Plant Species Evaluation Form

Antirrhinum subcordatum Gray

DIMORPHIC SNAPDRAGON

Family: Plantaginaceae (CNPS 2017) **PLANTS Symbol:** SASU8 (USDA 2017) **Calif. Endemic:** Yes (CNPS 2017)

Synonyms/Other Names: *Antirrhinum subcordatum* was originally described by Asa Gray, in Proc. Amer. Acad. Arts 20: 306 (1885). The name was changed to *Sairocarpus subcordatus* (A.Gray) D.A. Sutton by the latter author, in Rev. Tribe Antirrhineae 477 (1988). While the original name remains widely accepted (e.g. by the Jepson Herbarium), the USDA PLANTS database uses the revised taxonomy. In short, nomenclatural convention for this taxon is in a state of flux.

Identification Issues: New World *Antirrhinum*—comprising ~17 species in western North America—are morphologically and ecologically divergent, making identification fairly straightforward. *Antirrhinum subcordatum* is most easily confused with *A. vexillo-calyculatum* or *A. ovatum*. The combination of a swollen corolla lower lip-base and white or tannish flower color is sufficient to differentiate *A. subcordatum* from the other two species (Wetherwax and Thompson 2012).

Taxonomy:

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Species In Genus: 35 species: western North America, western Mediterranean. Etymology: (Greek: nose-like, from corolla shape). Note: North America taxa more closely related to *Mohavea* than to Mediterranean taxa; revision needed. *Antirrhinum cyathiferum* moved to *Pseudorontium*.

Habit: Annual, nonglandular-hairy proximal to inflorescence. Stem: erect but weak, often clinging to other plants or debris, 8--90 cm. Leaf: petiole 0--20 mm; blade 5--60 mm, ovate, rounded at tip. Inflorescence: raceme-like or flowers 1 in axils, glandular-hairy, flowers all opening; pedicels 1--3 mm, proximal-most subtended by twining branchlets. Flower: calyx lobes unequal, 7--9 mm, upper 8--14 mm; corolla 13--17 mm, white to tan, throat floor expanded at mouth, lower lip lobes reflexed, poorly developed. Fruit: +- 6 mm, dehiscent by 3 pores at tip, 1 in upper chamber, 2 in lower. Seed: +- 1 mm, ovoid, dark brown to black, netted, ridged. Chromosomes: n=15. eFlora Treatment Author: Margriet Wetherwax & David M. Thompson.

Status:

Note: Federally recognized Endangered, Threatened, Proposed, or Candidate species under the Endangered Species Act are omitted as they do not meet the definition of a Species of Conservation Concern (FSH 1909.12 § 12.52).

