Species: *Bulbostylis capillaris* (L.) C. B. Clarke, thread-leaved beakseed

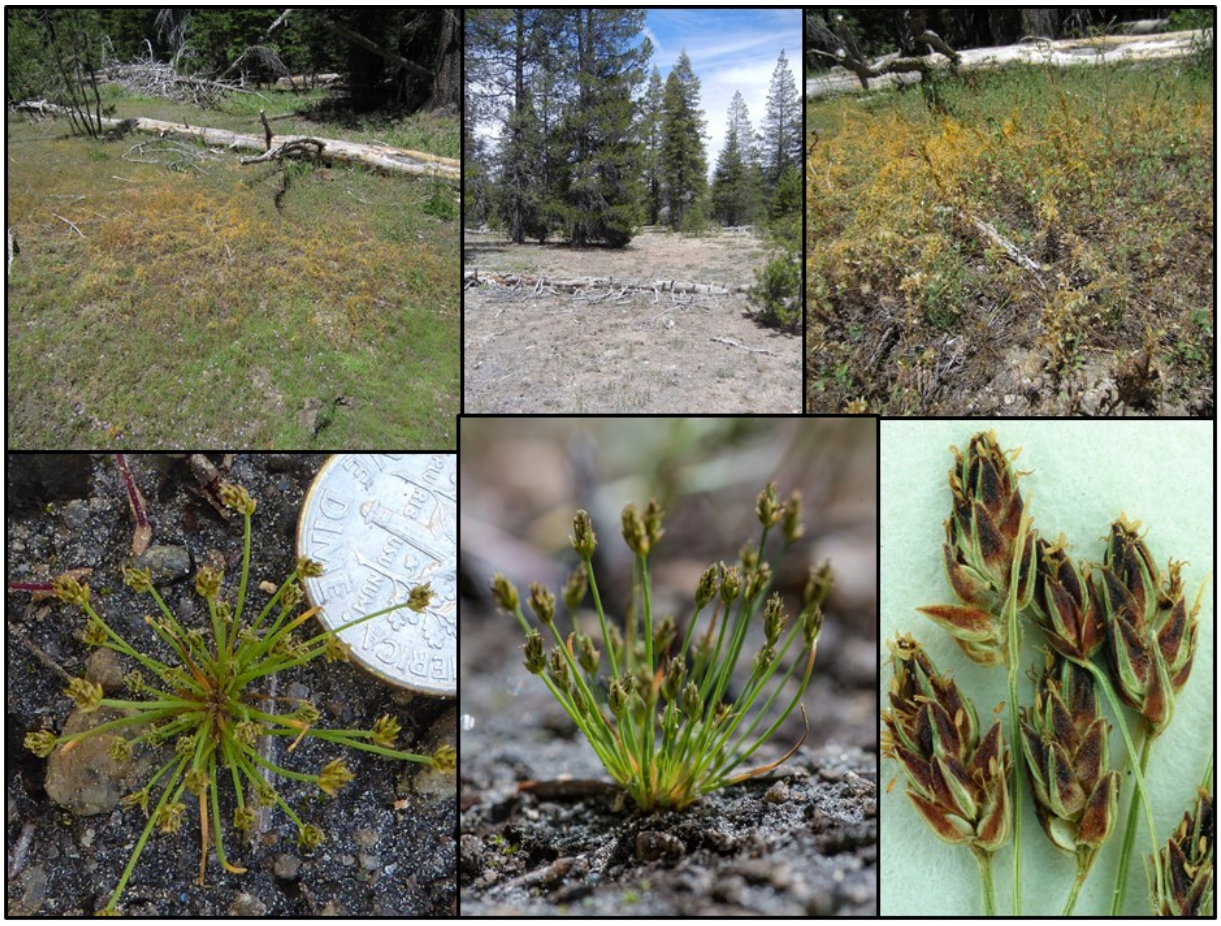


Photo Source: CalPhotos 2021, Ellen Dean

Photo Credits: Top: Ellen Dean; lower left and center: Svetlana Yegorova; lower right: Steve Matson.

Status

Table 1 summarizes the current status of this species or subspecies/variety by various ranking entities and defines the meaning of the status.

Table 1. Current status of thread-leaved beakseed		
Entity	**Status**	**Status Definition**
NatureServe CA[a]	G5 S3	G5: Demonstrably Secure — Common; widespread and abundant. S3: Vulnerable — Vulnerable in the state due to a restricted range, relatively few populations (often 80

		or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the nation or state/province.
California Rare Plant Rank[b]	4.2	4: Plants of limited distribution – a watch list. 0.2: Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat) This taxon was added to the *CNPS Inventory of Rare and Endangered Plants of California* in 2001 and has undergone no further changes (CNPS 2021).
California State Listing[c]	Not listed	
USDA Forest Service[d]	Not listed	
USDI FWS[e]	Not listed	
USDI BLM[f]	Not listed	
NatureServe OR[g]	SH	H: Historical Occurrence, formerly part of the native biota with the implied expectation that it may be rediscovered.
Oregon State Listing[h]	Not listed	
NatureServe NV[i]	Not present	
Nevada State Listing[j]	Not present	

[a] California Natural Diversity Database, California Dept. of Fish & Wildlife [CNDDB 2021, 2021a]
[b] California Native Plant Society [CNPS 2021]
[c] California Department of Fish and Wildlife [CDFW 2021]
[d] US Forest Service Region 5 Forester's List [USDA 2013] and Pacific NW Survey and Manage [USDA & BLM 2014]
[e] US Department of Interior Fish and Wildlife Service [USFWS 2021]
[f] US Department of Interior Bureau of Land Management [BLM 2020]
[g] Oregon Biodiversity Information Center [ORBIC 2019]
[h] Oregon Department of Agriculture [ODA 2018]
[i] Nevada Natural Heritage Program [NNHP 2021]
[j] Nevada Division of Forestry [NDF 2012]
Note: Individual State Heritage Programs (CNDDB, ORBIC, NNHP) represent NatureServe and contain more up-to-date ranks for their state than NatureServe Explorer.

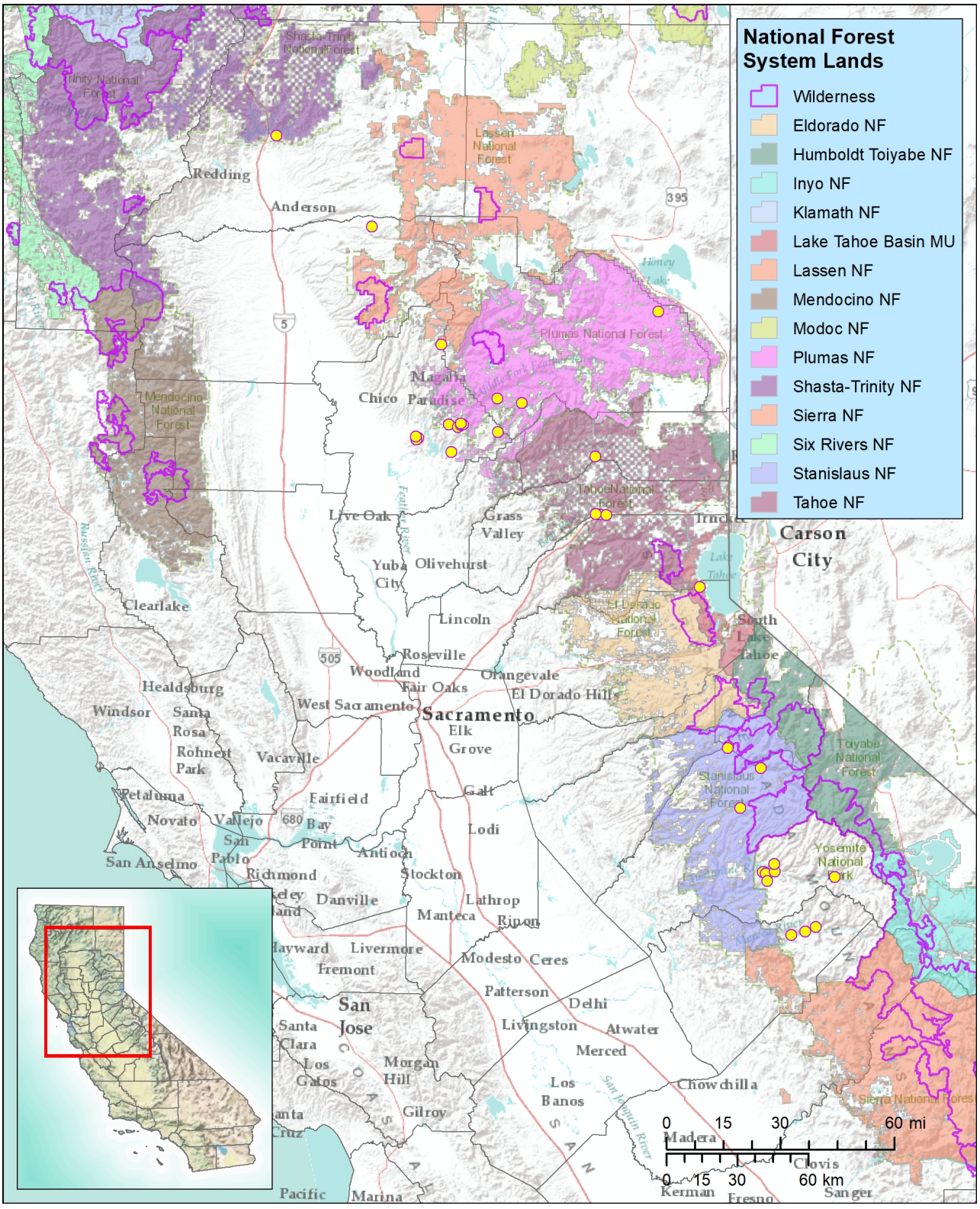
Distribution, abundance, and population trend on the planning unit[1]

