

## Plant Species Evaluation Form

### *Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

#### DWARF SOAPROOT

**Family:** Agavaceae  
(CNPS 2017)

**PLANTS Symbol:** CHPOM  
(USDA 2017)

**Calif. Endemic:**  
(CNPS 2017)

**Synonyms/Other Names:** No synonyms or other names have been used to refer to this entity. At the species level, *Chlorogalum pomeridianum* (DC.) Kunth has been referred to as *Anthericum pomeridianum* (DC.) Ker Gawl., *Laothe pomeridiana* (DC.) Raf, *Phalangium pomeridianum* (DC.) Sweet, and *Scilla pomeridiana* DC. (Tropicos 2017).

**Identification Issues:** *Chlorogalum pomeridianum* var. *minus* is one of three infraspecific taxa within *C. pomeridianum*. It differs from sister taxa by the lack of persistent coarse fibers coating its bulb and its diminutive stature (Jernstedt 2003). Confusion with *C. grandiflorum* is possible given that both taxa have membranous bulb coats and undulate leaves. *Chlorogalum grandiflorum* differs by its short, stout pedicels and larger flowers (Jernstedt 2017).

#### **Taxonomy:**

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**Species In Genus:** 5 species: western North America, especially California. **Etymology:** (Greek: green milk or juice).

**Genus Description – Habit:** Perennial herb; bulb ovoid to +- elongate, outer coat white to brown, often fibrous; generally not heterostylous. **Leaf:** basal, linear. **Inflorescence:** panicle, peduncled; flowers, buds 1--several per node; bracts scarious. **Flower:** perianth parts 6 in 2 petal-like whorls, free, white, purple, or +- pink, twisted together above ovary in fruit; stamens 6, attached to base of perianth, anthers attached at middle; ovary superior, chambers 3, style thread-like, deciduous, stigma +- 3-lobed. **Fruit:** stalked, loculicidal. **Seed:** 1--2 per chamber, ovoid, black.

**Species Description – Habit:** Bulb 7--15 cm, coat membranous or with coarse fibers. **Leaf:** 20--70 cm, 6--25 mm wide; margin generally wavy. **Inflorescence:** 30--250 cm, much-branched; pedicels 5--35 mm, slender, +- >= perianth. **Flower:** open in evening; perianth parts spreading or recurved, 15--25 mm, linear, white, midvein green or purple; stamens < perianth, anthers +- 2 mm, purple or yellow, pollen yellow or cream; style 10--15 mm, < to > perianth. **Fruit:** 5--7 mm, spheric to +- lobed. **Subspecies Description:** **Habit:** Bulb coat membranous or with few coarse fibers. **Inflorescence:** 30--170 cm, erect or branches ascending. **Chromosomes:** n=18. **eFlora Treatment Author:** Judith A. Jernstedt.