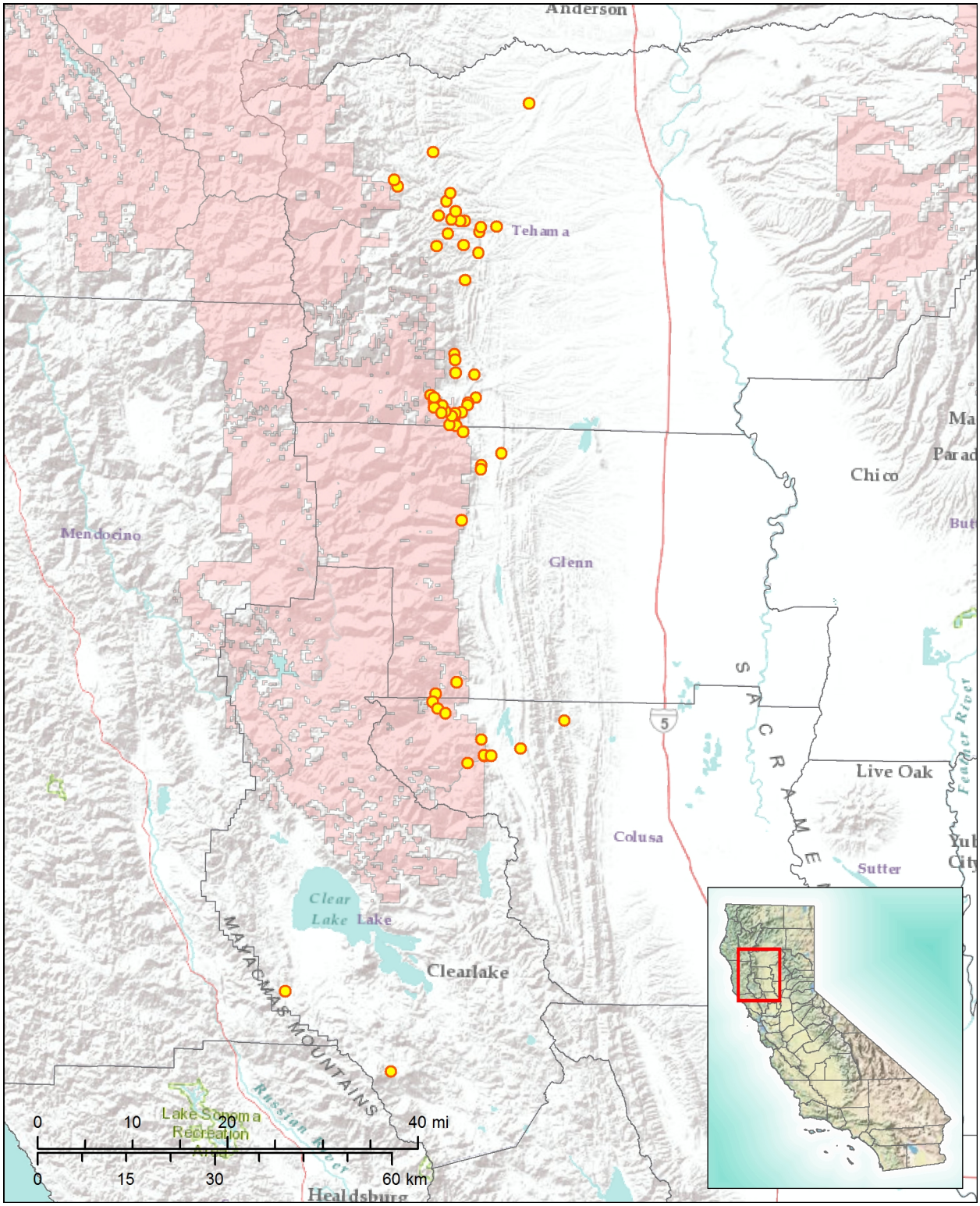
State Listing	G-rank	S-rank	CRPR	R5 FSS	NFP SM	CA BLM
CA: Not listed NV: Not listed OR: Not listed	G3	CA: S3 NV: Not listed OR: Not listed	4.3	Sensitive	Not listed	Not listed

SWAP:	NNHP:	NNPS:	ORBIC:	OCS:	IUCN:
Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Expanded abbreviations and citations: State Listing=California Endangered Species Act Listing (CDFW 2017b), Nevada Division of Forestry Fully Protected Plant Species (NAC 527) (NDF 2012), Oregon Department of Agriculture Listed Plants (ODA 2014); G-rank=Global Conservation Status (CDFW 2017a; NatureServe 2017); S-rank=Subnational (state or province-level) Conservation Status (CDFW 2017a; NatureServe 2017; NNHP 2017; ORBIC 2016); CRPR=California Rare Plant Rank (CNPS 2017); R5 FSS=USDA Forest Service Region 5 Regional Forester Sensitive Plant Species List (USDA 2013); NFP SM=Forest Service and Bureau of Land Management Northwest Forest Plan Survey and Manage Species (USDA 2001); CA BLM=California Bureau of Land Management Designated Sensitive Species (BLM 2010); SWAP=California State Wildlife Action Plan Status (CDFW 2015); NNHP=Nevada Natural Heritage Program Status (NNHP 2017); NNPS=Nevada Native Plant Society Status (NNHP 2017); ORBIC=Oregon Biological Information Center Status (ORBIC 2016); OCS=Oregon Conservation Strategy Species (ODFW 2016); IUCN=International Union for Conservation of Nature Red List Status (IUCN 2017).

Antirrhinum subcordatum was included in the *CNPS Inventory, First Edition* (Powell 1974) with the equivalency of a California Rare Plant Rank (CRPR) of 1B (Rare, Threatened, or Endangered in California and Elsewhere). It was changed to CRPR 4 (Limited Distribution) in the *CNPS Inventory, Sixth Edition* (RPSAC and Tibor 2001), as being more common than originally thought, and no longer rare enough to meet the criteria of CRPR 1B.

Distribution: This species is restricted to the eastern foothills of the Coastal Range in the Sacramento Valley, between 185 and 800 meters in elevation. There are 49 element occurrences (EO's) in the California Natural Diversity Database (CNDDB); of these, 32 are in Tehama County, with the remainder split between Glenn, Colusa and Lake counties. Twelve EO's are on National Forest land—all within Mendocino National Forest. All observations are greater than twenty years old, with the most recent being from 1997. One occurrence is presumed extirpated; of the remainder, 18 rank between 'excellent' and 'fair', and 30 are of 'unknown' status. However, it is important to note that when this species changed from CRPR 1B to 4 status in the *CNPS Inventory* in 2001, its occurrences were no longer updated or maintained in the CNDDB thereafter; therefore, the ranks and conditions of its occurrences in the CNDDB are only reflective of 2001, and not current.