Table 2 summarizes the distribution and frequency of this species or subspecies/variety within National Forest System Lands in California. Table 4 in Appendix 1 lists all known occurrences of this species or subspecies/variety within California. Individual occurrences are defined as sites that contain an individual, population, or groups of populations of the plant that are located more than 1/4 (0.25) of a mile apart from each other as defined by the CNDDB.

[1] 1909.12 Chapter 10, Section 12.53, components 2, 3, and 4.

Table 2. Known occurrence frequency of thread-leaved beakseed within the planning area (NRIS, CNDDB, Calflora/CCH databases)

National Forest System (NFS) lands in California	Record #s (from Table 4)	CNDDB EOs	Non-CNDDB Records	Recent (seen in past 20 years)	Historical (not seen in past 20 years)	Most Recent Obs. Date	Total Records on NFS lands
Lassen:	9	0	1	0	1	29-Jul-1993	1
Plumas:	2, 3, 5, 6, 7, 20, 21, 22	0	8	8	0	9-Sep-2013	8
Shasta-Trinity:	23	0	1	0	1	24-Aug-1958	1
Stanislaus:	1, 26, 34, 35	0	4	0	4	7-Oct-1997	4
Tahoe:	18, 24	0	2	1	1	23-Jul-2011	2
Totals:	N/A	0	16	9	7	N/A	16



Sources: *Distribution*: Calflora 2021, CCH2 2021, Green 2021 pers. comm., NRIS 2021. *Baselayers*: 2013 National Geographic Society, i-cubed, Esri, Garmin, NOAA, NPS, USGS.

In California, thread-leaved beakseed is mainly distributed along the Cascade Range-Sierra Nevada axis and is found in the High Cascade Range (CaRH), northern Sierra Nevada Foothills (nSNF), northern High Sierra Nevada (nSNH), and central High Sierra Nevada (cSNH) bioregions, as well as the easternmost part of the Klamath Ranges (KR) bioregion. From north to south, it occurs in Shasta, Tehama, Plumas, Butte, Sierra, Nevada, El Dorado, Alpine, Tuolumne, and Mariposa counties. In North America, thread-leaved beakseed is known from Canada (British Columbia, New Brunswick, Ontario, Quebec, Novia Scotia) and most of the continental United States, from Maine to Florida and west to Texas, New Mexico, Arizona, and California. It has not been observed in many of the western states (Washington, Idaho, Nevada, Utah, Colorado, Wyoming, Montana, North and South Dakota) (Lomer 2008, NRCS 2021). Historically, it was known from Grants Pass, Josephine County, Oregon but is now believed to be extirpated there (Lomer 2008, ORBIC 2019). Outside of North America, this species is known from the West Indies, Mexico, Central America, and northern South America (FNA 1993+, López and Simpson 2012, NRCS 2021). It is also present in Hawaii, where it is considered non-native (NRCS 2021). Some of the Canadian populations of this plant may also be adventive, as it can spread along railway tracks and roadsides (Oldham and Zinck 1997, Lomer 2008). The occurrence of thread-leaved beakseed in Asia is disputed (FNA 1993+, Lomer 2008, López and Simpson 2012).

Sixteen of the 35 California occurrence records are located on U.S. National Forest lands (Table 2): Shasta-Trinity NF (one record), Lassen NF (one), Plumas NF (eight), Tahoe NF (two), and Stanislaus NF (four). The other records are located on lands managed by the US National Park Service (nine), California Department of Parks and Recreation (two), California Department of Fish and Wildlife (two), BLM (one), and Hetch Hetchy Water and Power (one). The other four records are on private land. None of the records are located in Wilderness Area. Approximately half (17) of the occurrence records are historical (not visited in over 20 years), and 18 are recent. Six of the records have been visited more than once, however only one record (#13) was censused at both visits, with dozens of plants present after a very wet winter in 2011 and only one plant present in 2017 after a very dry winter. Only two other records have population counts, record #2 with 16,110 plants in 2011 and #22 with 200 plants in 2013. Although population numbers were not recorded, observers noted that thread-leaved beakseed was “uncommon” at eight records and “common” or “very common” at three others.

Three records based on historical herbarium specimens collected in 1866, 1911, and 1936 from “Yosemite Valley” could not be georeferenced with any accuracy and are highlighted in pink at the bottom of Table 4. There are two other locations in Yosemite Valley (records #15 and #16), and it is uncertain if the pink-highlighted records should be assigned to one of these two locations or represent other populations.

Brief description of natural history and key ecological functions[2]

Thread-leaved beakseed is a small annual herb to 30 cm tall (FNA 1993+), producing flowers and fruits from June to October (Table 4). Plants are found in moist meadows, seeps, and seasonally wet depressions in open grasslands, cismontane woodland, and lower and upper montane coniferous forest from 300–2095 m in elevation (Calflora 2021, CCH2 2021). This

[2] Basis for other 1909.12 Chapter 10, Section 12.53 components.

species is often observed on open granite or granodiorite rock outcrops or sandy soil from decomposed granite, however it is also found in fine soils derived from volcanic mudflow deposits such as basalt and breccia (CDC 2015, Table 4). Associates of thread-leaved beakseed in California include *Pinus* spp., *Abies* spp., *Quercus* spp*., Arctostaphylos viscida, Erythranthe* spp., *Navarretia leptalea*, *Polygonum polygonoides*, *Gnaphalium palustre*, *Jensia yosemitana, Hypericum anagalloides*, *Heterocodon rariflorum*, *Muhlenbergia filiformis*, *Deschampsia elongata, Aira caryophyllea*, *Lipocarpha occidentalis, Eleocharis acicularis*, *Carex* spp., *Juncus capillaris*, *J. bufonius, J. triformis, J. tenuis,* and *J. hemiendytus* (CCH2 2021, Green 2021 pers. comm.).

Bulbostylis is a genus of ca. 100 species (FNA 1993+) that is included in tribe Albigaardieae within the Cyperaceae family (Roalson et al. 2019). A complete phylogeny of *Bulbostylis* has not yet been completed; therefore, the closest relatives of thread-leaved beakseed are not yet known with certainty. However, it may be related to *B. juncoides*, a perennial species that shares a very similar Neotropical distribution but a more limited distribution within North America north of Mexico (Texas, New Mexico, Arizona) (Kral 1971, FNA 1993+, Reuteman et al. 2000, Roalson et al. 2019). Thread-leaved beakseed is the only species of *Bulbostylis* found in California; it differs from other similar, small, annual species of Cyperaceae by having tufted, narrow, basal leaves, more than one cauline leaf, leaf sheaths with ciliate tips, just one inflorescence per plant, and a persistent style base on the fruit. The annual *Fimbristylis autumnalis* superficially resembles thread-leaved beakseed but differs in having wider leaves that are generally proximally flat, shorter hairs (<< 0.5 mm versus 1 mm) on the margins of the sheath summit and across the sheath, and glabrous flower bracts (Bainbridge 2017, JEPS 2021).

