

**Deleted from California Rare Plant Rank 1B.2 of the CNPS Inventory on
December 11, 2017**

**Rare Plant Status Review: *California macrophylla*
Proposed Deletion from CRPR 1B.2, G3? / S3?**

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Changes made to the original document are in blue text.

Background

California macrophylla (H. & A.) Aldas, Navarro, Vargas, Saez & Aedo is an annual herb in the Geraniaceae known from southern Oregon to the Inner North Coast Ranges, southern Sierra Nevada Foothills, Great Central Valley, Central Western California, South Coast, Channel Islands, western Transverse Ranges, and Peninsular Ranges of California; to northern Mexico. It occurs on heavy clay soils of cismontane woodland and valley and foothill grasslands at an approximate elevation of 15 to 1,200 meters. *California macrophylla* is included in *The Jepson Manual* (as *Erodium macrophyllum*) (Taylor 1993) and *The Jepson Manual, Second Edition* (Alarcón et al. 2012); the Geraniaceae treatment (Vol. 13) of the *Flora of North America* is not yet published. It mostly flowers from March to May.

California macrophylla (then recognized as *Erodium macrophyllum*) was Considered But Rejected from the Fifth Edition of the CNPS Inventory (Skinner and Pavlik 1994) as being too common. It was then added to California Rare Plant Rank (CRPR) 2 of the CNPS Inventory, 6th Edition (RPSAC and Tibor 2001) due to the historical status of most of its occurrences, its small population sizes, threats to occurrences in southern California, and because many botanists reported having never seen it. At that time it was thought to be more common outside of California in Arizona, Nevada, Oregon, Utah, and Baja, California. However, occurrences from Arizona, Nevada, and Utah were found to be erroneous, and since only two collections were known from Oregon and only one collection known from Baja, it was changed to CRPR 1B in November of 2006. Its name was also changed to *California macrophylla* at that time (see the Rare Plant Status Review Forum at: <http://cnps.org/forums/showthread.php?t=993> for more information regarding these changes. For those who have not registered on the Forum, contact asims@cnps.org for registration instructions).

When its status changed from CRPR 2 to 1B in 2006, *C. macrophylla* was known from approximately 74 occurrences; its known occurrences have more than doubled in less than 10 years. The reason for such an increase in its known occurrences in the last decade is at least partly due to an increase of its known voucher collections in the Consortium of California Herbaria (CCH 2015). As more herbaria participate and regularly update their records to CCH, more records are revealed to the public and entered into the CNDDDB when a plant is updated. Based on CNDDDB documentation, approximately 65 records existed in the CCH for *C. macrophylla* in 2004, and 272 records existed when the plant was updated in 2015 (many were duplicate records, but this still represents a significant increase of available data). The increase of occurrences might also be due to the plant originally being overlooked and under-collected due to its

non-showy habit, and occurrence mostly on private range lands. When reviewed in 2006, V. Yadon felt that CRPR 4 was more appropriate due to these factors, as well as its commonness in the Inner Coast Ranges. Some others agreed, however, the consensus was that although locally abundant in some places, its populations were small and highly localized overall. Threats from development and grazing (or lack thereof) were also mentioned, and it was subsequently changed to 1B. A rank change was suggested in 2015 to CRPR 4 but was ultimately decided to change to 1B.2 due to local rarity and a lack of sufficient data. While several people commented that northern California populations were common and abundant, just as many commented that southern California populations were rare and sparse. Dean Taylor and Dan Cooper pointed out *C. macrophylla*'s poor ability to compete with non-native grasses as well as the high level of development in the habitat types in which it occurs in southern California as potential reasons to keep it as a CRPR 1B. Other comments, such as those from Fred Roberts, pointed out that *C. macrophylla* is a difficult species to determine conservation status. Roberts mentioned the decline and lack of recent data in southern California, but also compared places such as Tejon Ranch, which contains habitat for very large populations of this plant. Following this, he suggested waiting to change *C. macrophylla* to CRPR 4 in order to allow for more field surveys and data to be submitted (see the Rare Plant Status Review Forum at: <http://www.cnps.org/forums/showthread.php?p=6701> for all comments regarding our final decision to maintain *C. macrophylla* as CRPR 1B in 2015). Since last reviewed in 2015, the CNDDDB has included 42 new occurrences for *C. macrophylla*. In contrast, the CCH has only seen an increase of 18 collections since the past review; indicating that new surveys and data submissions for *C. macrophylla* has occurred. See Appendix II, Table 1 for additional comparisons of CNDDDB occurrence data from 2006, 2015, and present.

