented location of contiguous habitat as defined by physical and biotic features.

Our computer reports consist of two parts. The “header” contains general information for each taxa, such as the common and scientific names, federal and state listing status, habitat associations, etc. The “body” contains the particular information for each occurrence.

The reports are available in two formats, expanded and condensed. In the expanded format each page contains the header and one occurrence record. In the condensed format (Appendix C), the type and margins are smaller, some of the fields are rearranged, up to three occurrences are printed per page, and the header is printed only once.

The text report accompanying a map overlay will be printed in the condensed format. The records are ordered by species, with animals, first, then plants and finally communities.

Our computer reports present data as narratives, condensed phrases, abbreviations, and a variety of codes. This enables us to maximize the amount of information given for each record. Most of the codes and abbreviations are straightforward. This handout will explain our report format field by field. The information is the same in both the expanded and condensed reports with the exception of "source codes;" they are only given in the expanded report format.

A sample expanded report is attached as Appendix B. Each field is numbered for reference and explained.

When citing the CNDDB as an information source, use the following:

California Natural Diversity Database
Wildlife & Habitat Data Analysis Branch
Department of Fish and Game
Date (insert date information purchased, see lower right corner of printout)

(1) SCIENTIFIC NAME - The scientific (Latin) name of a plant or animal or the name of a natural community.

(2) COMMON NAME - The common name of a plant or animal. The field is blank for natural communities since it is the same as the scientific name.

(3) ELEMENT CODE - A ten-character code assigned to each element. It is used for data management purposes.

(4) FEDERAL LEGAL STATUS:

Endangered =	Federally Listed Endangered
Threatened =	Federally Listed Threatened
Proposed Endangered =	Proposed for Federal Listing as Endangered
Proposed Threatened =	Proposed for Federal Listing as Threatened
Candidate =	Candidate for Federal Listing
Species of Concern =	Most of the Former C2 Candidates and some former C1s.

See *Federal Register* for legal definitions of federal status

(5) CALIFORNIA LEGAL STATUS:

Endangered = California Listed Endangered
Threatened = California Listed Threatened
Rare = California Listed Rare
Candidate = A taxon that has been officially recognized by the Fish and Game Commission as under consideration for addition to the

Threatened or Endangered list. Candidate species are also protected from taking.

(6) GLOBAL RANK - The global rank is a reflection of the overall condition (rarity and endangerment) of an element throughout its range. Some global ranks for endemic species are assigned by the CNDDB biological staff following review of all available information; other global ranks are assigned by other states, other heritage programs or The Nature Conservancy. For a complete explanation of this ranking, please refer to Appendix A.

(7) STATE RANK - The state rank is a reflection of the condition (rarity and endangerment) of an element within the state. The state rank is assigned by the CNDDB staff. See Appendix A.

(8) OTHER LISTS:

CDFG: Indicates whether the species is a Department of Fish and Game Species of Special Concern (**animals only**).

CNPS LIST: Indicates the California Native Plant Society (CNPS) list to which the taxon is assigned **(plants only)**.

List 1A: Plants presumed extinct in California
List 1B: Plants rare, threatened, or endangered in California and elsewhere
List 2: Plants rare, threatened, or endangered in California, but more common elsewhere
List 3: Plants about which we need more information - a review list
List 4: Plants of limited distribution — a watch list

CNPS R-E-D CODE: System of scoring plant taxa based on their Rarity (R), Endangerment (E), and Distribution (D) information.

R (Rarity)
1- Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time
2- Occurrence confined to several populations or to one extended population
3- Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported

E (Endangerment)
1- Not endangered
2- Endangered in a portion of its range
3- Endangered throughout its range

D (Distribution)
1- More or less widespread outside of California
2- Rare outside of California
3- Endemic to California

(9) HABITAT ASSOCIATIONS - Information on the general habitat with which the element is associated, and where known, a description of the microhabitat.

(10) OCCURRENCE NUMBER - This number, together with the element code, uniquely identifies a particular location of a species or community. Occurrence numbers are assigned sequentially as the occurrence is mapped. The first location mapped for an element is OCC #1, the eighteenth location is OCC #18, etc. There may be gaps in the number sequence as occurrences are combined.

Numbers 11 through 14 - Information about the habitat and condition of the element at this location only.

(11) OCC RANK
- Excellent
- Good
- Fair
- Poor
- None (extirpated)
- Unknown

(12) ORIGIN - Indicates whether this occurrence is natural, a transplant, a reintroduction, or a refugium.