The pollination system of thread-leaved beakseed has not yet been studied. Like other species of *Bulbostylis*, it is most likely wind pollinated and the flowers are bisexual (having both pistil and stamens) (Jacobi and Fonseca do Carmo 2011, JEPS 2021). The fruits are one-seeded achenes (sometimes referred to as nutlets), and the fruit and seed are dispersed as a unit (FNA 1993+). The mode of seed dispersal in thread-leaved beakseed is unknown, but the seeds are most likely dispersed by water, wind, and/or animals. The species is common in soil depressions in granite outcrops in the Georgia piedmont of the southeastern United States, and in those areas, the seeds can be persistent and numerous in the seed bank (Houle and Phillips 1988). The germination ecology and early growth of thread-leaved beakseed have not been studied. However, observers have noted that the seasonally wet depressions in which it grows are greatly influenced by the timing and amount of winter precipitation, and the plants may not emerge in dry years (Green 2021 pers. comm.). Once it emerges, it can develop rapidly, progressing from seedling to fruiting stage in a few weeks (Kral 1971). It is considered weedy in some areas of North America, growing on sandy highway shoulders or in railroad rights-of-way, and it has the widest geographical range of any American *Bulbostylis* species (Kral 1971). There are no observations or data on fire response in this species.

Overview of ecological conditions for recovery, conservation, and viability[3] including Threats and Risk Factors

In California, thread-leaved beakseed is usually found in ephemerally wet habitats on rocky or sandy soil in upper elevations of the Cascade-Sierran mountain axis. The only threat recorded for this species is grazing disturbance (Table 4), although in general, it would be threatened by alterations in hydrology, any changes in vegetation that would suppress recruitment (including invasion by non-native species), or disruption of the seed bank (Bainbridge 2017). More information is needed for this species regarding trends in population size. Only three of the populations have been censused, and there is only one record that has been censused over time, with the observations confirming the importance of water availability for germination and survival. Although this species is noted for becoming adventive in several areas of North America (Kral 1971), it remains relatively rare in California (35 location records) and is thought to be extirpated from Oregon. Given the absence of this species from many western states, it may not be well adapted to summer drought and may do better in regions with summer rainfall. The lack of California location records could also be due to its inconspicuous and ephemeral nature (Kral 1971, CCH2 2021).

Taxonomy[4]

Table 3 summarizes this species or subspecies/variety's name status in key literature.

Table 3. Name status of thread-leaved beakseed

Entity	Name Status
CNDDB and CNPS	*Bulbostylis capillaris* (L.) Clarke
Jepson eFlora	*Bulbostylis capillaris* (L.) C. B. Clarke
Jepson Manual (1993)	*Bulbostylis capillaris* (L.) C. B. Clarke
Flora of North America	*Bulbostylis capillaris* (Linnaeus) C. B. Clarke in J. D. Hooker, Fl. Brit. India
USDA NRCS[a] PLANTS	*Bulbostylis capillaris* (L.) Kunthe ex C. B. Clarke

[a] Natural Resources Conservation Service [NRCS 2021]

Synonymy: *Bulbostylis capillaris* var. *crebra* Fernald, *Bulbostylis capillaris* var. *isopoda* Fernald, *Bulbostylis capillaris* var. *tenuifolia* (Rudge) C.B. Clarke, *Fimbristylis capillaris* (L.) A. Gray, *Fimbristylis tenella* Raddi, *Isolepis brachyphylla* (Link) Schult., *Isolepis capillaris* Ehrenb. ex. Boeckeler, *Isolepis capillaris* (L.) Roem. & Schult., *Isolepis ciliata* J. Presl & C. Presl., *Isolepis radiciflora* Steud., *Scirpus brachyphyllus* Willd. ex Kunth, *Scirpus capillaris* L., *Scirpus muehlenbergii* Spreng., *Stenophyllus capillaris* (L.) Britton, *Stenophyllus capillaris* var. *ciliatus* (J. Presl. & C. Presl.) J.F. Macbr. *Stenophyllus eucapillaris* H. Pfeiff., *Stenophyllus eucapillaris* fo. *ciliata* (J. Presl. & C. Presl.) H. Pfeiff. (Tropicos 2021).

Jepson eFlora link (JEPS 2021): https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=16367

[3] 1909.12 Chapter 10, Section 12.53, components 7, 9, 10, 11 and 12, as appropriate.
[4] 1909.12, Chapter 10, Section 12.53, component 1.

Type locality: United States, Virginia (*Clayton 771*, LINN, BM) (Linnaeus 1753, López and Simpson 2012, JSTOR 2021)

Key literature

Bainbridge, S. 2017. Draft Species Evaluation Form for *Bulbostylis capillaris*. NatureServe, Arlington, Virginia.

Kral, R. 1971. A treatment of *Abildgaardia*, *Bulbostylis*, and *Fimbristylis* (Cyperaceae) for North America. *Sida* 4: 57–227.

Linnaeus, C. 1753. *Species Plantarum* Vol. 1, Impensis Laurentii Salvii, Holmiae [Stockholm], Sweden.

Lomer, F. 2008. *Bulbostylis capillaris* (Cyperaceae) in British Columbia. *Botanical Electronic News* 401: 1–2.

López, M. G. and D. A. Simpson. 2012. The *Bulbostylis capillaris* complex (Cyperaceae) in southern South America. *Kew Bulletin* 67: 225–234.

Oldham, M. J. and M. Zinck. 1997. New and noteworthy records from the vascular flora of Nova Scotia. *The Canadian Field-Naturalist* 111: 393–398.

Reutemann, A. G., R. E. Ardissone, M. G. López, S. E. Machut, I. Boldrini, A. C. Vegetti, and L. M. Giussani. 2000. Phylogenetic relationships in *Bulbostylis* (Albigaardieae: Cyperaceae) inferred from nuclear and plastid DNA sequence data. *Systematics and Biodiversity* 16: 441–452.

Roalson, E. H., A. P. Prata, A. Mesterházy, M. W. Chase, D. A. Simpson, W. W. Thomas, and I. Larridon. 2019. A broader circumscription of *Bulbostylis* including *Nemum* (Albigaardieae: Cyperaceae).

Literature cited

Bainbridge, S. 2017. Draft Species Evaluation Form for *Bulbostylis capillaris*. NatureServe, Arlington, Virginia.

[BLM] U.S. Dept. of Interior Bureau of Land Management. 2020. Special Status Plants in California, Including BLM Designated Sensitive Species. January 17, 2020. Provided by Christina Lund, State Botanist, California BLM on 30 April 2020.

Calflora. 2021. Information on wild California plants for conservation, education, and appreciation. Website http://www.calflora.org/ [accessed July 2021].

[CDC] California Department of Conservation. 2015. Geologic Map of California (2010). California Geological Survey, Geologic Data Map No. 2. Available at https://maps.conservation.ca.gov/cgs/gmc/ [accessed July 2021].

[CDFW] California Department of Fish and Wildlife, Natural Diversity Database. 2021. State and Federally Listed Endangered, Threatened, and Rare Plants of California. Last updated January 8, 2021. 10 pp. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109390 [accessed July 2021].

[CNDDB] California Department of Fish and Wildlife, Natural Diversity Database. 2021. RareFind 5 [Internet application] and CNDDB Maps and Data, Version 5.2.14. Available at: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data [Government Version, July 2021].

____. 2021a. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication, January 2021. 166 pp. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline [accessed July 2021].

[CNPS] California Native Plant Society, Rare Plant Program. 2021. *Inventory of Rare and Endangered Plants of California* (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed July 2021].

CalPhotos. 2021. CalPhotos: Plants. Regents of the University of California, Berkeley. Website http://calphotos.berkeley.edu/flora/ [accessed July 2021].

[CCH2] Consortium of California Herbaria Portal 2. 2021. Data provided by the participants of the Consortium of California Herbaria and the California Phenology Thematic Collections Network (CAP-TCN). Regents of the University of California, Berkeley and Cal Poly, San Luis Obispo. Website http//:www.cch2.org/portal/index.php [accessed July 2021].

[FNA] Flora of North America Editorial Committee, eds. 1993+. *Flora of North America North of Mexico.* 20+ vols. Missouri Botanical Garden, New York and Oxford. Volume 23, 2002.

Jacobi, C. M. and F. Fonseca do Carmo. 2011. Life forms, pollination and seed dispersal syndromes in plant communities on ironstone outcrops, SE Brazil. *Acta Botanica Brasilica* 25: 395–412.