Map Sources: *Layers*: USDA Forest Service, Pacific Southwest National Forests: CPAD 2016. California counties: CDF 2009. *Basemaps*: California inset map: © 2013 National Geographic Society, i-cubed (Esri 2017a). Main map: Esri, DeLorme, USGS, NPS (Esri 2012) and Esri, USGS, NOAA (Esri 2017b).

Locations within California:

(Note: Record numbers indicate sites that contain an individual, population, or groups of populations located within ¼ mile of each other (per the California Natural Diversity Database (CNDDB) definition of Element Occurrences in California). Official Element Occurrence (EO) numbers for plants in California are determined solely by the CNDDB and are included within the Reference (Source) column for CNDDB data. Duplicate records from the same site are given the same record number and included in red. The Population Info column includes total number of individuals and total number and size of populations/sub-populations when provided. Elevations in meters from source were converted to feet. If not provided in original source, Land Manager information was obtained using the California Protected Areas Database (CPAD 2016) and Quad information was obtained using 24K Quads, SDE Feature Class (CDFG 2013). All other information is directly from the Reference (Source) column unless additional citation is given.)

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
1	ABOUT ONE AIR MILE NW OF CHROME.	Glenn	Chrome (3912265)	CNDDB, May 2017 (EO 1)	7-Apr-1982	2 COLONIES HERE, SEEN IN 1981 AND 1982. SERPENTINE POPULATION WITH FEWER THAN 50 PLANTS; SHALE POPULATION WITH THOUSANDS OF PLANTS.		PVT	1200
2	ABOUT 10 MILES E OF ALDER SPRINGS.	Glenn	Chrome (3912265)	CNDDB, May 2017 (EO 2)	27-May-1914	POSSIBLY ERRONEOUS. THOUGHT TO BE OUT OF ELEVATION RANGE AND ON WRONG SUBSTRATE ACCORDING TO DAVID ISLE. CHECKED IN 1981 AND NOT FOUND.		Mendocino NF	1200
3	ABOUT ONE AIR MILE WNW OF CHROME.	Glenn	Chrome (3912265)	CNDDB, May 2017 (EO 3)	7-Apr-1982	FEWER THAN 100 PLANTS IN 1982.		PVT	1160

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
4	ABOUT 0.3 MILE SE OF THE JUNCTION OF ROUND VALLEY ROAD AND GARLAND ROAD.	Tehama	Newville (3912275)	CNDDB, May 2017 (EO 4)	1980s	1 PLANT SEEN BY LACEY IN 1980 OR 1981. SITE VISITED IN 1982 AND PLANT NOT FOUND.	POSSIBLY GRAZED BY DEER.	PVT	960
5	ABOUT 1 MI S ON PVT RD FROM JCT WITH ROUND VALLEY RD; 1 MI SW OF ROUND VALLEY RD JCT W/GARLAND RD.	Tehama	Newville (3912275)	CNDDB, May 2017 (EO 5)	1982	FEWER THAN 50 PLANTS IN 1981; 12 PLANTS IN 1982.		PVT	920
6	APPROX 1.3 AIR MI SW OF JCT OF ROUND VALLEY RD AND GARLAND RD.	Tehama	Newville (3912275)	CNDDB, May 2017 (EO 6)	27-Apr-1982	ABOUT 100 PLANTS IN 1982.		PVT	920
7	ON JEEP TRAIL APPROX 1/4 MI E OF SALT CREEK SADDLE.	Tehama	Newville (3912275)	CNDDB, May 2017 (EO 7)	20-May-1982	ABOUT 200 PLANTS IN 2 COLONIES.		PVT	1600
8	ABOUT 0.5 MI ON JEEP TRAIL SSE FROM SALT CREEK SADDLE.	Tehama	Newville (3912275)	CNDDB, May 2017 (EO 8)	20-May-1982	ABOUT 10 PLANTS IN 1982.		PVT	1340