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**Status:**

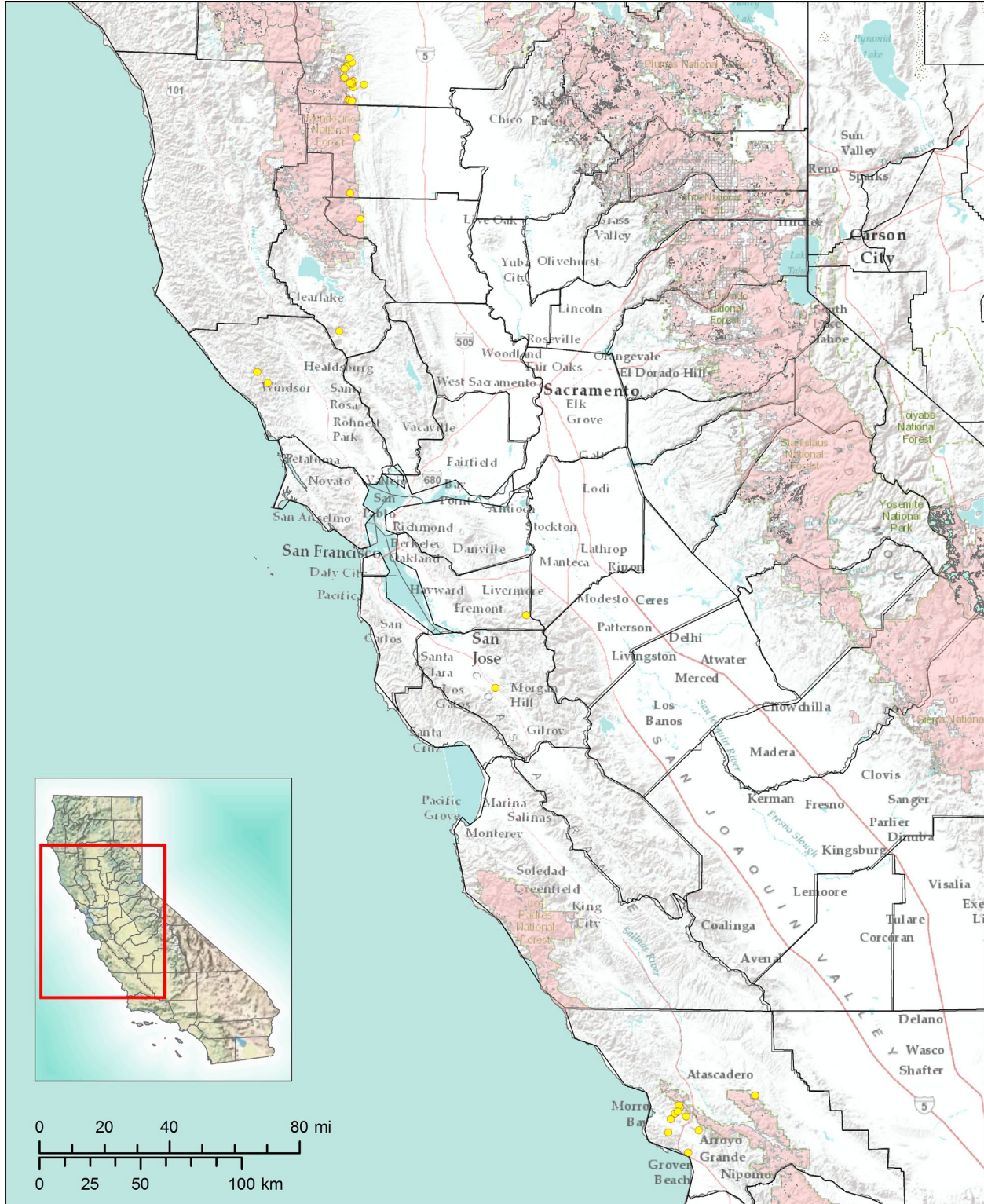
Note: Federally recognized Endangered, Threatened, Proposed, or Candidate species under the Endangered Species Act are omitted as they do not meet the definition of a Species of Conservation Concern (FSH 1909.12 § 12.52).

State Listing	G-rank	S-rank	CRPR	R5 FSS	NFP SM	CA BLM
CA: Not listed NV: Not listed OR: Not listed	G5T2T3	CA: S2S3 NV: Not listed OR: Not listed	1B.2	Sensitive	Not listed	Sensitive
SWAP: Not listed	NNHP: Not listed	NNPS: Not listed	ORBIC: Not listed	OCS: Not listed	IUCN: 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).

**Distribution:** Northern and central California, with occurrences in Tehama, Lake, San Luis Obispo, Santa Clara, Alameda, Glenn, and Colusa counties. Occurrence density is high in both the Inner North Coast Ranges and the Outer South Coast Ranges (Jernstedt 2017; CNDDDB 2017; CCH 2017). A smaller number of occurrences are distributed between these two major foci. A total of nine occurrences are found on NFS lands within Mendocino NF, with an additional 10 occurrence records found within five miles of its border. A total of seven occurrences are found within five miles of Los Padres NF (CNDDDB 2017; CCH 2017).