(13) PRESENCE - Refers to the status of the taxon/stand at this site when it was last observed.

a. Presumed Extant - The most common entry. An occurrence is presumed to be still in existence until evidence to the contrary is received by the CNDDB.

b. Possibly Extirpated - Some evidence of habitat destruction or population extirpation has been received by the CNDDB for this site, but questions remain as to whether the element still exists here.

c. Extirpated - Only used when the element has been searched for but not seen for many years or when the habitat at this site is destroyed.

(14) TREND - Indicates population trend at this site.

a. Increasing
b. Stable
c. Decreasing
d. Fluctuating
e. Unknown

(15) MAIN SOURCE - Primary source of information for this occurrence.

(16) MAP INDEX NUMBER - The key number linking each feature on the map overlays with its specific text report.

(17) DATE ELEMENT LAST OBSERVED - The most recent date that an observer actually saw the element at this site according to information available to the CNDDB.

(18) DATE SITE LAST VISITED - The most recent date that an observer visited the site according to information available to the CNDDB.

(19) QUAD SUMMARY - The name(s) of the United States Geological Survey (USGS) 7½ minute quadrangle(s) where the occurrence is mapped. The quad code is the 7-digit code which identifies the 7½ minute USGS quadrangle on which the element occurrence is mapped. This code also appears on corresponding plot reports and map overlays. It is based on a 64-map grid in each 1° of latitude and longitude. The first two numbers indicate latitude; the 3rd-5th numbers indicate longitude and the final two numbers are a row-column designation, starting from the lower right hand corner of the grid.

(20) COUNTIES - The county (or counties) where the occurrence is mapped.

(21) SNA SUMMARY - Significant Natural Areas site number.

(22) LOCATION - The specific location of the element occurrence.

(23) LATITUDE, LONGITUDE - The latitude and longitude of the center point of the element occurrence location (determined by the computer).

(24) UTM - The Universal Transverse Mercator. The zone and northing and easting coordinates of the center point of the element occurrence location (determined by the computer).

(25) MAPPING PRECISION:

Specific: A circular feature with a radius of 80 meters or a specific polygon.

Non-specific: A circular feature with a radius of 1/10,1/5, 2/5, 3/5, 4/5, or 1 mile or a non-specific polygon. The sizes of the circles may indicate different confidence levels in the source data or different levels of precision describing the location in the source data.

(26) SYMBOL TYPE

Polygon - Delineates an area where the element is known to occur or, in some cases, includes habitat where the element is known to occur. Polygons can be "specific" or "non-specific," indicating our level of confidence in the source data.

Point - Indicates a circular feature with a radius of 80 meters, 1/10,1/5, 2/5, 3/5, 4/5, or one mile.

(27) RADIUS - For circular features only. See above description for “point” symbol type

(28) T-R-S - The Township, Range, and Section of the center point of the element occurrence location.

QTR - The half section or quarter section if known.

(29) MERIDIAN - This field contains either "M,” "H,” or "S." These letters refer to Mt. Diablo, Humboldt, or San Bernardino baseline and meridians, respectively. These are necessary to indicate a unique township, range, and section coordinate.

(30) ELEVATION - The elevation in feet of the center-point of the element occurrence.

(31) COMMENTS - Site specific notes about an element's distribution, threats, habitat, associated species, population size, general comments, and ownership information.

(32) SOURCE CODES - An 8-character code assigned to any information which is used to map an occurrence. Includes: the first three letters of the contributor’s last name, year of the document (or year of field visit in the case of field survey forms), one character code for type of document (“F” = field survey form, “R” = report, “M” = map, “U” = personal communication or other type of correspondence, “B” = book), and a two-character ‘tie-breaker’ assigned and used internally by the CNDDB.

(33) DATE OF REPORT - Date report printed.

(34) DATE INFORMATION - Date of last CNDDB download.

APPENDIX A

ELEMENT RANKING

GLOBAL RANKING

The *global rank* (G-rank) is a reflection of the overall condition of an element throughout its global range.

SPECIES OR NATURAL COMMUNITY LEVEL

G1 = Less than 6 viable element occurrences (EOs) OR less than 1,000 individuals OR less than 2,000 acres.
G2 = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres.
G3 = 21-100 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres.
G4 = Apparently secure; this rank is clearly lower than G3 but factors exist to cause some concern; i.e., there is some threat, or somewhat narrow habitat.
G5 = Population or stand demonstrably secure to ineradicable due to being commonly found in the world.