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
9	ABOUT 1.25 MI ALONG JEEP TRAIL S OF SALT CREEK SADDLE; JUST E OF TRAIL.	Tehama	Newville (3912275)	CNDDB, May 2017 (EO 9)	20-May-1982	ABOUT 100 PLANTS IN 1982.		PVT	1200
10	N SIDE OF SALT CREEK, ABOUT 0.75 MI E OF DIGGER RIDGE.	Glenn	Newville (3912275)	CNDDB, May 2017 (EO 10)	1982	FEWER THAN 1000 PLANTS REPORTED IN 1981; ABOUT 100+ PLANTS IN 1982.		Mendocino NF	1160
11	0.75 MI N OF BURROWS GAP ON RANCH RD W OF THE CHROME ROAD.	Glenn	Newville (3912275)	CNDDB, May 2017 (EO 11)	1982	FEWER THAN 50 PLANTS IN 1981; ABOUT 24 PLANTS IN 1982.	SOME GRAZING IMPACTS EVIDENT.	PVT	1000
12	ABOUT 0.5 MI SE OF DIGGER HILL; N OF THOMES CREEK.	Tehama	Paskenta (3912285)	CNDDB, May 2017 (EO 12)	31-May-1953		LOGGING COULD THREATEN.	PVT	1000
13	TOOMES CAMP ROAD (FOREST ROAD M2), ABOUT 0.4-0.5 MI NE OF CROWFOOT POINT; 5.5-6 MI W OF PASKENTA.	Tehama	Paskenta (3912285)	CNDDB, May 2017 (EO 13)	29-May-1997	ABOUT 60 PLANTS IN 1984, 50 IN 1997. PARCEL UNDER CONSIDERATION FOR DISPOSAL FROM PUBLIC DOMAIN (LAND EXCHANGE) IN 1997.	IN 1981, PLANTS ALONG 75' OF STEEP, E-FACING ROADCUT; BY 1984, COUNTY HAD WIDENED THE ROAD LEAVING 5 M OF HABITAT.	BLM-Redding RA	1900

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
14	BLACK DIAMOND GLADES AREA.	Glenn	Stonyford (3912245)	CNDDB, May 2017 (EO 14)	14-Jun-1979	THIS IS ONE OF THE LARGEST POPULATIONS; 1978 SURVEY COUNTED ABOUT 1670 PLANTS.		Mendocino NF	2200
15	NORTH FORK STONY CREEK, W OF BLACK DIAMOND RIDGE. ALONG WEDGE FS RD #18N03.	Glenn	St. John Mtn. (3912246)	CNDDB, May 2017 (EO 15)	8-Jun-1978	70-80 PLANTS IN 1978.		Mendocino NF	1920
16	NORTH FORK STONY CREEK, BETWEEN RED BRIDGE & NORTH FORK CAMPGROUND.	Colusa	St. John Mtn. (3912246)	CNDDB, May 2017 (EO 16)	8-Jun-1978	ABOUT 15 PLANTS IN 1978.		Mendocino NF	1600
17	CANDY BUCKET SPRING, S SIDE USFS ROAD 18N01.	Colusa	Fouts Springs (3912236)	CNDDB, May 2017 (EO 17)	20-Jun-1978	2 PLANTS IN 1978.		Mendocino NF	2160
18	WOLF GLADE; ABOUT 2.5 AIR MILES W OF STONYFORD.	Colusa	Gilmore Peak (3912235)	CNDDB, May 2017 (EO 18)	22-Jun-1978	ABOUT 50 PLANTS IN 1978.		Mendocino NF	1480

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
19	DIGGER PINE CAMPGROUND AREA; FROM CAMPGROUND TO ABOUT 0.4 MI W OF IT.	Colusa	Gilmore Peak (3912235)	CNDDB, May 2017 (EO 19)	8-Jun-1978	ABOUT 80 PLANTS.		Mendocino NF	1600
20	<1 MILE S OF SALT CREEK SADDLE, NEAR TRIBUTARY TO SALT CREEK & JUST N OF GLE/TEH COUNTY LINE.	Glenn | Tehama	Hall Ridge (3912276)	CNDDB, May 2017 (EO 20)	1982	25 PLANTS IN 1982.		Mendocino NF	2000
21	NW OF RUBY KING MINE ALONG LITTLE STONY CREEK, 0.1-0.2 MI W OF FOREST BOUNDARY.	Colusa	Gilmore Peak (3912235)	CNDDB, May 2017 (EO 21)	3-Jun-1989	2 DISTINCT POPULATIONS. LARGER ONE WITH ABOUT 1050 PLANTS IN 1978 AND SMALLER ONE WITH ABOUT 90 PLANTS IN 1978. ABOUT 100 PLANTS (TOTAL) SEEN IN 1989.	ROAD MAINTENANCE COULD THREATEN.	Mendocino NF	1400
21	Mendocino NF	Colusa	Gilmore Peak (3912235)	NRIS, Sep 2016 (050853SASU8013)	5-Nov-2014	individuals		Mendocino NF	
21	Mendocino NF	Colusa	Gilmore Peak (3912235)	NRIS, Sep 2016 (050853SASU8013)	30-Jun-2016	200 individuals		Mendocino NF	