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**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).

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**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 (CNDDDB) definition of Element Occurrences in California). Official Element Occurrence (EO) numbers for plants in California are determined solely by the CNDDDB and are included within the Reference (Source) column for CNDDDB 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	RIDGE ABOUT 3 MILES E OF SAN LUIS OBISPO, SW OF WEST CORRAL DE PIEDRA CREEK.	San Luis Obispo	Lopez Mtn. (3512035)	CNDDDB, May 2017 (EO 2)	28-May-1992	100+ PLANTS OBSERVED IN 1992.	GROWING ALONG PROPOSED ACCESS ROAD TO COASTAL AQUEDUCT.	PVT	1000
2	4.5 AIR MILES NW OF GUERNEVILLE.	Sonoma	Cazadero (3812351)	CNDDDB, May 2017 (EO 3)	Unknown	ONLY SOURCE OF INFORMATION FOR THIS SITE IS SITE DESCRIPTION GLEANED FROM DRAFT OF THE SONOMA FLORA.		Stewards of the Coast and Redwoods	800
3	VICINITY OF LOVELADY RIDGE, SW OF EAST PARK RESERVOIR.	Colusa	Gilmore Peak (3912235)	CNDDDB, May 2017 (EO 4)	Unknown	PLANT OBSERVED BETWEEN 1983 AND 1991. NEEDS FIELDWORK.		Mendocino NF	

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
4	W OF ROUND MOUNTAIN, SE OF GOVERNMENT FLAT JUNCTION.	Tehama	Riley Ridge (3912286)	CNDDDB, May 2017 (EO 5)	23-May-1992	MAIN SOURCE OF INFORMATION FOR THIS SITE IS A 1992 ISLE COLLECTION. A 1991 REPORT FOR THE SLATE CREEK SERPENTINE HABITAT STUDY AREA SHOWS A MAP WITH PLANTS OCCURRING IN THIS GENERAL VICINITY. NEEDS FIELDWORK.		Mendocino NF	4000
5	on Covelo Road 10.7 mi W Paskenta	Tehama	Riley Ridge (3912286)	CCH, Jan 2017 (JEPS5571 5)	3-May-1968			Mendocino NF	
6	ALONG ROUND VALLEY ROAD (COUNTY ROAD M4), ABOUT 1.2 AND 1.4 AIR MILES W OF SALT CREEK SADDLE.	Tehama	Hall Ridge (3912276)	CNDDDB, May 2017 (EO 6)	22-May-2011	~30 PLANTS IN W POLYGON AND ~30 PLANTS IN E POLYGON IN 2011. A 1968 NIEHAUS COLLECTION FROM "COVELO ROAD 10.7 MI W PASKENTA" IS ALSO ATTRIBUTED TO THIS SITE.		Mendocino NF	2200
6	Round Mountain SE of Government Flat Junction	Tehama	Riley Ridge (3912286)	CCH, Jan 2017 (CHSC101 419)	23-May-1992			Mendocino NF	3862

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
7	RIDGE ABOUT 0.5 MILE SW OF HARBIN SPRINGS ANNEX, S OF BOGGS MOUNTAIN AND NW OF MIDDLETOWN.	Lake	Whispering Pines (3812276)	CNDDDB, May 2017 (EO 7)	8-May-1997	200 PLANTS OBSERVED IN 1997. THIS PARCEL IN UNDER CONSIDERATION FOR LAND EXCHANGE.		BLM	2200
8	RIDGE N OF TOOMES CAMP ROAD AND DIGGER CREEK, ABOUT 1.3 MILES SW OF PONY SPRING, W OF PASKENTA.	Tehama	Paskenta (3912285)	CNDDDB, May 2017 (EO 8)	29-May-1997	500 PLANTS OBSERVED IN 1997. THIS PARCEL IN UNDER CONSIDERATION FOR LAND EXCHANGE.		BLM	1720
9	RIDGE SOUTH OF TOOMES CAMP ROAD AT CROWFOOT POINT, ABOUT 1 MILE SE OF BEEHIVE FLAT, W OF PASKENTA.	Tehama	Paskenta (3912285)	CNDDDB, May 2017 (EO 9)	29-May-1997	200 PLANTS OBSERVED IN 1997. THIS PARCEL IS UNDER CONSIDERATION FOR LAND EXCHANGE.		BLM	1800