SUBSPECIES LEVEL
Subspecies receive a **T-rank** attached to the G-rank. With the subspecies, the G-rank reflects the condition of the entire species, whereas the T-rank reflects the global situation of just the subspecies or variety. For example: *Chorizanthe robusta* var. *hartwegii.* This plant is ranked G2TI. The G-rank refers to the whole species range i.e., *Chorizanthe robusta.* The T-rank refers only to the global condition of var. *hartwegii.*

STATE RANKING

The *state rank* is assigned much the same way as the global rank, except state ranks in California often also contain a threat designation attached to the S-rank.

S1 = Less than 6 EOs OR less than 1,000 individuals OR less than 2,000 acres
S1.1 = very threatened
S1.2 = threatened
S1.3 = no current threats known
S2 = 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres
S2.1 = very threatened
S2.2 = threatened
S2.3 = no current threats known
S3 = 21-100 EOs or 3,000-10,000 individuals OR 10,000-50,000 acres
S3.1 = very threatened
S3.2 = threatened
S3.3 = no current threats known
S4 - Apparently secure within California; this rank is clearly lower than S3 but factors exist to cause some concern; i.e. there is some threat, or somewhat narrow habitat. NO THREAT RANK.

S5 - Demonstrably secure to ineradicable in California. NO THREAT RANK.

Notes:

1. Other considerations used when ranking a species or natural community include the pattern of distribution of the element on the landscape, fragmentation of the population/stands, and historical extent as compared to its modern range. It is important to take a bird's eye or aerial view when ranking sensitive elements rather than simply counting EOs.

2. Uncertainty about the rank of an element is expressed in two major ways:

   By expressing the rank as a range of values: e.g., S2S3 means the rank is somewhere between S2 and S3.

   By adding a ? to the rank: eg., S2? This represents more certainty than S2S3, but less than S2.

3. Other symbols

   GH All sites are historical; the element has not been seen for at least 20 years, but suitable habitat still exists (SH = All California sites are historical).
   GX All sites are **extirpated**; this element is extinct in the wild (SX = All California sites are extirpated).
   GXC Extinct in the wild; exists in cultivation.
   G1Q The element is very rare, but there is a taxonomic question associated with it.

APPENDIX B

California Department of Fish and Game
Natural Diversity Data Base

Full Expanded Report – One Record Per Page

CLEMMYS MARMORATA MARMORATA 1.
NORTHWESTERN POND TURTLE 2. Element Code: ARAAD02031 3.

Status	NDDB Element Ranks	Other Lists
Federal: None 4.	6. Global: G4T4	CDFG Status: SC
State: None 5.	7. State: S3	8.

9. Habitat Associations
General: ASSOCIATED WITH PERMANENT OR NEARLY PERMANENT WATER IN A WIDE VARIETY OF HABITATS.
Micro: REQUIRES BASKING SITES. NESTS SITES MAY BE FOUND UP TO 0.5 KM FROM WATER.

10. Occurrence No. 101 Map Index: 38446 16.
11. Occ Rank: Fair
12. Origin: Natural/Native occurrence
13. Presence: Presumed Extant
14. Trend: Unknown
15. Main Source: TAYLOR, D. 1997 (OBS)

—Dates Last Seen— 17.
Element: 1997-04-08
Site: 1997-04-08 18.

Quad Summary: MT. VACA (3812241/499A) 19.
County Summary: SOLANO 20.
SNA Summary: 21.

Location: JUST SOUTH OF WILD HORSE CANYON, IN THE VACA MOUNTAINS. 22.

23. Lat/Long: 38°26'23" / 122°06'50"
24. UTM: Zone-10 N4254757 E577344
Mapping Precision: SPECIFIC 25.
Symbol Type: POINT 26.
Radius: 80 meters 27.

Township: 07N 28.
Range: 02W
Section: 20 Qtr NW
Meridian: M 29.
Elevation: 2360 ft 30.

31. Comments
Distribution:
Ecological: SMALL, CIRCULAR, ARTIFICIAL POND IN DENSE CHAPARRAL ON DIVIDE BETWEEN MILLER & WILD HORSE CYNS. ~1-2 YRS OLD (NO EMERGENT VEG YET). USED AS IRRIGATION SOURCE. GRAVELLY/ROCKY SHORE, NO LOGS FOR PERCHING. NO SIGN OF FISH/AMPHIBIANS IN POND.
Threat:
General: A SINGLE ADULT WAS OBSERVED IN THE WATER; NO OTHER TURTLES EVIDENT.
Owner/Manager: PVT

Source Codes 32.
TAY97F05

33. Date: 06/21/2000
Report: RF2FULL Information dated 06/05/2000 34.

APPENDIX C

California Department of Fish and Game
Natural Diversity Data Base

Full Condensed Report - Multiple Records per Page

SPERMOPHILUS MOHAVENSIS
MOHAVE GROUND SQUIRREL
Element Code: AMAFB05150

List Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G2?	CDFG Status:
State: Threatened	State: S2?	