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
22	SITES-LODOGA ROAD, ABOUT 9 MI E OF LODOGA.	Colusa	Lodoga (3912234)	CNDDB, May 2017 (EO 22)	20-Jun-1978	2 PLANTS IN 1987.		PVT	800
23	ON RIDGE E OF LODOGA (SITES-LODOGA RD).	Colusa	Lodoga (3912234)	CNDDB, May 2017 (EO 23)	7-Jun-1940			PVT	1200
24	NEAR WHISPERING PINES RESORT.	Lake	Whispering Pines (3812276)	CNDDB, May 2017 (EO 24)	4-Jul-1927	1978 SURVEY FOUND NO PLANTS.		PVT, BLM?	
25	1.2 MILES SW OF HIGHLAND SPRINGS.	Lake	Highland Springs (3812288)	CNDDB, May 2017 (EO 25)	13-May-1951	SEEN IN 1951. VISITED IN 1977 AND 1978 AND NO PLANTS SEEN.		Lake County	1560
26	STIVARS RANCH NW OF DRY CREEK; MAPPED ABOUT 1 MILE N OF BAKER FIRE CONTROL STATION.	Tehama	Mitchell Gulch (4012234)	CNDDB, May 2017 (EO 26)	12-May-1990	COLLECTION BY ERTTER IN 1990 IS RELOCATION OF AREA WHERE SPECIES WAS COLLECTED BY JEPSON IN 1899.	SITE IS GENERALLY INACCESSABLE TO CATTLE.	PVT	600
27	LITTLE STONY CREEK, N SIDE OF GOAT MOUNTAIN ROAD 0.5 MILE W OF STONYFORD-LODOGA ROAD.	Colusa	Gilmore Peak (3912235)	CNDDB, May 2017 (EO 27)	12-May-1989	72 PLANTS OBSERVED BY ISLE IN 1989.		Unknown	1360

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
28	S SIDE OF RED BANK CREEK, 1.3 MILES NNW OF COLYEAR SPRINGS ROAD/ MOUNTAIN ROAD INTERSECTION. N OF LOWREY.	Tehama	Lowrey (4012215)	CNDDB, May 2017 (EO 28)	23-Jun-1993	THREE COLONIES OBSERVED BY HUBERT IN 1993.	LIGHT CATTLE GRAZING & POSSIBLE RESERVOIR SITE ARE THREATS.	Unknown	950
29	N SIDE OF DRY CREEK, 0.7 MILE WNW OF CONFLUENCE WITH RED BANK CREEK. N OF LOWREY.	Tehama	Lowrey (4012215)	CNDDB, May 2017 (EO 29)	23-Jun-1993	FIVE COLONIES OBSERVED BY HUBERT IN 1993.	LIGHT CATTLE GRAZING & POSSIBLE RESERVOIR SITE ARE THREATS.	PVT	920
30	TRIBUTARY TO GRIZZLY CREEK, JUST W OF "THE NARROWS" & S OF LEWIS FLAT. N OF LOWREY.	Tehama	Lowrey (4012215)	CNDDB, May 2017 (EO 30)	23-Jun-1993		LIGHT CATTLE GRAZING & POSSIBLE RESERVOIR SITES ARE THREATS.	Unknown	900
31	N SIDE OF GRIZZLY CREEK BETWEEN SPRING BRANCH & LONG HOLLOW. N OF LOWREY.	Tehama	Lowrey (4012215)	CNDDB, May 2017 (EO 31)	23-Jun-1993	17 COLONIES OBSERVED BY HUBERT IN 1993.	LIGHT GRAZING & POTENTIAL RESERVOIR SITE THREATEN.	Unknown	900

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
32	BOTH SIDES OF COTTONWOOD CREEK NEAR LONG GULCH.	Tehama	Cold Fork (4012226)	CNDDB, May 2017 (EO 32)	24-Jun-1993	FEWER THAN 100 PLANTS OBSERVED BY HUBERT IN 1993.	LIGHT CATTLE GRAZING AND POTENTIAL RESERVOIR SITE THREATEN.	PVT	1200
33	N SIDE OF COTTONWOOD CREEK, ALONG UNNAMED TRIBUTARY N OF JEEP TRAIL FROM WOODYARD FLAT.	Tehama	Cold Fork (4012226)	CNDDB, May 2017 (EO 33)	24-Jun-1993	FEWER THAN 100 PLANTS OBSERVED BY HUBERT IN 1993.	LIGHT CATTLE GRAZING AND PROPOSED RESERVOIR THREATEN.	PVT	1200
34	VICINITY OF SALT CREEK; ABOUT 1.5 MILES NNE OF CONFLUENCE OF SALT CREEK AND FRESHWATER CREEK, MENDOCINO NATIONAL FOREST.	Tehama	Newville (3912275)	CNDDB, May 2017 (EO 34)	May, 1990	POPULATION SMALL, BUT APPEARED HEALTHY. MAP DETAIL AND ECOLOGICAL INFORMATION NEEDED FOR THIS SITE.		Mendocino NF	1100