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
10	ALONG TOOMES CAMP ROAD AT BEEHIVE FLAT, W OF PASKENTA.	Tehama	Riley Ridge (3912286)	CNDDB, May 2017 (EO 10)	15-Jun-2000	5000 PLANTS OBSERVED BETWEEN OCCURRENCES #10, 11, AND 12 IN 1997. A 2000 CASTRO & JANEWAY COLLECTION IS ALSO ATTRIBUTED TO THIS SITE. THIS PARCEL IS UNDER CONSIDERATION FOR LAND EXCHANGE.		BLM	2200
10	Inner North Coast Ranges. Ca 7.1 mi W of Paskenta along Rd M2, at Beehive Flat	Tehama	Riley Ridge (3912286)	CCH, Jan 2017 (CHSC108649)	15-Jun-2000			BLM	2201
10	Toomes Camp Road (Forest Road M2) about 7 road miles W from Paskenta, in vicinity of Beehive Flat	Tehama	Riley Ridge (3912286)	Calflora, May 2017 (gr14626)	29-May-1997	1+ individuals		BLM	2434
10	Toomes Camp Road (Forest Road M2) about 7 road miles W from Paskenta, in vicinity of Beehive Flat	Tehama	Riley Ridge (3912286)	CCH, Jan 2017 (UC1731217)	29-May-1997				

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Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
11	ALONG TOOMES CAMP ROAD ABOUT 0.5 MILE N OF BEEHIVE FLAT, W OF PASKENTA.	Tehama	Riley Ridge (3912286)	CNDDDB, May 2017 (EO 11)	29-May-1997	5000 PLANTS OBSERVED BETWEEN OCCURRENCES #10, 11, AND 12 IN 1997. THIS PARCEL IS UNDER CONSIDERATION FOR LAND EXCHANGE.		BLM	2500
12	SW OF TOOMES CAMP ROAD BETWEEN BEEHIVE FLAT AND MILL CREEK, W OF PASKENTA.	Tehama	Riley Ridge (3912286)	CNDDDB, May 2017 (EO 12)	29-May-1997	5000 PLANTS OBSERVED BETWEEN OCCURRENCES #10, 11, AND 12 IN 1997. THIS PARCEL IS UNDER CONSIDERATION FOR LAND EXCHANGE.		BLM	2600
13	ALONG SOUTH FORK ELDER CREEK ABOUT 0.7 MILE WNW OR RED MOUNTAIN, N OF RILEY RIDGE.	Tehama	Riley Ridge (3912286)	CNDDDB, May 2017 (EO 13)	27-Jun-1997	500 PLANTS OBSERVED BETWEEN OCCURRENCES #13 AND 14 IN 1997. THIS PARCEL IS UNDER CONSIDERATION FOR LAND EXCHANGE.		BLM	2700
14	RILEY RIDGE, ABOUT 1 MILE WSW OF STONY POINT, E OF RED MOUNTAIN.	Tehama	Riley Ridge (3912286)	CNDDDB, May 2017 (EO 14)	27-Jun-1997	500 PLANTS OBSERVED BETWEEN OCCURRENCES #13 AND 14 IN 1997. THIS PARCEL IS UNDER CONSIDERATION FOR LAND EXCHANGE.		BLM	2700