[JEPS] Jepson Flora Project (eds.). 2021. Jepson eFlora. Website http://ucjeps.berkeley.edu/IJM.html [accessed July 2021].

[JSTOR] Global Plants database. 2021. Website http://plants.jstor.org [accessed July 2021].

Kral, R. 1971. A treatment of *Abildgaardia*, *Bulbostylis*, and *Fimbristylis* (Cyperaceae) for North America. *Sida* 4: 57–227.

Houle, G. and D. L. Phillips. 1988. The soil seed bank of granite outcrop plant communities. *Oikos* 52: 87–93.

Linnaeus, C. 1753. *Species Plantarum* Vol. 1, Impensis Laurentii Salvii, Holmiae [Stockholm], Sweden.

Lomer, F. 2008. *Bulbostylis capillaris* (Cyperaceae) in British Columbia. *Botanical Electronic News* 401: 1–2.

López, M. G. and D. A. Simpson. 2012. The *Bulbostylis capillaris* complex (Cyperaceae) in southern South America. *Kew Bulletin* 67: 225–234.

[NRCS] U.S. Department of Agriculture, Natural Resources Conservation Service. 2021. PLANTS Database. Website http://plants.usda.gov/ [accessed July 2021].

[NRIS] U.S. Department of Agriculture Forest Service, Natural Resource Information System. 2021. Natural Resource Information System; Threatened, Endangered and Sensitive Plants—Invasive Plants [accessed March 2021].

[NDF] Nevada Division of Forestry. 2012. NAC 527.010 List of fully protected species of native flora. April 2012. Available at: https://www.leg.state.nv.us/NAC/NAC-527.html#NAC527Sec010 [accessed May 2020].

[NNHP] Nevada Natural Heritage Program. 2021. Tracking and Watch Lists. Department of Conservation and Natural Resources. Available at: http://heritage.nv.gov/botany [accessed February 2021].

[ODA] Oregon Department of Agriculture. 2018. Oregon listed and candidate plants - complete list. Native Plant Conservation Program. October 12, 2018. Available at: https://data.oregon.gov/Natural-Resources/Oregon-listed-and-candidate-plants-complete-list/8s3k-ygh2 [accessed February 2021].

Oldham, M. J. and M. Zinck. 1997. New and noteworthy records from the vascular flora of Nova Scotia. *The Canadian Field-Naturalist* 111: 393–398.

[ORBIC] Oregon Biodiversity Information Center. 2019. Rare, Threatened and Endangered Vascular Plant Species of Oregon. Institute for Natural Resources, Portland State University, Portland, OR. 49 pp. Available at https://inr.oregonstate.edu/sites/inr.oregonstate.edu/files/2019-rte-vascs.pdf [accessed May 2020].

Reutemann, A. G., R. E. Ardissone, M. G. López, S. E. Machut, I. Boldrini, A. C. Vegetti, and L. M. Giussani. 2000. Phylogenetic relationships in *Bulbostylis* (Albigaardieae: Cyperaceae) inferred from nuclear and plastid DNA sequence data. *Systematics and Biodiversity* 16: 441–452.

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Tropicos. 2021. Missouri Botanical Garden. Website http://www.tropicos.org [accessed July 2021].

[USDA] U.S. Department of Agriculture Forest Service, Pacific Southwest Region. 2013. Regional Forester Sensitive Species List. Available at: http://www.fs.usda.gov/main/r5/plants-animals/plants [accessed May 2020].

[USDA & BLM] U.S. Department of Agriculture Forest Service and U.S. Department of Interior Bureau of Land Management. 2014. List of Survey and Manage Species in Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures; as amended by Annual Species Reviews 2001-2003. Available at: https://www.blm.gov/or/plans/surveyandmanage/files/sm-fs-enc3-table1-1-dec2003wrtv.pdf [accessed May 2020].

[USFWS] U.S. Dept. Interior Fish and Wildlife Service. 2021. Endangered Species List. Available at: https://www.fws.gov/endangered [accessed July 2021].

Persons Contacted

Green, Kaitlyn. 2021. California Native Plant Society. Email correspondence regarding recent/unprocessed CNDDB survey forms for *Bulbostylis capillaris*. Personal communication 23 June 2021.

Author(s) and Date:

Ellen A. Dean, California Native Plant Society, Associate Rare Plant Botanist, 23 July 2021; finalized 8 October 2021.

Reviewer(s) and Date:

Aaron E. Sims, California Native Plant Society, Rare Plant Program Director, 27 September 2021; Julie Ann Kierstead, USDA Forest Service Region 5, Ecosystem Planning, 7 October 2021.

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.

Appendix 1: Known Occurrences

Table 4. Known Occurrences of thread-leaved beakseed within California (NRIS, CNDDB, Calflora/CCH databases).

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.

Rec. #	Locality	County	Quad	Ref. (Source)	Date Last Obs'd	Population Info	Threats	Land Mgr.	Elev. (ft.)
1	Utica Reservoir, west shore of the lake;	Alpine	Tamarack (3812041)	Calflora, Jan. 2021 (xr167940)	7-Oct-1997	1+ individuals		Stanislaus NF	6870
1	Utica Reservoir, west shore of the lake	Alpine	Tamarack (3812041)	CCH2, Nov. 2020 (JEPS96859)	7-Oct-1997	moist gruss on high water margin of the lake, associated with Muhlenbergia filiformis, Juncus capillaris, Mimulus suksdorfii. Flowering/fruiting.		Stanislaus NF	6820
2	Berry Creek DFPZ	Butte	Berry Creek (3912164)	NRIS polys, Nov. 2020 (051103_BUCA2_006)	21-Jun-2011	16110 individuals (genets) over 0.3013 acres. 100% in flower.		Plumas NF	

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
2	Northern High Sierra Nevada. Plumas National Forest; northwest facing slopes near the top of the ridge on the southeast side of Martin Creek, 1.9 air miles northeast of Madrone Lake. T21N R05E S26 NE1/4 of NW1/4 USGS Quadrangle: Berry Creek 1:24,000	Butte	Berry Creek (3912164)	CCH2, Nov. 2020 (CHSC108 058)	22-Jun-2011	Northwest facing slopes. On moist benches of decomposed granite, found intermittently along granite slabs; open.		Plumas NF	2480
2	NE of town of Berry Creek. T21N, R5E, Sec 26, north 2/3 of NW 1/4. All populations are within 1400 ft of the forest border. Project Berry Creek DFPZ.	Butte	Berry Creek (3912164)	CNDDB recent survey form (Green 2021 pers. comm.)	21-Jun-2011	16110 plants over 13.6 acres. Identified in 3 August 2011 by Lawrence Janeway after fruit matured. Very near ridgetop in mixed conifer forest. Most on moist benches of decomposed granite. One group in the road and two in seeps with bryophytes and running water, and a few on granite slabs. Site quality Excellent. Growing with Juncus bufonius, Juncus triformis, Juncus tenuis, Danthonia, Deschampsia, Agrostis, Aira	None observed. Any activity that would wash granite downslope.	Plumas NF	

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
3	Maps to Big Bald Rock	Butte	Brush Creek (3912163)	NRIS polys, Nov. 2020 (051103_BUCA2_004)	11-Sep-2002	0.0184 acres		Plumas NF	
3	On the top of Big Bald Rock, NE of Oroville.	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CHSC042840)	20-Jul-1980	On fine moist to dry granite sand. Yellow Pine Forest.		Plumas NF	3300
3	At Big Bald Rock.	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CAS 857125)	20-Jul-1980	Annual, stems 5-25 cm. tall. Yellow Pine Forest.		Plumas NF	3609
3	At Big Bald Rock.	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (SD131006)	20-Jul-1980	Annual; stems 5-25 cm tall. Flowering/fruiting.		Plumas NF	3609
3	Big Bald Rock, about 3 miles (air) east of Madrone Lake, about 12 miles (air) northeast of Oroville. T21N R06E S30 SE1/4	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CHSC078274)	27-Jun-2000	On dry to damp bare granite soil. Yellow Pine Forest. Normal size plants; uncommon, inconspicuous.		Plumas NF	3260
3	Big Bald Rock, about 3 miles (air) east of Madrone Lake, about 12 miles (air) northeast of Oroville	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (UCR-263566)	27-Jun-2000	Normal size plants, on dry to damp bare granite soil. Common, inconspicuous. Yellow Pine Forest. Flowering.		Plumas NF	3260