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
35	VICINITY OF SALT CREEK; ABOUT 1.3 MILES NNW OF CONFLUENCE OF SALT CREEK AND FRESHWATER CREEK, MENDOCINO NATIONAL FOREST.	Tehama	Newville (3912275)	CNDDB, May 2017 (EO 35)	May, 1990	POPULATION SMALL, BUT APPEARED HEALTHY. MAP DETAIL AND ECOLOGICAL INFORMATION NEEDED FOR THIS SITE.		Mendocino NF	1700
35	Mendocino NF	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SA SU8010)	22-May-2011	113 individuals		Mendocino NF	
36	DE HAVEN GULCH, ABOUT 1.3 MILES W OF NORTH FORK ELDER CREEK AND 1 MILE NNW OF ROUSE FLAT, W OF LOWREY.	Tehama	Lowrey (4012215)	CNDDB, May 2017 (EO 36)	3-Jun-1993	1 PLANT OBSERVED IN 1993.		PVT	1150
37	ALONG SUNFLOWER TRAIL ABOVE (S OF) SUNFLOWER GULCH, ABOUT 5.5 MILES NW OF LOWREY.	Tehama	Lowrey (4012215)	CNDDB, May 2017 (EO 37)	11-Jun-1993	33 PLANTS OBSERVED IN 1993.	BLM LAND DISPOSAL.	BLM	1480

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
38	ALONG LITTLE GRIZZLY CREEK ABOUT 0.6 MILE W OF PANTHER ROCK, NNW OF LOWREY.	Tehama	Lowrey (4012215)	CNDDB, May 2017 (EO 38)	10-Jun-1993	55 PLANTS OBSERVED AT THIS SITE IN 1993. PLANTS APPEAR TO OCCUR IN NATURALLY DISTURBED AREAS THAT ARE CAUSED BY LOOSE SOIL ON STEEP SLOPES.	BLM LAND DISPOSAL.	BLM	1240
39	ALONG LITTLE GRIZZLY CREEK ABOUT 0.5 AND 1.1 MILES W OF PANTHER ROCK, NNW OF LOWREY.	Tehama	Lowrey (4012215)	CNDDB, May 2017 (EO 39)	10-Jun-1993	34 PLANTS AT E- SITE AND 15 PLANTS AT W SITE OBSERVED IN 1993. PLANTS APPEAR TO OCCUR IN NATURALLY DISTURBED AREAS THAT ARE CAUSED BY LOOSE SOIL ON STEEP SLOPES.	BLM LAND DISPOSAL.	BLM	1440
40	ALONG LITTLE GRIZZLY CREEK ABOUT 0.5 MILE SW OF MARY ELLEN PLACE, S OF WAKEFIELD FLAT.	Tehama	Raglin Ridge (4012216)	CNDDB, May 2017 (EO 41)	10-Jun-1993	38 PLANTS OBSERVED AT THIS SITE IN 1993. PLANTS APPEAR TO OCCUR IN NATURALLY DISTURBED AREAS ASSOC. WITH LOOSE SOIL ON STEEP SLOPES.	BLM LAND DISPOSAL.	BLM	1560

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
41	RED BANK CREEK ABOUT 0.6 MILE E OF CONFLUENCE WITH ALDER CREEK, NNE OF FRANKLIN POINT.	Tehama	Raglin Ridge (4012216)	CNDDB, May 2017 (EO 42)	15-Jun-1993	42 PLANTS OBSERVED AT THIS SITE IN 1993.	BLM LAND DISPOSAL.	BLM	1800
42	BETWEEN SUNFLOWER GULCH AND SOUTH FORK DRY CREEK, N OF SUNFLOWER FLAT.	Tehama	Raglin Ridge (4012216)	CNDDB, May 2017 (EO 43)	14-Jun-1993	21 PLANTS OBSERVED IN THREE COLONIES IN 1993.	BLM LAND DISPOSAL.	BLM	1660
43	NW OF LAST FEED FLAT AND W OF LANYAN TRAIL, ABOUT 1.4 MILES WSW OF WAKEFIELD FLAT.	Tehama	Raglin Ridge (4012216)	CNDDB, May 2017 (EO 44)	16-Jun-1993	27 PLANTS OBSERVED IN TWO COLONIES IN 1993.		PVT	1650
44	VESTAL ROAD ABOUT 0.4 MILE E OF WEEMASOUL CREEK CROSSING, N OF COLD FORK.	Tehama	Cold Fork (4012226)	CNDDB, May 2017 (EO 45)	2-Jun-1994	15 PLANTS OBSERVED IN 1994.		PVT	1230