*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
15	SLOPE S OF MIDDLE FORK ELDER CREEK, ABOUT 1.3 MILES E OF BRUSH MOUNTAIN, N OF RED MOUNTAIN.	Tehama	Riley Ridge (3912286)	CNDDDB, May 2017 (EO 15)	27-Jun-1996	20 PLANTS OBSERVED IN 1996. THIS PARCEL IS UNDER CONSIDERATION FOR LAND EXCHANGE.		Mendocino NF	1700
16	ALONG JEEP ROADS BETWEEN PEPPERWOOD SPRING AND KLEINSORGE MINE, SE OF RAGLIN RIDGE.	Tehama	Raglin Ridge (4012216)	CNDDDB, May 2017 (EO 16)	27-Jun-1997	5000 PLANTS OBSERVED IN 1997. THIS PARCEL IS UNDER CONSIDERATION FOR LAND EXCHANGE.		BLM, Unknown	2600
17	NEAR DUGHY SPRING IN CAMP SAN LUIS OBISPO.	San Luis Obispo	San Luis Obispo (3512036)	CNDDDB, May 2017 (EO 17)	4-Aug-2003	<25 PLANTS OBSERVED IN EACH OF THE TWO COLONIES IN 2003. THIS AREA BURNED IN 1994. ALSO ASSOC WITH NASSELLA, BRACHYPODIUM DISTACHYON, LOLIUM, AVENA BARBATA, AND ALIEN ANNUAL GRASSES.	CATTLE GRAZING, FERAL PIGS, MILITARY TRAINING ACTIVITIES, TOO FREQUENT FIRES & / OR FIRES IN THE WRONG SEASON.	State-Camp San Luis Obispo	1500

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
17	Santa Lucia Mtns: W of Dughi Spring; Camp San Luis Obispo	San Luis Obispo	San Luis Obispo (3512036)	CCH, Jan 2017 (SBBG118 531)	4-Aug-2003				1640
18	GUARD HILL AT CAMP SAN LUIS OBISPO.	San Luis Obispo	San Luis Obispo (3512036)	CNDDDB, May 2017 (EO 18)	14-Jun-2001	UNKNOWN NUMBER OF PLANTS SEEN IN 2000. <10 PLANTS OBSERVED IN 2001. ALSO ASSOC WITH CENTAUREA CALCITRAPA, HIRSCHFELDIA INCANA, CALOCHORTUS CLAVATUS SSP. CLAVATUS, AND ALIEN ANNUAL GRASSES.	EROSION, FERAL PIGS, ROAD MAINTENANCE, CATTLE GRAZING, MILITARY TRAINING ACTIVITIES, IMPROPER FIRE REGIME.	State-Camp San Luis Obispo	800
18	N side of Guard Hill, on steep NNE-facing slope; Camp San Luis Obispo	San Luis Obispo	San Luis Obispo (3512036)	CCH, Jan 2017 (SBBG118 275)	14-Jun-2000				722
19		San Luis Obispo	Pismo Beach (3512026)	CNDDDB, July 2017 (EO 19)	14-Feb-2015			Land Conservancy of SLO County	

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
19	Pismo Preserve. Along unpaved road from intersection with Thousand Hills Road westward to summit	San Luis Obispo	Pismo Beach (3512026)	CCH, Jan 2017 (OBI80864)	14-Feb-2015				656
20		San Luis Obispo	Port San Luis (3512027)	CNDDDB, July 2017 (EO 20)	1-Jul-1979			Unknown	
20	Ridge between Prefumo and See Canyons. About 5 miles from junction of Los Osos Valley Road and Prefumo Canyon Road.	San Luis Obispo	Pismo Beach (3512026)	CCH, Jan 2017 (RSA659433)	1-Jul-1979				
21		San Luis Obispo	San Luis Obispo (3512036)	CNDDDB, July 2017 (EO 21)	5-Jun-2009			State-Camp San Luis Obispo	
22		San Luis Obispo	San Luis Obispo (3512036)	CNDDDB, July 2017 (EO 22)	5-Jun-2009			State-Camp San Luis Obispo	
23		San Luis Obispo	San Luis Obispo (3512036)	CNDDDB, July 2017 (EO 23)	2-Jul-1998			PVT	