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
3	Big Bald Rock, about 3 miles (air) east of Madrone Lake, about 12 miles (air) northeast of Oroville.	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (JEPS98586)	27-Jun-2000	On dry to damp bare granite soil; Yellow Pine Forest. Normal size plants; uncommon, inconspicuous. Flowering/fruiting.		Plumas NF	3260
4	Along Bean Creek Road, south of Little Bald Rock, about 15 miles northeast of Oroville.	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CHSC042841)	20-Aug-1980	On damp fine soil along the edges of small seeps. Yellow pine forest.		Private	3300
4	At Little Bald Rock.	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CAS 856741)	20-Aug-1980	Annual, stems 5-25 cm. tall. Yellow Pine Forest.		Private	3609
5	maps to off Bean Creek Road, E of Little Bald Rock	Butte	Brush Creek (3912163)	NRIS polys, Nov. 2020 (051103_BUCA2_005)	1-Jan-2001	0.0188 acres		Plumas NF, Private	
5	Near Bean Creek Road, about 1/2 mi SE of Little Bald Rock.	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CHSC044437)	29-Jun-1988	On dry bare granite soil. Yellow Pine Forest.		Plumas NF, Private	3200
5	Near Bean Creek Road, about 0.5 mile southeast of Little Bald Rock.	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CAS 849087)	29-Jun-1988	Abundant, inconspicuous. On dry bare granite soil. Yellow Pine Forest.		Plumas NF, Private	3200

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
5	Along swales, in a large bare granite opening (about an acre in size), northeast of Little Bald Rock, about 300 yards east of Bean Creek Road, about 16 miles (air) northeast of Oroville. T21N R06E S20 SE1/4	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CHSC096959)	12-Jun-2007	Yellow Pine Forest. Normal size plants, on dry to damp bare granite soil, along swales. Uncommon, very inconspicuous.		Plumas NF, Private	3311
5	Along swales, in a large bare granite opening (about an acre in size), northeast of Little Bald Rock, about 300 yards east of Bean Creek Road, about 16 miles (air) northeast of Oroville	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (JEPS113695)	12-Jun-2007	Yellow Pine Forest. Normal size plants, on dry to damp bare granite soil, along swales. Uncommon, very inconspicuous.		Plumas NF, Private	3311
6	Maps to region of Little Bald Rock near center of Section 20	Butte	Brush Creek (3912163)	NRIS polys, Nov. 2020 (051103_BUCA2_001)	23-Sep-2002	0.0749 acres		Plumas NF	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
6	Area of almost bare rock, about 1/4 mile east of Little Bald Rock, about 2 miles (air) southeast of Brush creek, about 15 miles (air) northeast of Oroville. T22N R06E S20 near center	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CHSC107588)	9-Jul-2011	Yellow Pine Forest. Normal size plants, on damp to wet granite soil, wet open area of almost bare rock. Common, very inconspicuous.		Plumas NF	3311
6	Area of almost bare rock, about 1/4 mile east of Little Bald Rock, about 2 miles (air) southeast of Brush creek, about 15 miles (air) northeast of Oroville	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (JEPS118487)	9-Jul-2011	Yellow Pine Forest. Normal size plants, on damp to wet granite soil, wet open area of almost bare rock. Common, very inconspicuous.		Plumas NF	3311
6	0.5 air miles northeast of Little Bald Rock, northeast of and below Bean Creek Road 0.6 road miles from Bald Rock Road. Northern Sierra Nevada Highlands.	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (RSA accession #: 794453)	5-Aug-2011	Common but inconspicuous annual, seasonally moist thin soil, sun or partial shade, granodiorite slab, with Allium amplectens, Aira, Juncus triformis, Polytrichum, Agrostis pallens.		Plumas NF	3296

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
6	Southeast edge of a large open bare granite area, about 3/8 mile northeast of Little Bald Rock, about 2 miles (air) southeast of Brush Creek, about 15 miles (air) northeast of Oroville. T22N R06E S20 near center	Butte	Brush Creek (3912163)	CCH2, Nov. 2020 (CHSC107590)	9-Jul-2011	Yellow Pine Forest. Normal size plants, on damp to wet bare granite soil, along seeps. Common, very inconspicuous.		Plumas NF	3197
7	About 150 yards southeast of Lumpkin Ridge Road, about 2 miles east of the intersection of Lumpkin Ridge Road, County Road, and road to Fall River, about 6 3/4 miles (air) northeast of Feather Falls. T20N R07E S02 NE1/4	Butte	Cascade (3912162)	CCH2, Nov. 2020 (CHSC082504)	17-Jun-2002	Yellow Pine Forest. Small size plants, on moist dark bare basalt soil, high moisture area from small seeps. Uncommon, very inconspicuous.		Plumas NF	4252

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
8	On the bottom of an old gold mining pit, about 200 yards northwest of where the dirt road crosses oregon Gulch Creek, about 1/4 mile north of the cemetary, about 1 1/2 mile south of Crystal Hill, about 5 miles (air) east of Oroville Dam. T20N R05E S35 SE1	Butte	Forbestown (3912153)	CCH2, Nov. 2020 (CHSC078176)	6-Jun-2000	On damp dark disturbed granite soil, in tire ruts on the bottom of an old gold mining pit. Foothill Woodland. Normal size plants; uncommon, very inconspicuous.		CA Dept Parks and Rec. Lake Oroville State Recreation Area, Private	1001
8	5 mi(air)E of Oroville Dam (in tire ruts, bottom of old gold mining pit 200 yds NW of dirt road crossing Oregon Gulch creek, 1/4 mi N of cemetary, 1 1/2 mi S of Crystal Hill)	Butte	Forbestown (3912153)	CCH2, Nov. 2020 (JEPS98571)	6-Jun-2000	normal size plants. damp dark disturbed granite soil, tire ruts, bottom of old gold mining pit; Foothill Woodland. Flowering/fruiting.		CA Dept Parks and Rec. Lake Oroville State Recreation Area, Private	1000
9	About 2 1/2 mi NE of Bald Mountain, about 6 1/2 mi NE of Stirling City. T24N R05E S08 NE1/4	Butte	Kimshew Point (3912184)	CCH2, Nov. 2020 (CHSC061340)	29-Jul-1993	On dry bare fine granite soil, near a seep. Yellow pine forest.		Lassen NF	5200
9	2.5 mi ne Bald Mountain (about 6.5 mi ne of Stirling City)	Butte	Kimshew Point (3912184)	CCH2, Nov. 2020 (JEPS87443)	29-Jul-1993	on dry bare fine granite soil, near a seep, Yellow Pine Forest. Flowering/fruiting.		Lassen NF	5200

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9	2.5 mi ne Bald Mountain (about 6.5 mi ne of Stirling City)	Butte	Kimshew Point (3912184)	CCH2, Nov. 2020 (UC1609481)	29-Jul-1993	on dry bare fine granite soil, near a seep, Yellow Pine Forest. Flowering/fruiting.		Lassen NF	5200
10	Top of North Table Mtn, ca 200 m NW of the jct of Cherokee Road and the E edge of Mtn.	Butte	Oroville (3912155)	CCH2, Nov. 2020 (CHSC030870)	18-Jul-1980	Along the damp edges of waterways in Valley Grasslands with Hypericum anagalloides and Heterocodon rariflorum.		CA Dept. Fish and Wildlife. North Table Mtn. Ecological Reserve, Private	
11	Below of W of a large seep, W of the lone oak tree, W of the cow chute on the W side of Cherokee Road, North Table Mountain, about 7 mi (air) N of Oroville.	Butte	Oroville (3912155)	CCH2, Nov. 2020 (CHSC071265)	1-Jul-1998	On wet dark soil, margins of a small stream. Basalt Grassland.		Private?	1300
11	Margins of a small stream, below or west of a large seep, west of the lone oak tree, west of the cow chute on the west side of Cherokee Road, North Table Mountain, about 7 miles (air) north of Oroville	Butte	Oroville (3912155)	CCH2, Nov. 2020 (UCSB040267, 63746)	1-Jul-1998	Common. Basalt Grassland; on wet dark soil, margins of a small stream		Private?	