Habitat Associations
General: OPEN DESERT SCRUB, ALKALI SCRUB & JOSHUA TREE WOODLAND. ALSO FEEDS IN ANNUAL GRASSLANDS. RESTRICTED TO MOHAVE DESERT.
Micro: PREFERS SANDY TO GRAVELLY SOILS, AVOIDS ROCKY AREAS. USES BURROWS AT BASE OF SHRUBS FOR COVER. NESTS ARE IN BURROWS.

Occurrence No. 24 Map Index:02204
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Dates Last Seen — Element: 1932-04-05 Site: 1932-04-05
Lat/Long: 34°35'40" / 118°07'11"
UTM: Zone-11 N3828436 E397313
Precision: NON-SPECIFIC
Symbol Type: POLYGON
Area: 2,296.2 ac
Township: 06N
Range: 12W
Section: 23 Qtr XX
Meridian: S
Elevation: 2600 ft
Main Source: CLARK, D. 1992 (PERS)
Quad Summary: PALMDALE (3411851/161D)*, RITTER RIDGE (3411852/161C)
County Summary: LOS ANGELES
SNA Summary:
Location: PALMDALE AND VICINITY.

Comments
Distribution: 4/28/20 COLLECTION: SEC 14; 7/15/20 COLLECTION: SEC 23; 6/15/31 AND 4/05/32 COLLECTIONS: SEC 26.
Ecological:
Threat: ("OTHER" CONTINUED) (LACM #S 003009-10 AND 003129-003135); 4 TRAPPED ON UNKNOWN DATE (UCLA #18645-6, 18661 AND 18669)
General: 3 FEMALES & 1 MALE TRAPPED 4/28/20 BY L.S. NEVILLE (MVZ #31158-31160, & U. MICH. #77651); 1 TRAPPED 7/15/20 (MVZ #31966)-DC #56; 1 FEMALE TRAPPED 6/15/31 (LACM #030714); 6 FEMALES & 1 MALE TRAPPED 3/13-31 & 4/4-5/32 (CONTINUED IN "THREAT")
Owner/Manager: UNKNOWN

Occurrence No. 45 Map Index:02258
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Dates Last Seen — Element: 1934-08-27 Site: 1934-08-27
Lat/Long: 34°34'48" / 118°04'31"
UTM: Zone-11 N3826788 E401387
Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1 mile
Township: 06N
Range: 11W
Section: 30 Qtr XX
Meridian: S
Elevation: 2600 ft
Main Source: CLARK, D. 1992 (PERS)
Quad Summary: PALMDALE (3411851/161D)
County Summary: LOS ANGELES
SNA Summary:
Location: 2.5 MILES EAST OF PALMDALE.

Comments
Distribution: 1931 COLLECTIONS: SECTIONS 29 AND 30; 1934 COLLECTION: SEC 30.
Ecological:
Threat:
General: 6 TRAPPED IN 1931 IN SEC 30: 1 FEMALE ON 8/6 (SDNHM #9629), 3 FEMALES & 1 MALE ON 8/26 (SDNHM #9623-24 & 9708-09), & 1 MALE ON 8/27 (SDNHM #9726); 3 TAKEN 6/14/31 (LACM #002639-41. 2 FEM & 1 UNK GENDER); 1 MALE TAKEN 8/27/34 (SDMNH #9710)
Owner/Manager: UNKNOWN

Occurrence No. 134 Map Index:21920
Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown
Dates Last Seen — Element: 1977-XX-XX Site: 1977-XX-XX
Lat/Long: 34°36'20" / 118°02'39"
UTM: Zone-11 N3829600 E404254
Precision: NON-SPECIFIC
Symbol Type: POINT
Radius: 1/5 mile
Township: 06N
Range: 11W
Section: 16 Qtr SE
Meridian: S
Elevation: 2540 ft
Main Source: RECHT, M. 1977 (MUS)
Quad Summary: PALMDALE (3411851/161D)
County Summary: LOS ANGELES
SNA Summary:
Location: AT CORNER OF 47TH STREET E AND AVENUE P STREET, 4 MILES ENE OF PALMDALE

Comments
Distribution:
Ecological:
Threat:
General: UNKNOWN NUMBER OF SQUIRRELS TRAPPED BY M.A. RECHT FROM 1973-1977.
Owner/Manager: UNKNOWN