In California, *C. macrophylla* is currently known from 204 occurrences throughout 30 counties as well as Santa Catalina and Santa Cruz Islands (CNDDDB 2017). It has a very large distribution in California as is seen by its occupancy of 118 USGS 7.5" Quadrangles (153 when including non-key quads) (see Appendix I, Map 1). Of the 204 occurrences of *C. macrophylla*, 69 are historical (occurrences not seen in the past 20 years are considered historical by the CNDDDB), nine are possibly extirpated, and one is presumed extirpated. Seventy of the 204 occurrences are ranked as either "excellent" or "good", with the majority of occurrences (116) having an unknown occurrence rank. The population sizes of *C. macrophylla* are not very well known, with data available for roughly half (114) of its occurrences. Approximately 24 of the total known occurrences have population count/estimates of 1,000 plants or more (with three occurrences estimated to have greater than 10,000 plants); 36 occurrences have populations estimated from 100 to 100s of individuals; and about 44 occurrences are estimated to have fewer than 100 individuals. With only half of the known occurrences having documented population/count estimates, it is difficult to estimate a statewide number of known individuals for *C. macrophylla*. However, as an annual herb, population sizes can fluctuate greatly on an annual basis due to precipitation, climate, and possibly other factors, and attempting to assess the plants overall number of individuals is therefore not particularly useful.

Although the number of occurrences of *C. macrophylla* have continued to increase since its status was last reviewed in 2015, it still appears to have some small, highly localized populations, especially in the south coast range (Appendix I, Map 2). According to Gillespie (2005), some historical observations suggest that *C. macrophylla* may have been more common, but its distribution and possibly abundance has decreased in the past century. Gillespie (2005) also revealed that it may have occurred on soil types other than clay in the past, which may support the hypothesis of its past commonness. Evidence suggests that *C. macrophylla* can actually grow and reproduce on soil types other than clay, and it's possible that it is presently restricted to clay soils where there is less competition with non-native plants (Gillespie 2005). Other soil types throughout the range of *C. macrophylla* should therefore be surveyed for potential additional occurrences.

A significant number of occurrences (78; approximately 38%) of *C. macrophylla* have an unknown land ownership. Its remaining known occurrences are mostly on private lands (59), BLM lands (31), and lands owned by the California Department of Fish and Wildlife (13). The remaining occurrences with a known landownership are on various county and local land jurisdictions (see the "Localities" worksheet in the "Locations_CaliforniaMacrophylla" spreadsheet to review land ownership known for each occurrence). The majority of the occurrences with an unknown land ownership are at least in part referenced by old voucher specimens, which may explain why land ownership is undetermined. Further documentation of known occurrences is necessary to adequately address the conservation status of this plant based on its presence on protected versus unprotected lands.

Approximately 56 of the 204 occurrences have threats documented in the CNDDDB. Twenty-one of the occurrences include grazing as a threat; however, properly managed grazing may actually benefit *C. macrophylla* from having to compete with non-native plants (E. Buxton, B. Olson, D. Taylor; Forum Comments 2006), and therefore should not be considered a threat unless adequately assessed. The next most documented threat to this species is development, with eighteen occurrences noted to be threatened directly or indirectly by development or potential development. One of its occurrences is presumed extirpated (EO #54), and nine other occurrences are possibly extirpated (EO #s 46, 48, 50, 52, 56, 84, 100, 164, and 175), most likely from development, urbanization, and agriculture. Five historical occurrences (EO #s 45, 54, 59, 65, and 159) are presumed extant by CNDDDB, but the occurrences are mostly comprised of developed land (review of occurrences on Google Earth imagery by first author; Google Inc. 2017). Other documented threats include off road vehicles, road/trail construction and maintenance, pipeline construction, feral pigs, and non-native plants.

With 70 occurrences ranked as "excellent" or "good" by CNDDDB, *C. macrophylla* has met the general level of meriting down ranking from California Rare Plant Rank 1B based on occurrence numbers and occurrence status alone (in general, California Rare Plant Rank 1B contains plants that are known from fewer than 50 occurrences ranked as "excellent" or "good" by CNDDDB). With over 200 total occurrences, 194 of them being presumed extant, and the majority of occurrences (148) having no documented threats, *C. macrophylla* has also met criteria for deletion from the CNPS Inventory (in general, California Rare Plant Rank 4 contains plants that are known from 50 to 100

occurrences). Counties in the south coast ranges that contain small, localized populations of *C. macrophylla* that are under severe threat should continue to track it as a county species of concern.