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
11	about 7 air mi n of Oroville (w of the ione oak tree, w of the cow chute on w side of Cherokee Road, North Table Mountain); North Table Mountain, Cherokee Road	Butte	Oroville (3912155)	CCH2, Nov. 2020 (JEPS94764)	1-Jul-1998	on wet dark soil, margins of a small stream, below or w of a large seep; Basalt Grassland. Flowering/fruiting.		Private?	1300
12	On the north side of a small drainage, about one mile (air) northwest of the Improved Parking Area and Cherokee Road, North Table Mountain, about 8 miles (air) north of Oroville. T20N R04E S08 NW1/4	Butte	Oroville (3912155)	CCH2, Nov. 2020 (CHSC113225)	2-May-2014	Small size plants, on damp dark soil. Uncommon, very inconspicuous. Basalt Grassland.		CA Dept. Fish and Wildlife. North Table Mtn. Ecological Reserve	1284
12	About one mile (air) northwest of the improved Parking Area and Cherokee Road, North Table Mountain, about 8 miles (air) north of Oroville.	Butte	Oroville (3912155)	CCH2, Nov. 2020 (JEPS122141)	2-May-2014	Small size plants. Uncommon, very inconspicuous. Basalt Grassland. On damp dark soil, on the north side of a small drainage. Flowering/fruiting.		CA Dept. Fish and Wildlife. North Table Mtn. Ecological Reserve	1284

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13	El Dorado County: West side of Lake Tahoe. Ed Z'berg Sugar Pine Point State Park. Olympic Meadow on S side of General Creek near last bridge over creek.	El Dorado	Homewood (3912012)	CCH2, Nov. 2020 (DAV220525)	6-Jul-2017	Low wet area on N side of meadow near beaver exclosure, on N side of fallen tree trunk. Annual herb. Uncommon. Only one plant seen and photographed. Growing with Juncus bufonius, Navarretia leptalea, Polygonum polygonoides, and Juncus hemiendytus. This plant was more common here in the summer of 2011.		CA Dept Parks and Rec. Ed Z'Berg Sugar Pine Point SP	6478
13	El Dorado County: Lake Tahoe Basin. Sugar Pine Point State Park on W side of Hwy. 89. Meadow known as 'Olympic Meadow' on S side of South Fire Road, just E of bridge known as 'Second Bridge.' Southwest corner of meadow.	El Dorado	Homewood (3912012)	CCH2, Nov. 2020 (DAV194288)	8-Aug-2011	Moist swale, now drying. Uncommon annual herb.		CA Dept Parks and Rec. Ed Z'Berg Sugar Pine Point SP	6490

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13	El Dorado County: Lake Tahoe Basin. Sugar Pine Point State Park. Olympic Meadow, southwest corner.	El Dorado	Homewood (3912012)	CNDDB recent survey form (Green 2021 pers. comm.)	8-Aug-2011	dozens of plants. Did not do a thorough inventory of this plant, but it was rare in the meadow and only found in a swale with other annuals such as juncus bufonius and Lipocarpha occidentalis. Site quality Fair. 2011 was a high snowpack year and the meadow was very wet. Returned on May 31, 2015 and the same area was already dry and barren.		CA Dept Parks and Rec. Ed Z'Berg Sugar Pine Point SP	6491
14	Below pullout on Highway 41 that is closest to The Rostrum, ca 1.3 km west of the Wawona Tunnel. Datum: NAD83.	Mariposa	El Capitan (3711966)	CCH2, Nov. 2020 (YOSE216914)	20-Jun-2007			Yosemite NP	4839
14	Below pullout on Highway 41 that is closest to The Rostrum, ca 1.3 km west of the Wawona Tunnel. Datum: NAD83.	Mariposa	El Capitan (3711966)	CCH2, Nov. 2020 (YOSE216915)	20-Jun-2007			Yosemite NP	4839
14	Below pullout on Highway 41 that is closest to The Rostrum, ca 1.3 km west of the Wawona Tunnel.	Mariposa	El Capitan (3711966)	CCH2, Nov. 2020 (UC1949523)	20-Jun-2007			Yosemite NP	4839

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14	Below pullout 0.8 mi W of .. -- Wawona Tunnel, Yosemite NP	Mariposa	El Capitan (3711966)	Calflora, Jan. 2021 (wb1194-454)	24-Jun-2012	1+ individuals		Yosemite NP	4849
15	base of El Capitan Yosemite National Park, Yosemite Valley	Mariposa	El Capitan (3711966)	CCH2, Nov. 2020 (UC632751)	13-Jul-1938	meadow. Flowering/fruiting.		Yosemite NP	4025
16	Yosemite National Park: Yosemite Valley, Yosemite Village, Ranger Club, growing on the edge of an informal path ['social trail'] ca. 100 feet S of the SE end of the building	Mariposa	Half Dome (3711965)	CCH2, Nov. 2020 (YOSE231863, JEPS109358)	12-Jun-2009			Yosemite NP	
16	Yosemite National Park: Yosemite Valley, Yosemite Village, Ranger Club, growing on the edge of an informal path ['social trail'] ca. 100 feet S of the SE end of the building	Mariposa	Half Dome (3711965)	CCH2, Nov. 2020 (YOSE231864)	12-Jun-2009	moist gravelly yet dark soil with trampled vegetation on edge of dense meadow swards of Carex and Poa		Yosemite NP	3950

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16	Yosemite National Park: Yosemite Valley, Yosemite Village, ranger Club, growing on the edge of an informal path ['social trail'] ca. 100 feet S of the SE end of the building; Half Dome, CA 7.5' USGS quadrangle	Mariposa	Half Dome (3711965)	CCH2, Nov. 2020 (JEPS109358, YOSE 06990)	12-Jun-2009	Moist gravelly yet dark soil with trampled vegetation on edge of dense meadow swards of Carex and Poa. Flowering/fruiting.		Yosemite NP	3950
17	On the bottom and sides of a small wash, meadow, under the power lines, about 100 yards west of the paved road, southwest of Lake Spaulding, about 1/2 mile north of Highway 20. T17N R12E S21 SW1/4	Nevada	Blue Canyon (3912036)	CCH2, Nov. 2020 (CHSC092070)	23-Jul-2005	Yellow Pine Forest. Normal size plants, on moist to dry soil, on the bottom and sides of a small wash, open meadow. Common, inconspicuous.		Private	5160

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17	On the bottom and sides of a small wash, meadow, under the power lines, about 100 yards west of the paved road, southwest of Lake Spaulding, about 1/2 mile north of Highway 20	Nevada	Blue Canyon (3912036)	CCH2, Nov. 2020 (JEPS107504)	23-Jul-2005	Yellow Pine Forest. Normal size plants, on moist to dry soil, on the bottom and sides of a small wash, open meadow. Common, inconspicuous.		Private	5160
18	In the small meadow where there are two grave memorials, about 40 yards west of Bowman Lake Road, about 1/8 mile west of the bridge across the South Fork of the Yuba River, about 1 mile (air) north of Highway 20 at the intersection of Bowman Lake Road. T1	Nevada	Blue Canyon (3912036)	CCH2, Nov. 2020 (CHSC108302)	23-Jul-2011	Yellow Pine Forest. Normal size plants, on dry rocky soil. Very common, inconspicuous.		Tahoe NF	4526

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
18	In and around the small meadow where there are two grave memorials, about 40 yards west of Bowman Lake Road, about 1/8 miles west of the bridge across the South Fork of the Yuba River.About 1 air mile north of Highway 20 at the intersection of Bowman Lake	Nevada	Blue Canyon (3912036)	CCH2, Nov. 2020 (RSA accession #: 795266)	23-Jul-2011	Normal size plants, on dry rocky soil. Very common, inconspicuous.Yellow Pine Forest.		Tahoe NF	4526
19	On the south side of the small natural lake, on the east side of the paved road to Lake Valley Reservoir, about 1/4 mile east of Yuba Gap and Highway 80. T17N R12E S27 NE1/4	Placer	Cisco Grove (3912035)	CCH2, Nov. 2020 (CHSC082661)	22-Jul-2002	Mixed Evergreen Forest (mostly destroyed by fire). Normal size plants, on damp dark fine disturbed soil, openings under scattered evergreen trees and surrounded by large granite rocks, on the south side of the small natural lake, on the east side of the r		Private	5820

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19	Lake Valley Reservoir, about 1/4 mile east of Yuba Gap and Highway 80.	Placer	Cisco Grove (3912035)	CCH2, Nov. 2020 (JEPS103535)	22-Jul-2002	Normal size plants. Common. Mixed Evergreen Forest (mostly destroyed by fire). On damp dark fine disturbed soil, openings under scattered evergreen trees and surrounded by large granite rocks, on the south side of the small natural lake, on the east side of the paved road. Flowering/fruiting.		Private	5820
19	On the east side of the paved road to Lake Valley Reservoir, about 1/4 mile east of Yuba Gap and Highway 80.	Placer	Cisco Grove (3912035)	CCH2, Nov. 2020 (RSA accession #: 877402)	22-Jul-2002	Normal size plants. Common. On damp dark fine disturbed soil, openings under scattered evergreen trees and surrounded by large granite rocks, on the south side of the small natural lake. Mixed Evergreen forest (mostly destroyed by fire).		Private	5820

