

Rare Plant Status Review: *Layia erubescens*
Proposed Addition to California Rare Plant Rank 1B.2, G2 / S2
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This status review is being expedited through an agreement between the California Native Plant Society and the Center for Plant Conservation (CPC), with contributions from the state of California, CPC, and the California Plant Rescue initiative. Aside from being advanced as part of this agreement, the process, content, and information provided herein is not altered, modified, or developed differently in any way or form compared to other status reviews developed by CNPS.

Background and Taxonomy

Layia erubescens B.G. Baldwin is an annual herb in the Asteraceae known from San Luis Obispo and Santa Barbara counties in California. It was first described in 2022 (Baldwin 2022). Therefore, it was not included in *The Jepson Manual* (Baldwin and Bainbridge 1993), *Jepson eFlora* (Baldwin and Bainbridge 2012), or *Flora of North America* (Baldwin et al. 2006). Prior to 2022, it was most often identified as a white-rayed form of *L. glandulosa*. “*Layia erubescens* can be distinguished from white-rayed *L. glandulosa* by the combination of strongly odorous foliage, an often more strictly erect central leader, proximal leaves often with deeper lobing, sometimes with secondary lobing in larger plants, ray corollas generally becoming pink or rose in age except at the base, and pappus scales often narrower at base (generally 0.13 mm, rather than commonly to 0.3 mm wide in *L. glandulosa* in its newly restricted sense)” (Baldwin 2022). In addition, the two species are differentiated by climatic region (low-elevation maritime climate in *L. erubescens* vs inland climate in *L. glandulosa*) and soils (loose, fine sand in *L. erubescens* vs coarse sand, gravel, or silt in *L. glandulosa*) (Baldwin 2022). “The species epithet is from the Latin *erubescere*, to blush or redden, in reference to the ray corolla color transition in age from white to pink or rose. On this basis, the recommended common name for *Layia erubescens* is blushing layia” (Baldwin 2022).

Ecology

Layia erubescens occurs in low-elevation, maritime climate regions in the loose, fine sand of stabilized dunes and sandhills from 10 to 245 m elevation (30 to 800 ft) (Baldwin 2022, Baldwin 2022 pers. comm., CCH2 2022). Associated native taxa include *Acmispon glaber*, *Amsinckia spectabilis*, *Artemisia californica*, *Chaenactis glabriuscula* var. *lanosa*, *Croton californicus*, *Cryptantha hispidissima*, *Ericameria ericoides*, *Eriophyllum multicaule*, *Erysimum capitatum*, *Heterotheca grandiflora*, *Horkelia cuneata*, *Layia hieracioides*, *Lupinus arboreus*, *L. chamissonis*, *L. truncatus*, and *Toxicodendron diversilobum*. Non-native (grass) associates commonly include *Bromus diandrus*, *B. rubens*, and *Ehrharta calycina* (Baldwin 2022, CCH2 2022). Flowering specimens have been collected or observed from mid-February to mid-June (mostly March to May) (Baldwin 2022, CCH2 2022, iNaturalist 2022).

Distribution and Abundance

Layia erubescens is known from approximately 30 occurrences in San Luis Obispo and Santa Barbara counties, 15 of which are considered recent (observed since November of 2002), with the other 15 considered historical (not seen for over 20 years). Many of the observations based on historical herbarium specimens have inexact locations and uncertain georeferencing. Therefore, it is difficult to estimate an accurate occurrence number, especially in the region near La Purisima Mission and Burton Mesa. Two estimated occurrences are in the Oceano Dunes State

Vehicular Recreation Area, eight are in State Parks (La Purisima Mission State Historic Park, Montaña de Oro State Park, Morro Bay State Park), five are in the Burton Mesa Ecological Reserve, one is partly on land owned by the County of Santa Barbara and partly on land of unknown ownership, and nearly half (14) are completely on lands of unknown ownership. Population sizes and current trends are not known for most occurrences; for the five occurrences with information, observations are “locally abundant,” “locally scattered,” three plants, dozens of plants, and 50 plants. Therefore, although this species may be widespread in some locations, such as Burton Mesa, hundreds of plants have not been observed recently. Field work is needed to establish the number of extant occurrences at Burton Mesa and La Purisima Mission, as well as in the Nipomo and Oceano regions.