Based on the available information, CNPS and CNDDDB recommend deleting *California macrophylla* from CRPR 1B.2 of the CNPS Inventory. If occurrences of *C. macrophylla* in California begin to trend downward, and/or if threats to its survival increase, CNPS and CNDDDB will re-evaluate its status at that time.

Recommended Actions

CNPS: Delete from 1B.2

CNDDDB: Delete from G3? / S3?

Current CNPS Inventory Record

California macrophylla (H. & A.) Aldas, Navarro, Vargas, Saez & Aedo
round-leaved filaree

Geraniaceae

Synonym: *Erodium macrophyllum*

CRPR 1B.2

Baja California, Oregon

Alameda, Butte(*?), Contra Costa, Colusa, Fresno, Glenn, Kings, Kern, Lake, Los Angeles, Merced, Monterey, Napa, Riverside, Santa Barbara, San Benito, Santa Clara, Santa Catalina Island, Santa Cruz Island*, San Diego, San Joaquin, San Luis Obispo, San Mateo, Solano, Sonoma, Stanislaus, Tehama, Tulare, Ventura, Yolo
Dulzura (010A) 3211667, Otay Mesa (010C) 3211658, National City (011A) 3211761, El Cajon Mtn. (021A) 3211687, San Pasqual (034C) 3311618, Sage (067C) 3311658, Romoland (068B) 3311762, Murrieta (068C) 3311752, Bachelor Mtn. (068D) 3311751, Lake Elsinore (069A) 3311763, Alberhill (069B) 3311764, Sunnymead (085B) 3311782, Perris (085C) 3311772, Lake Mathews (086C) 3311774, Vidal (096D) 3411415, Glendora (109A) 3411727, San Dimas (109D) 3411717, Los Angeles (110C) 3411812, Burbank (111A) 3411823, Calabasas (112B) 3411826, Malibu Beach (112C) 3411816, Newbury Park (113B) 3411828, Piru (139A) 3411847, Simi (139D) 3411837, Lake Hughes (162B) 3411864, Whitaker Peak (163C) 3411856, Warm Springs Mountain (163D) 3411855, Rancho Nuevo Creek (166B) 3411964, Figueroa Mtn. (168B) 3411968, Los Olivos (169A) 3412061, La Liebre Ranch (188C) 3411876, Lebec (189D) 3411877, Pleito Hills (190A) 3411981, Eagle Rest Peak (190B) 3411982, Hurricane Deck (193D) 3411977, Tehachapi North (212B) 3511824, Tehachapi South (212C) 3511814, Tejon Ranch (213C) 3511816, Tejon Hills (214D) 3511817, Wells Ranch (217C) 3511916, Chimineas Ranch (218B) 3511928, Taylor Canyon (218C) 3511918, Caliente Mtn. (218D) 3511917, Oiler Peak (238D) 3511835, Rio Bravo Ranch (239A) 3511847, Carneros Rocks (243A) 3511947, Simmler (243C) 3511938, La Panza NE (244A) 3512041, La Panza Ranch (244B) 3512042, California Valley (244D) 3512031, Camatta Ranch (245A) 3512043, Atascadero (246B) 3512046, Lake Isabella South (260C) 3511854, Knob Hill (262C) 3511858, Pine Mountain (262D) 3511857, Orchard Peak (267B) 3512062, Packwood Creek (267D) 3512051, Cholame (268A) 3512063, Estrella (269A) 3512065, White River (286D) 3511877, Garza Peak (291B) 3512082, Pyramid Hills (291D) 3512071, The Dark Hole (292A) 3512083, Tierra Redonda