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
23	At Baldwin property and on property to W of Baldwin property, along O'Connor Way (2051 O'Connor Way, W of San Luis Obispo).	San Luis Obispo	San Luis Obispo (3512036)	CCH, Jan 2017 (OBI58986 )	2-Jul-1998				
24		San Luis Obispo	San Luis Obispo (3512036)	CNDDDB, July 2017 (EO 24)	20-May-1965			Unknown	
25		San Luis Obispo	Camatta Ranch (3512043)	CNDDDB, July 2017 (EO 25)	1-Jun-2001			Unknown	
25	Highway 58, 4.7 road miles E from Shell Creek at about 35.41629° N x 120.28222° W.	San Luis Obispo	Camatta Ranch (3512043)	CCH, Jan 2017 (OBI60893 )	1-Jun-2001				1719
25	Highway 58, 4.7 road miles E from Shell Creek at about 35.41629° N x 120.28222° W.	San Luis Obispo	Camatta Ranch (3512043)	CCH, Jan 2017 (OBI64478 )	10-May-2001				1719

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
25	Hwy 58, 4.7 rd mi E of Shell Crk	San Luis Obispo	Camatta Ranch (3512043)	CCH, Jan 2017 (SBBG123179)	1-Jun-2001				
25	Hwy 58, 4.7 road mi E from Shell Creek at about [coords.]	San Luis Obispo	Camatta Ranch (3512043)	CCH, Jan 2017 (UC1873064)	10-May-2001				1719
25	Hwy 58, 4.7 road mi E from Shell Creek at about [coords.]	San Luis Obispo	Camatta Ranch (3512043)	CCH, Jan 2017 (UC1873065)	10-May-2001				1719
25	Highway 58, 4.7 road miles E from Shell Creek at about 35.41629' N x 120.28222' W.	San Luis Obispo	Camatta Ranch (3512043)	CCH, Jan 2017 (UC1945181)	10-May-2001				1719
25	South Coast Range Highway 58, 4.7 road miles E from Shell Creek	San Luis Obispo	Camatta Ranch (3512043)	CCH, Jan 2017 (UCR266031)	10-May-2001				1719
26	Coyote Creek Parkway	Santa Clara	Morgan Hill (3712126)	CNDDDB, July 2017 (EO 26)	9-Jun-1896			Coyote Creek Parkway	
26	Coyote Creek	Santa Clara	Morgan Hill (3712126)	CCH, Jan 2017 (JEPS61590)	9-Jun-1896				

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

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27		Alameda	Cedar Mtn. (3712155)	CNDDDB, July 2017 (EO 27)	25-Jun-2011			PVT-Boy Scouts of America	
27	Mt. Hamilton Range - Mines Rd.	Alameda	Cedar Mtn. (3712155)	Calflora, May 2017 (jgr32892)	25-Jun-2011	1+ individuals			2051
28	Mendocino NF	Glenn	Stonyford (3912245)	CNDDDB, July 2017 (EO 28)	11-Jun-2006			Mendocino NF	
28	On the E side of Forest Road 18N03, south of an intersection, on Black Diamond Ridge, about 2 miles (air) NE of the North Fork Campground, about 4 3/4 miles (air) NW of Stonyford	Glenn	Stonyford (3912245)	CCH, Jan 2017 (CHSC946 97)	11-Jun-2006			Mendocino NF	3100
29		Glenn	Chrome (3912265)	CNDDDB, July 2017 (EO 29)	19-May-1949			Unknown, Mendocino NF	
29	20 miles W of Willows, on Alder Spring Road.	Glenn	Elk Creek (3912255)	CCH, Jan 2017 (RSA4861 3)	19-May-1949			Mendocino NF	1201
30	Mendocino NF	Tehama	Hall Ridge (3912276)	CNDDDB, July 2017 (EO 30)	22-May-2011			Mendocino NF	