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20	About 120 yards south of the road to Tamarack Flat, on the south side of a small branch of Fall River, about 1/8 mile southwest of the intersection of Lumpkin Ridge Road and road to Tamarack Flat, about 1 mile (air) northwest of Little Grass Valley Reserv	Plumas	American House (3912161)	CCH2, Nov. 2020 (CHSC082 550)	18-Jul-2002	Red Fir Forest. Normal size plants, on damp fine dark disturbed soil, on the south side of a very small branch of the river. Uncommon, scattered, inconspicuous.		Plumas NF	5637
20	ca. 120 yards S of rd to Tamarack Flat, on S side of very small branch of Fall River, ca. 1/8 mi SW of intersection of Lumpkin Ridge Rd and rd to Tamarack Flat, ca. 1 mi (air) NW of Little Grass Valley Reservoir Dam, ca. 4 mi (air) NW of La Porte.	Plumas	American House (3912161)	CCH2, Nov. 2020 (SBBG141 102)	18-Jul-2002	Inconspicuous; normal size plants. Scattered, uncommon. Damp fine dark disturbed soil; red fir forest.		Plumas NF	5637

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
20	About 120 yards S of the road to Tamarack Flat, on the S side of a small branch of Fall River, ca 1/8 mile SW of the intersection of Lumpkin Ridge Road and road to Tamarack Flat, ca 1 mile (air) NW of Little Grass Valley Reservoir dam	Plumas	American House (3912161)	CCH2, Nov. 2020 (JEPS103536)	18-Jul-2002	Red Fir Forest. Normal size plants, on damp fine dark disturbed soil, on the S side of a very small branch of the river. Uncommon, scattered, inconspicuous. Flowering/fruiting.		Plumas NF	5637
20		Plumas	American House (3912161)	NRIS polys, Nov. 2020 (051103_BUCA2_003)	17-Jun-2002	0.0188 acres		Plumas NF	
21	Maps to water feature at Hartman Bar Ridge just west of FS Road 22N05 north of 22N94	Plumas	Haskins Valley (3912172)	NRIS polys, Nov. 2020 (051103_BUCA2_002)	4-Jul-2002	0.2097 acres		Plumas NF	

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21	Northern High Sierra Nevada; Plumas National Forest, Hartman Bar Ridge, ca. 7 air miles west of Little Grass Valley Reservoir, ca. 4 air miles north of Cascade. East of FS Road 22N05, ca. 0.4 mile north of FS Road 22N94. In bottom of pond and in meadow swale.	Plumas	Cascade (3912162)	CCH2, Nov. 2020 (CHSC083685)	6-Jul-2002	Barren soil in seasonally wet meadow with Perideridia sp., Eleocharis acicularis var. acicularis, Gnaphalium palustre, Deschampsia elongata, Muhlenbergia filiformis, Lotus purshianus, Juncus bufonius, Carex spp. Uncommon, scattered on vegetated bottom of old pond and in meadow-swale to north.		Plumas NF	5200
22	Within Last Chance Creek floodplain, ~0.25 miles S/SE of intersection of 26N70 with 26N82	Plumas	Ferris Creek (4012013)	NRIS polys, Nov. 2020 (051101_BUCA2_007)	9-Sep-2013	Approx. 200 individuals (genets) over 2.6073 acres. On floodplain. 5% slope. Moist. Full sun.	disturbance from grazing, impact unknown	Plumas NF	5800
23	Shasta Lake. 0.25 mi west of the mouth of Cove Creek	Shasta	Project City (4012263)	CCH2, Nov. 2020 (UCR-101758)	24-Aug-1958	Sunny seep uncovered by receding lake. Flowering/fruiting.		Shasta-Trinity NF	

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24	South of the larger pond, steep rocky slope on the N side of Henness Pass Road, at Keystone Gap, E of Keystone Mountain, about 1 1/2 mi NE of Middlewaters, about 11 mi (air) NE of Alleghany. T19N R12E S06 SE1/4	Sierra	Sierra City (3912056)	CCH2, Nov. 2020 (CHSC063 186)	1-Jul-1994	On damp dark rocky soil, on large rocks, steep rocky slope. Red Fir Forest.		Tahoe NF	6200
24	on the N side of Henness Pass Road, at Keystone Gap, E of Keystone Mountain, about 1.5 mi NE of Middlewaters, about 11 mi (air) NE of Alleghany	Sierra	Sierra City (3912056)	CCH2, Nov. 2020 (UCR-263567)	1-Jul-1994	South of the larger pond, steep rocky slope. Red fir forest. Flowering. On damp dark rocky soil, on large rocks. Uncommon, inconspicuous.		Tahoe NF	6200
24	11 air miles NE of Alleghany (S of the larger pond, N side of Henness Pass Road, at Keystone Gap, E of Keystone Mountain, 1 1/2 mi NE of Middlewaters)	Sierra	Sierra City (3912056)	CCH2, Nov. 2020 (JEPS9535 2)	1-Jul-1994	damp dark rocky soil, on large rocks, steep rocky slope on N side of road; Red Fir Forest. Flowering/fruiting.		Tahoe NF	6200
25	Sand Spring Canyon headwaters (about 10 air miles East of Manton)	Tehama	Manton (4012147)	Calflora, Jan. 2021 (xr168750)	18-Jun-1997	1+ individuals		BLM	3196

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Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
25	Sand Spring Canyon headwaters (about 10 air miles East of Manton)	Tehama	Manton (4012147)	CCH2, Nov. 2020 (JEPS101103)	18-Jun-1997	open mud-flow breccia bandland terrain, on margin of ephemeral seepage areas		BLM	3150
25	Sand Spring Canyon headwaters (about 10 air miles East of Manton)	Tehama	Manton (4012147)	CCH2, Nov. 2020 (JEPS104966)	18-Jun-1997	open mud-flow breccia bandland terrain, on margin of ephemeral seepage areas		BLM	3150
26	Brightman Flat	Tuolumne	Dardanelle (3811937)	CCH2, Nov. 2020 (UC766109)	15-Jul-1938	Flowering/Fruiting		Stanislaus NF	
27	0.4 mile Northeast of Cathedral Creek - Tuolumne River confluence, Grand Canyon of the Tuolumne. Datum: NAD83. GPS Error: 1 M.	Tuolumne	Falls Ridge (3711984)	CCH2, Nov. 2020 (YOSE118448)	10-Jul-2006			Yosemite NP	6113
27	0.4 mile Northeast of Cathedral Creek - Tuolumne River confluence, Grand Canyon of the Tuolumne. Datum: NAD83. GPS Error: 1 M.	Tuolumne	Falls Ridge (3711984)	CCH2, Nov. 2020 (YOSE118449)	10-Jul-2006			Yosemite NP	6113
27	0.4 mile Northeast of Cathedral Creek - Tuolumne River confluence, Grand Canyon of the Tuolumne.	Tuolumne	Falls Ridge (3711984)	CCH2, Nov. 2020 (UC1949569)	10-Jul-2006			Yosemite NP	6113

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
28	ridge between Swamp Lake and Miguel Meadow	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (SBBG27950)	6-Jul-1938	dry ridge		Yosemite NP	5400
28	between Swamp Lake and Miguel Meadow; Yosemite National Park	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (UC632753)	6-Jul-1938	dry ridge. Flowering/fruiting.		Yosemite NP	5400
29	w of Hetch Hetchy; Miguel Meadow	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (UC632752)	11-Jul-1938	margin of lake at gravel pit. Flowering/fruiting.		Hetch Hetchy Water and Power	5200
29	w of Hetch Hetchy; Yosemite National Park, Miguel Meadow	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (UC1111004)	6-Jul-1940	Flowering/Fruiting		Hetch Hetchy Water and Power	5200
30	w Hetch Hetchy Dam (Swamp Lake, Yosemite National Park); Sierra Nevada, Yosemite National Park, Swamp Lake	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (UC1102979)	9-Aug-1958	Flowering/Fruiting		Yosemite NP	5200