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45	JACKASS CANYON ALONG LANYAN TRAIL, ABOUT 0.4 MILE E OF WAKEFIELD FLAT, SE OF COLD FORK (TOWN).	Tehama	Cold Fork (4012226)	CNDDB, May 2017 (EO 46)	10-Jun-1993	268 PLANTS OBSERVED IN 1993.		PVT, BLM	1560
46	0.2 MILE N OF LONG GRADE ON PETTYJOHN ROAD NEAR POKER FLAT, ABOUT 4 MILES W OF COLD FORK (TOWN).	Tehama	Cold Fork (4012226)	CNDDB, May 2017 (EO 47)	26-Jul-1993	100 PLANTS OBSERVED IN 1993.	BLM LAND DISPOSAL. CURRENT LAND USE IS RECREATIONAL CABINS ALONG COLD FORK.	PVT	2400
47	BETWEEN PETTYJOHN ROAD AND COLD FORK (CREEK) ALONG TRAIL, ABOUT 0.6 MILE N OF RED FLAT AND E OF GREASEWOOD BASIN.	Tehama	Tomhead Mtn. (4012227)	CNDDB, May 2017 (EO 48)	26-Jul-1993	411 PLANTS OBSERVED IN 1993.	BLM LAND DISPOSAL.	PVT, BLM	2130

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
48	4.2 AIR MI NW OF PASKENTA, 2.1 AIR MI WSW OF NORTHERN-MOST PEAK OF WHITLOCK BUTTE; N OF TOOMES CAMP RD (FOREST ROAD M2).	Tehama	Riley Ridge (3912286)	CNDDB, May 2017 (EO 49)	29-May-1997	300 PLANTS TOTAL HERE AND AT OCCURRENCE #50.	PARCEL UNDER CONSIDERAT-ION FOR DISPOSAL FROM PUBLIC DOMAIN (LAND EXCHANGE).	BLM-Redding RA	1800
49	3.9 AIR MI NW OF PASKENTA, 2.85 AIR MI WNW OF OWENS BUTTE; N OF TOOMES CAMP RD (FOREST ROAD M2).	Tehama	Paskenta (3912285)	CNDDB, May 2017 (EO 50)	29-May-1997	300 PLANTS TOTAL HERE AND AT OCCURRENCE #49.	PARCEL UNDER CONSIDERAT-ION FOR DISPOSAL FROM PUBLIC DOMAIN (LAND EXCHANGE).	BLM-Redding RA	1500
50	Range Allotment;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SA SU8004)	19-May-2009	100 individuals	Fire in May 2008 burned all perennial plants completely.	Mendocino NF	
50	Range Allotment;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SA SU8005)	19-May-2009	35 individuals	Fire in May 2008 burned all perennial plants completely.	Mendocino NF	
50	Range Allotment;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SA SU8006)	19-May-2009	100 individuals	Fire in May 2008 burned all perennial plants completely.	Mendocino NF	

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50	Range Allotment;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8006)	3-Sep-2015	13 individuals		Mendocino NF	
50	Range Allotment;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8003)	19-May-2009	30 individuals	a fire in May 2008 burned all perennial plants completely.	Mendocino NF	
50	Mendocino NF	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8011)	21-May-2011	1 individuals		Mendocino NF	
51	Range Allotment;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8007)	19-Jun-2009	39 individuals		Mendocino NF	
51	Whiskey Baer;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8007)	8-Jun-2009	39 individuals		Mendocino NF	
52	Whiskey Baer;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8008)	8-Jun-2009	47 individuals		Mendocino NF	
53	Whiskey Baer;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8009)	8-Jun-2009	11 individuals		Mendocino NF	

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
54	Range Allotment;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8001)	19-May-2009	3 individuals	Fire in May 2008 had burned all perennial plants completely.	Mendocino NF	
55	Range Allotment;	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8002)	19-May-2009	100 individuals	Fire in May 2008 burned all perenial plants completely.	Mendocino NF	
56	Trail 27 Proposed Trail Reroute;	Colusa	Gilmore Peak (3912235)	NRIS, Sep 2016 (0508PVTSASU8_001)	17-Nov-2015	individuals		Mendocino NF	
57	Mendocino NF	Tehama	Hall Ridge (3912276)	NRIS, Sep 2016 (050853SASU8012)	22-May-2011	individuals		Mendocino NF	

Distribution on National Forest System (NFS) Lands:

(Please see Reference column of Locations table above for references pertaining to Record Numbers indicated on NFS lands.)