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

Rec. #	Locality	County	Quad	Reference (Source)	Date Last Observed	Population Info	Threats	Land Manager	Elev. (ft.)
31	Mendocino NF	Tehama	Hall Ridge (3912276)	CNDDDB, July 2017 (EO 31)	22-May-2011			Mendocino NF	
31	Mendocino NF	Tehama	Hall Ridge (3912276)	CCH, Jan 2017 (CHSC110169)	22-May-2012			Mendocino NF	1424
32		Sonoma	Cazadero (3812351)	CNDDDB, July 2017 (EO 32)	17-May-2014			Unknown	
32	Sonoma County: 4.5 mi NNW of Cazadero	Sonoma	Cazadero (3812351)	CCH, Jan 2017 (UCD163102)	17-May-2014				623
33	foothills above Paskenta (on road to Covelo); ; Paskenta, Tehama Co.	Tehama	Paskenta (3912285)	CCH, Jan 2017 (UC618191)	11-May-1939				

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

**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)	CNDDDB EOs	Non-CNDDDB 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:	-	-	-	-	-	-	7	0
Mendocino:	3,4,5,6,15,28,29,30,31	9	-	4	3	22-May-2011	10	9
Modoc:	-	-	-	-	-	-	-	0
Plumas:	-	-	-	-	-	-	-	0
San Bernardino:	-	-	-	-	-	-	-	0
Sequoia:	-	-	-	-	-	-	-	0
Shasta-Trinity:	-	-	-	-	-	-	-	0
Sierra:	-	-	-	-	-	-	-	0
Six Rivers:	-	-	-	-	-	-	-	0
Stanislaus:	-	-	-	-	-	-	-	0
Tahoe:	-	-	-	-	-	-	-	0
<b>Totals:</b>	N/A	9	0	4	3	N/A	17	9

**Demographic and Population Trends:** Population count and size estimate information is known for 14 of the 33 total occurrences (14/33; ~42%). These occurrences range in size from 10 to 5,000 estimated individuals each, with an average of ~830 plants per occurrence and a median value of 225. A total of four records are estimated to have between 10 and 100 plants each. Another six occurrences were estimated to have between 101 and 500 plants each at the time of their observations. Three of the remaining four occurrences had an estimated average of roughly



*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

1,670 plants each. A single element occurrence (EO 16) had an estimated 5,000 plants at the time of its observation (CNDDDB 2017; CCH 2017).

**Life History:** *Chlorogalum pomeridianum* var. *minus* is a diminutive variety of the widespread *C. pomeridianum* (Jernstedt 2003). It is a perennial and bulbiferous herb that blooms from May until August (CNPS 2017). Plants have a basal tuft of flaccid leaves with undulating margins that spread along the ground. Flowers emerge from a robust and branched (30-170 cm) inflorescence. Each flower along the branched inflorescence opens and displays for a single day. Plants have upward of 200 flowers; sometimes only a few are seen. Bulbs of mature plants are submerged 10-30 cm underground. Each plant has contractile roots that pull the bulb progressively downward as the plant ages, becoming increasingly well established and less vulnerable in the face of fire. Plants regenerate from seed and from sprouting. At burned sites in Mendocino and Shasta counties, *C. pomeridianum* density progressively increased for five years after fire. Plants reach reproductive age after about 5-7 of growth. Some data suggest that plants do not produce seed each year. Geophytes, like *C. pomeridianum*, generally show considerable seed production the first year after a burn. Seeds are gravity dispersed and fall below parent plants. Seeds are not dormant, germinating readily upon exposure to water. Seeds emerge in roughly seven days after initial exposure to water in laboratory conditions. Granivores are known to consume seeds. Ground squirrels, pocket gophers, other rodents, rabbits, and mule deer consume leaves and inflorescences (observed in Alameda and Santa Clara counties). At a site at Hastings Natural History Reservation, *C. pomeridianum* plants were only known to occur on sites without livestock (Fryer 2015).