Mountain (294C) 3512078, Curry Mountain (315C) 3612014, Priest Valley (316B) 3612026, Slack Canyon (316C) 3612016, Smith Mountain (316D) 3612015, Monarch Peak (317A) 3612027, Lillis Ranch (338B) 3612044, Joaquin Rocks (338C) 3612034, Ciervo Mtn. (339A) 3612045, Idria (339B) 3612046, San Benito Mtn. (339C) 3612036, Santa Rita Peak (339D) 3612035, Rock Spring Peak (340B) 3612048, Hepsedam Peak (340D) 3612037, Rana Creek (343A) 3612145, Chews Ridge (343D) 3612135, Tumey Hills (361C) 3612056, Llanada (362C) 3612058, Panoche (362D) 3612057, Panoche Pass (363A) 3612161, San Benito (363D) 3612151, Ortigalita Peak NW (383B) 3612088, Laguna Seca Ranch (383D) 3612077, Hollister (385C) 3612174, San Juan Bautista (386D) 3612175, Howard Ranch (404A) 3712121, San Luis Dam (404D) 3712111, Merced (421C) 3712034, Patterson (424B) 3712142, Newman (424D) 3712131, San Jose East (427D) 3712137, San Gregorio (429C) 3712234, Westley (443C) 3712152, Tracy (444B) 3712164, Lone Tree Creek (444C) 3712154, Solyo (444D) 3712153, Midway (445A) 3712165, Altamont (445B) 3712166, Stockton West (462A) 3712183, Brentwood (463B) 3712186, Byron Hot Springs (463C) 3712176, Clifton Court Forebay (463D) 3712175, Antioch South (464A) 3712187, Clayton (464B)* 3712188, Oakland East (465C)* 3712272, Las Trampas Ridge (465D) 3712271, Oakland West (466D)* 3712273, Honker Bay (481C) 3812118, Antioch North (481D) 3812117, Petaluma (484B) 3812226, Elmira (498C) 3812138, null (514C) 3812158, Glascock Mtn. (532A) 3812283, Wilson Valley (532B) 3812284, Jericho Valley (532C) 3812274, Arbuckle (546D) 3912211, Leesville (547B) 3912224, Wilbur Springs (547C) 3912214, Salt Canyon (547D) 3912213, Lodoga (563C) 3912234, Nelson (577D)(*) 3912157, Willows (578C) 3912252, Richardson Springs NW (593B) 3912188, Santa Catalina East (SCTE) 3311833, Santa Catalina North (SCTN) 3311844, Santa Catalina South (SCTS) 3311834, Santa Catalina West (SCTW) 3311845, Santa Cruz Island A (SCZA) 3311987, Santa Cruz Island B (SCZB) 3311986, Santa Cruz Island C (SCZC) 3311985, Santa Cruz Island D (SCZD) 3311984

Cismontane woodland, valley and foothill grassland / clay; elevation 15-1200 meters. Annual herb. Blooms March – May

Threatened by development, urbanization, and habitat alteration. Possibly threatened by vehicles, grazing, and non-native plants. See *The Botany of Captain Beechey's Voyage* p. 327 (1838) for original description, *Anales del Jardín Botánico de Madrid* 59(2):109-216 (2002) for revised nomenclature, and *Madroño* 52(1):53-59 (2005) for ecological information.

Available online at: <http://www.rareplants.cnps.org/detail/1340.html>

Revised CNPS Inventory Record

California macrophylla (H. & A.) Aldas, Navarro, Vargas, Saez & Aedo

Changed from 1B.2 to CBR on [YEAR-MM-DD]

Considered But Rejected: Too common [statewide](#); [counties that contain small, localized populations under severe threat should track *C. macrophylla* as a species of local concern.](#)