Status and Threats

According to Baldwin (2022), the inland dune habitat this species occupies in San Luis Obispo County was endangered by development as long ago as 1970. The remaining habitat is now often occupied by perennial veldt grass (*Ehrharta calycina*) (Baldwin 2022). “*Layia erubescens* persists in areas that have been less affected, so far, by *E. calycina* invasion and land development. Protection of remaining habitat from further development and vigorous efforts to control *E. calycina* are needed to prevent the extinction of *L. erubescens*” (Baldwin 2022). In addition, two of the occurrences are georeferenced within the Oceano Dunes State Vehicular Recreation Area where habitat is used for off-road vehicles. The eight occurrences mapped in other State Parks, as well as the five in the Burton Mesa Ecological Reserve, are protected from development but not from the spread of perennial veldt grass.

Summary

Based on the available information, CNPS and CNDDDB recommend adding *Layia erubescens* to California Rare Plant Rank 1B.2 of the CNPS Inventory. If knowledge on the distribution, threats, and rarity status of *L. erubescens* changes in the future, we will re-evaluate its status at that time.

Recommended Actions

CNPS: Add *Layia erubescens* to CRPR 1B.2

CNDDDB: Add *Layia erubescens* to G2 / S2

Draft CNPS Inventory Record

Layia erubescens B.G. Baldwin

blushing layia

Asteraceae

USDA Plants Symbol: none

Synonym(s)/Other Name(s): none

CRPR 1B.2

Counties: San Luis Obispo, Santa Barbara

States: California

Quad name (code): Santa Maria (3412052), Zaca Creek (3412062), Los Alamos (3412063), Lompoc (3412064), Surf (3412065), Sisquoc (3412073), Orcutt (3412074), Oceano (3512015), Arroyo Grande NE (3512025), Morro Bay South (3512037)

General Habitat: Coastal dunes, Coastal scrub

Microhabitat Details: Prefers loose, fine sand of stabilized dunes and sandhills

Microhabitat: Sandy, openings

Elevation: elevation 10-245 meters

Life form: Annual herb

Blooms: (February) March to May (June)

Threats: Recreational activities (ORV), invasive species, urbanization, development

Taxonomy: Populations previously identified as white-rayed *L. glandulosa*.

Selected References:

- CNPS Status Review: Proposed Addition to CRPR 1B.2, G2/S2 (2023)

- Original Description: *Madroño* 69: 88–94 (2022)

Literature Cited

Baldwin, B. G. and S. J. Bainbridge. 1993. *Layia* (Asteraceae). in Hickman, J. C. (ed.), *The Jepson manual: Higher plants of California*. University of California Press, Berkeley, CA. Website: https://ucjeps.berkeley.edu/cgi-bin/get_JM_treatment?609,1504 [accessed October 2022].

Baldwin, B. G., S. J. Bainbridge, and J. L. Strother, G. L. 2006. *Layia*, in Flora of North America Editorial Committee (eds.), *Flora of North America North of Mexico*, Volume 21. Website http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=117774 [accessed October 2022].

Baldwin, B. G. and S. J. Bainbridge. 2012. *Layia*. In: Jepson Flora Project (eds.), *Jepson eFlora*. Website https://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=502 [accessed October 2022].

Baldwin, B. G. 2022. A new species of *Layia* (Compositae) from the central coast of California. *Madroño* 69: 88–94.

[CCH2] Consortium of California Herbaria Portal 2. 2022. 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 November 2022].

[CNPS] California Native Plant Society, Rare Plant Program. 2022. Inventory of Rare and Endangered Plants of California (online edition, v9-01 1.0). Website <https://www.rareplants.cnps.org> [accessed October 2022].

iNaturalist. 2022. California Academy of Sciences. Available at: <https://inaturalist.org> [accessed December 2022].

Personal Communications

Baldwin, Bruce. 2022. Professor and Herbarium Curator, UC Berkeley. Email about distribution and abundance of *Layia erubescens*. Personal communication 28 October 2022.