**Diversity:** *Chlorogalum* is one of four genera (incl. *Camassia*, *Hastingsia*, *Schoenolirion*) in the Chlorogaloideae, an asparagalean clade of herbaceous perennials in the Agavaceae that have long and linear leaves that emerge from fibrous or membranous tunicoid bulbs (Halpin and Fishbein 2013; Seberg et al. 2012). At one time included in Liliaceae, members of Chlorogaloideae have been resolved as nested members of the Agavaceae by several phylogenetic studies. At least seven of the 16-18 species in Chlorogaloideae are endemic to serpentine, four of which are members of *Chlorogalum* (Halpin and Fishbein 2013). *Chlorogalum pomeridianum* var. *minus* is one of three varieties of the widespread *C. pomeridianum* (Jernstedt 2017).

**Habitat:** A majority of plants are found in serpentine sites within chaparral (CNDDDB 2017; CNPS 2017; NatureServe 2017). Plants are also documented in an open gravelly area in a Douglas-fir/black oak forest, in a man-made gully, in heavy soil in open places, in foothill woodland with chamise-chaparral, open grassy places with serpentine, a dry meadow on a serpentine outcrop, and openings among coastal scrub/coast live oak woodland. This taxon is known to occur alongside *Acmispon brachycarpus*, *Adenostoma fasciculatum*, *Arctostaphylos viscida*, *A. obispoensis*, *Avena barbata*, *Brachypodium distachyon*, *Brodiaea stellaris*, *Bromus laevipes*, *Calochortus obispoensis*, *Calycadenia pauciflora*, *Ceanothus cuneatus*, *C. jepsonii*, *Centaurea calcitrapa*, *Chorizanthe palmeri*, *Dudleya abramsii*, *Elymus multisetus*, *Eriophyllum lanatum*, *Gilia capitata*, *Hesperocyparis sargentii*, *Hesperolinon tehamense*, *Heteromeles arbutifolia*, *Hirschfeldia incana*, *Monardella villosa*, *Pedicularis densiflora*, *Pinus sabiniana*,

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

*Quercus berberidifolia*, *Q. durata*, *Sisyrinchium bellum*, *Stipa pulchra*, *Styrax redivivus*, and *Toxicoscordion* sp. (CNDDDB 2017).

**Habitat Status or Trend:** Over 40% (13/31) of CNDDDB element occurrences are reported to be in Excellent (A) condition. Just under 10% (3/31) of these occurrences are in Good (B) condition. One occurrence is in Poor (D) condition, whereas the remaining element occurrences (14/31) are documented in Unknown (U) condition. Over 15% (5/31) of these occurrences have a documented threat associated with it, with livestock grazing being the most frequently reported threat (CNDDDB 2017).

**Capacity for the Species to Disperse:** Seeds of *C. pomeridianum* are gravity dispersed and generally fall below parent plants (Fryer 2015).

**Threats:** Livestock grazing and road construction are documented threats to this taxon. Furthermore, erosion, feral pigs, and military activity are documented as threats to southern occurrences in San Luis Obispo County (CNDDDB 2017; NatureServe 2017).

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**Persons Contacted:**

None.

**Author(s) and Date:**

Steven Serkanic, Assistant Rare Plant Botanist, California Native Plant Society, (916) 447-2677 x218, [sserkanic@cnps.org](mailto:sserkanic@cnps.org)

Aaron E. Sims, Rare Plant Botanist, California Native Plant Society, (916) 324-3816, [asims@cnps.org](mailto:asims@cnps.org)

January 23, 2018

*Chlorogalum pomeridianum* (DC.) Kunth var. *minus* Hoov.

**Reviewer(s) and Date:**

David Magney, Rare Plant Program Manager, California Native Plant Society, (916) 447-2677 ext. 205, [dmagney@cnps.org](mailto:dmagney@cnps.org). January 24, 2018.

**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.