National Forest System (NFS) lands	Record #s (from Locations table above)	CNDDB EOs	Non-CNDDB Records	Recent (seen in past 20 yrs.)	Historic (not seen in past 20 yrs.)	Most Recent Obs.	EOs/ Recs. (5 mile buffer)	Total Records on NFS lands
Angeles:	-	-	-	-	-	-	-	0
Cleveland:	-	-	-	-	-	-	-	0
Eldorado:	-	-	-	-	-	-	-	0
Inyo:	-	-	-	-	-	-	-	0
Klamath:	-	-	-	-	-	-	-	0
Lake Tahoe Basin MU:	-	-	-	-	-	-	-	0
Lassen:	-	-	-	-	-	-	-	0
Los Padres:	-	-	-	-	-	-	-	0
Mendocino:	2, 10, 14, 15, 16, 17, 18, 19, 20, 21, 34, 35, 50, 51, 52, 53, 54, 55, 56, 57	12	8	10	10	30-Jun-16	22	20
Modoc:	-	-	-	-	-	-	-	0
Plumas:	-	-	-	-	-	-	-	0
San Bernardino:	-	-	-	-	-	-	-	0
Sequoia:	-	-	-	-	-	-	-	0
Shasta-Trinity:	-	-	-	-	-	-	-	0
Sierra:	-	-	-	-	-	-	-	0
Six Rivers:	-	-	-	-	-	-	-	0
Stanislaus:	-	-	-	-	-	-	-	0
Tahoe:	-	-	-	-	-	-	-	0
Totals:	N/A	12	8	10	10	N/A	22	20

Demographic and Population Trends: All 49 element occurrences in CNDDB were recorded at least twenty years ago, and one is regarded as possibly extirpated. Insufficient data

exist to make any inference as to trends in the size- and distribution of *A. subcordatum* populations.

Life History: This species is a short-statured herbaceous annual, which blooms between April and June. It is usually found on serpentine soils, and tends to favor structurally unstable areas, using prehensile branchlets to support the erect-but-weak stems in these dynamic environments (Thompson 1988).

Diversity: *Antirrhinum subcordatum* is one of ~35 species in its genus; ~17 of these are found in western North America, with the remainder native to the Mediterranean region of Europe. As constructed, the genus may not be monophyletic, but the North American taxa do comprise a natural group.

Antirrhinum subcordatum and its sister taxon, *A. vexillo-calyculatum*, have overlapping geographic ranges and remarkably similar morphology, but differ in soil preference and in flower color. Though the two species are interfertile and share pollinator assemblages, these insects show fidelity to flower color when foraging among both host species. This behavior permits continued divergence between the two incipient species (Oyama et al. 2010).

Habitat: This species is a strong indicator of serpentine soils (sensu Safford et al. 2005)—often appearing more vigorous in that regime than in more standard soils. It occurs in chaparral and lower montane coniferous forest, often on unstable ground such as soil slips or gravel slides; *A. subcordatum* does not tolerate moist environments (Thompson 1988).

Habitat Status or Trend: The status and prospects for *A. subcordatum*'s habitat in California are not well understood.

Capacity for the Species to Disperse: This species has dehiscent fruits and small, ridged seeds. These traits, together with a tendency to occur on geologically unstable landscape features, might suggest good local-scale dispersal ability. Furthermore, the part of California in which *A. subcordatum* occurs is less developed than much of the state, with fewer anthropogenic barriers to movement of propagules. But real-world observations on the matter do not exist.

Threats: *Antirrhinum subcordatum* is currently assigned as a California Rare Plant Rank of 4.3 species (limited distribution in California, but not very threatened in California or current threats unknown). It was indicated as being threatened by road maintenance and grazing in the *CNPS Inventory, Fifth Edition* (Skinner and Pavlik 1994), but these threats were removed from its entry in subsequent inventories after its status was changed from CRPR 1B to 4 (RPSAC and Tibor 2001; CNPS 2017). Althouh the direct knowledge of any current threats to this species is very limited, as an edaphic specialist and a narrow California endemic, unappreciated threats to the stability and persistence of its populations may exist.

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Formatting: Form is set up as 508 compliant. Please use the "styles" if further formatting is necessary.

Purpose: This is to maintain the best available science on a species that could be used by the Forest Service in a variety of functions. Specifically, there would be additional steps and evaluations to determine whether or not this species would be considered a Species of Conservation Concern under the 2012 Planning Rule or a Sensitive Species under the 1982 Planning Rule.

Additional Considerations at the Forest Level: Habitat amount and juxtaposition of both the species and habitat locations.