Literature Cited

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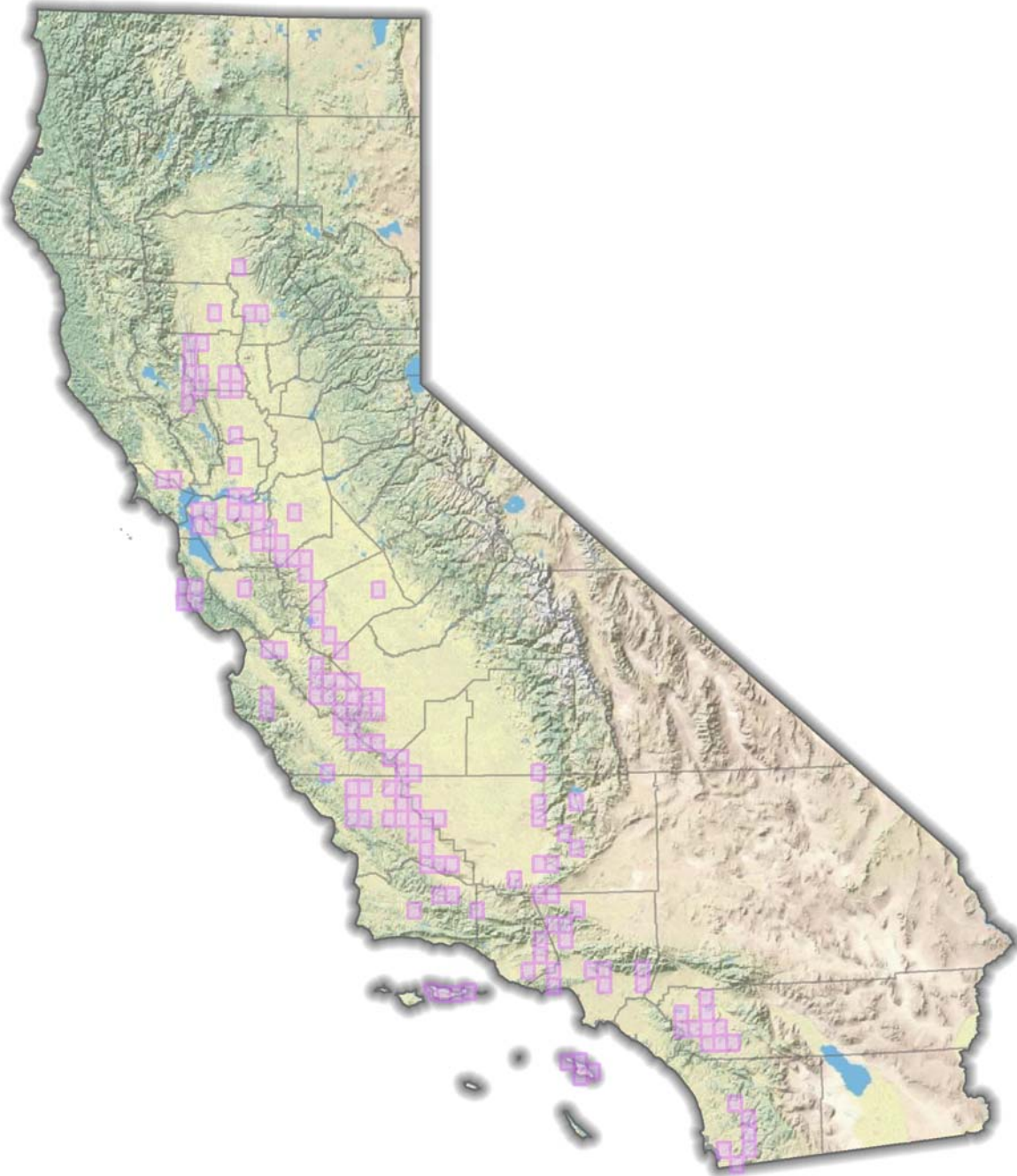
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Appendix I – Distribution Maps



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Map 1: General distribution of *California macrophylla* in California. Showing occupancy of USGS 7.5" Quadrangles based on data provided by the CNDDDB from August 2017.

Appendix I – Distribution Maps



Map 2: Specific distribution of *California macrophylla* in California. Showing element occurrences mapped by the CNDDDB as of August 2017.

Appendix II – Tables

Occurrence details	Year		
	2006	2015	2017
Occurrence status			
Total Occ	89	162	204
Historical	43	69	69
Possibly extirpated	6	8	9
Presumed extirpated	1	1	1
CCH records	-	272	290
Occurrence rank			
Rank A or B	14	42	70
Rank C or D	1	8	8
Rank U	67	103	116
Rank X	7	9	10
Population count/ estimate			
Unknown pop. estimate	53	80	90
10,000+ plants	0	2	3
1,000-9,999 plants	4	16	21
100-999 plants	10	29	36
0-99 plants	16	32	44
Non-numerical estimate	6	3	10
Land ownership			
Unknown landownership	57	83	78
Private	17	32	59
City/County	3	7	8
NGO	1	1	3
Federal	7	21	34
State	4	18	22
Threats (tallied by first listed threat)			
Occ with documented threats	21	45	56
Grazing	6	15	18
Development	7	14	19
Disking	0	2	2
Improper burn regime	0	1	1
Non-native plants	1	3	6
ORV activity	2	3	3
Other	3	3	3
Road/trail construction	1	3	3
Agriculture	1	1	1

Table 1. Occurrence comparison of *California macrophylla* over its three status change proposals in 2006, 2015, and present. (Note: *California macrophylla* was added to the Inventory 6th Edition in 2001, however, the earliest occurrence data available from CNDDDB is from 2006.)