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
31	Hetch Hetchy, Yosemite National Park, trail to Tueelala Falls about 250 trail meters east of the junction with the Hetch Hetchy-Miguel Meadows trail, vicinity about 100 trail meters E of BM 4050 on the USGS quadrangle	Tuolumne	Lake Eleanor (3711987)	CNDDB recent survey form (Green 2021 pers. comm.)	27-May-2009	No population count done. Growing with Deschampsia danthonioides and many small annual herbs. Vernally moist granite ledges. Overall site quality Excellent.	None observed.	Yosemite NP	
31	Yosemite National Park: Hetch Hetchy Valley, trail from O'Shaughnessy Dam to Tueeulala Falls (north side of the reservoir)	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (YOSE231835)	28-May-2009	saturated sites with annual herb vegetation over granite slabs. associated with Jensia yosemitana and Deschampsia danthonioides		Yosemite NP	3900
31	Yosemite National Park: Hetch Hetchy Valley, trail from O'Shaughnessy Dam to Tueeulala Falls (north side of the reservoir)	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (YOSE231836, JEPS109427)	28-May-2009	saturated sites with annual herb vegetation over granite slabs. associated with Jensia yosemitana and Deschampsia danthonioides		Yosemite NP	3900

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
31	Yosemite National PArk: Hetch Hetchy Valley, trail from O'Shaughnessy Dam to Tueeulala Falls (north of side of the reservoir); Lake Eleanor, CA 7.5' USGS quadrangle.	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (YOSE 06990, JEPS109427)	28-May-2009	Saturated sites with annual herb vegetation over granite slabs. associated with Jensia yosemitana and Deschampsia danthonionides. Flowering/fruiting.		Yosemite NP	3900
31	Yosemite National Park; Hetch Hetchy Valley, trail from O'Shaughnessy Dam to Tueeulala Falls (north side of the reservoir)	Tuolumne	Lake Eleanor (3711987)	Calflora, Jan. 2021 (wb2209-24921)	28-May-2009	individuals. Saturated sites with annual herb vegetation over granite slabs. associated with Jensia yosemitana and Deschampsia danthonionides.		Yosemite NP	3921
31	Yosemite National Park; Hetch Hetchy Valley, trail from O'Shaughnessy Dam to Tueeulala Falls (north side of the reservoir)	Tuolumne	Lake Eleanor (3711987)	Calflora, Jan. 2021 (wb2209-9468)	28-May-2009	individuals. Saturated sites with annual herb vegetation over granite slabs. associated with Jensia yosemitana and Deschampsia danthonionides.		Yosemite NP	3921
32	n of Hetch Hetchy (Vernon Lake Trail); Sierra Nevada, Yosemite National Park	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (UC632744)	22-Jul-1938	Flowering/Fruiting		Yosemite NP	6800

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
33	Pond complex on North side of Tuolumne River near river mile 115, Poopenaut Valley. Datum: NAD83. GPS Error: 2 M.	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (YOSE118805)	24-Jul-2006			Yosemite NP	3330
33	Pond complex on North side of Tuolumne River near river mile 115, Poopenaut Valley. Datum: NAD83. GPS Error: 2 M.	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (YOSE118806)	24-Jul-2006			Yosemite NP	3330
33	Pond complex on North side of Tuolumne River near river mile 115, Poopenaut Valley.	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (UC1949571)	24-Jul-2006			Yosemite NP	3330
33	Outcrop on North side of Tuolumne River near river mile 115, Poopenaut Valley. Datum: NAD83. GPS Error: 2 M.	Tuolumne	Lake Eleanor (3711987)	CCH2, Nov. 2020 (YOSE119018)	25-May-2006			Yosemite NP	3553
34	South Fork Stanislaus River, 1.5 stream miles up (east) from Pinecrest Reservoir	Tuolumne	Pinecrest (3811928)	CCH2, Nov. 2020 (JEPS101123)	21-Jun-1976	in wet sand on glaciated granite slabs. Flowering/fruiting.		Stanislaus NF	6600

Duplicate records from the same site are given the same record number and are included in red. Rows containing questionable records are highlighted in pink.									
Rec. #	**Locality**	**County**	**Quad**	**Ref. (Source)**	**Date Last Obs'd**	**Population Info**	**Threats**	**Land Mgr.**	**Elev. (ft.)**
34	South Fork Stanislaus River, 1.5 stream miles up (east) from Pinecrest Reservoir	Tuolumne	Pinecrest (3811928)	Calflora, Jan. 2021 (xr168143)	21-Jun-1976	1+ individuals		Stanislaus NF	
35	Utica Reservoir, west shore of the lake	Tuolumne	Tamarack (3812041)	Calflora, Jan. 2021 (xr167938)	7-Oct-1997	1+ individuals		Stanislaus NF	6824
35	Utica Reservoir, west shore of the lake	Tuolumne	Tamarack (3812041)	CCH2, Nov. 2020 (JEPS96858)	7-Oct-1997	moist gruss on high water margin of the lake, associated with Muhlenbergia filiformis, Juncus capillaris, Mimulus suksdorfii. Flowering/fruiting.		Stanislaus NF	
	Yosemite Valley Yosemite National Park	Mariposa	Half Dome (3711965)	CCH2, Nov. 2020 (UC204427)	1911-07-09	Flowering/Fruiting		Yosemite NP	4000-4500
	Yosemite Valley Yosemite National Park	Mariposa	Half Dome (3711965)	CCH2, Nov. 2020 (UC841511)	1911-07-09	Flowering/Fruiting		Yosemite NP	4000-4500
	Yosemite Valley	Mariposa	Half Dome (3711965)	CCH2, Nov. 2020 (UC1912)	Jun to Jul 1866	Flowering/Fruiting		Yosemite NP	
	Yosemite Valley	Mariposa	Half Dome (3711965)	CCH2, Nov. 2020 (UC1911)	Jun to Jul 1866	Flowering/Fruiting		Yosemite NP	
	along Merced River Yosemite National Park, Yosemite Valley	Mariposa	Half Dome (3711965)	CCH2, Nov. 2020 (UC632774)	1936-07-12	Flowering/Fruiting		Yosemite NP	

Appendix 2: Additional Considerations at the Forest Level

<This section, including the next 5 subheadings, would be filled out by **Forest Service botanists**.>

<Forest Name>

Geographic distribution within the Forest

A. Scarce or isolated
B. Patchy or gaps
C. Contiguous

<Select a geographic distribution rank and provide references or cite 'specialist expertise, <name>' where appropriate.>

Abundance of the species on the Forest

A. Rare – current abundance is low enough that stochastic and other factors could lead to potential imperilment.
B. Uncommon – current abundance is large enough that demographic stochasticity is not likely to lead to rapid local extinction, but, in combination with highly variable environmental factors, could pose a threat.
C. Common – current abundance is large enough that species persistence is not threatened by demographic stochasticity in combination with environmental variation.
D. Insufficient information to draw inferences about criterion.

<Select a species abundance rank and provide references or cite 'specialist expertise, <name>' where appropriate.>

Population trend on the Forest

A. Significant downward or suspected downward population trend.
B. Stable population.
C. Upward population trend.
D. Insufficient information to draw inferences about criterion.

<Select a population trend rank and provide references or cite 'specialist expertise, <name>' where appropriate.>

Habitat trend on the Forest

A. Decline in habitat quality or quantity.
B. Stable amounts of suitable or potential habitat, relatively unchanged habitat quality.
C. Improving habitat quality or increasing amounts of suitable or potential habitat.
D. Insufficient information to draw inferences about criterion.

<Select a habitat trend rank and provide references or cite 'specialist expertise, <name>'where appropriate.>

Vulnerability of habitat on the Forest

A. Substantial modification of habitat has occurred or is anticipated with conditions departing from expectations based on NRV, and/or habitat is impacted by modern stressors such as drought, climate change, high intensity wildfire and wildfire suppression disturbances, loss of natural openings due to historical wildfire suppression, nonnative invasive species, water impoundments and diversions, and recreation, etc.
B. Habitat modification is likely to result in ecological patterns similar to the range of historical conditions, but is being impacted by modern stressors.
C. Habitat resilient, changes are similar in frequency and intensity to those expected from NRV, and modern stressors not significant.
D. Insufficient information to draw inferences about criterion.

<Select a habitat vulnerability rank and provide references or cite 'specialist expertise, <name>'where appropriate.>

Additional Forest specific information related to the SCC determination

<This section is provided for Forest botanists to add additional Forest specific information that is not captured in the section above, if necessary. Provide a narrative description here of the additional relevant information. State "No additional information" if this section is not used.>