Rare Plant Status Review: *Eriogonum argillosum*
Proposed Change from California Rare Plant Rank 4.3, G3G4 / S3S4 to 1B.2, G2G3 / S2S3
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Background and Taxonomy

Eriogonum argillosum J. T. Howell is a California endemic annual herb in the Polygonaceae that was added to the *CNPS Rare Plant Inventory* (RPI) in 1974 and is currently a CRPR 4 taxon; it has undergone no recent changes in status (CNPS 2026). It is currently known from Fresno, Monterey, and San Benito counties; it is likely extirpated from Santa Clara County (Calflora 2026, CCH2 2026, CNDDB 2026, iNaturalist 2026, NatureServe 2026). It is included in *The Jepson Manual* (Hickman 1993), *Jepson eFlora* (Reveal and Rosatti 2012), and *Flora of North America* (Reveal 2005). Those most familiar with this species in the field indicate that it is much rarer and more threatened than previously believed, and after an analysis of known occurrences, we are proposing an up-ranking to CRPR 1B.2 (Calflora 2026, CCH2 2026, CNDDB 2026, iNaturalist 2026, O'Dell 2026 pers. comm.).

When first added to the RPI, *Eriogonum argillosum* was placed in the "rare but not endangered" category with an incomplete ranking (CNPS 1974). By 1988, it had been placed on List 4, plants of limited distribution, a watch list, with a RED code of 1-1-3 (rare but found in sufficient numbers and distributed widely enough that potential for extinction or extirpation is low, not endangered, endemic to California) (CNPS 1988). The species has been confused in the past with at least two species that can have similar coloration and distribution: *Eriogonum angulosum* (which has an unribbed, hairy involucre and glandular hairy perianth vs a ribbed, glabrous involucre and glabrous perianth in *E. argillosum*) and *E. ordii* (which has a densely hairy perianth vs a glabrous perianth in *E. argillosum*) (CCH2 2026 [see Randall Morgan specimen UCSC100013546 and accompanying field notes], O'Dell 2016 pers. comm.).

Ecology

The specific epithet "argillosum" refers to the clay soils this species inhabits (Howell 1932). "While the other species related to [this species] generally grow in loose and sandy soils, *E. argillosum* grows on clay slopes, and it is from this fact that the specific name has been derived" (Howell 1932). The type specimen was collected on disintegrating shale and clay soil of an open hillside (Howell 1932). More recent soil descriptions include vertic clay derived from marine shale, clayey soil derived from shale, steep clay gullies, clay bank, and clay slope (Calflora 2026, CCH2 2026). In their comprehensive review of California plant taxa with affinity for clay soil, Fryer et al. (2025) identify *E. argillosum* as a "strict endemic" to clay soils.

While the habitat currently listed in the CNPS Inventory is cismontane woodland (CNPS 2026), observers describe the habitat as slopes in open grassland or openings in chaparral (Calflora 2026, CCH2 2026, O'Dell 2026 pers. comm.). Associated species include *Acanthomintha obovata* subsp. *obovata* (CRPR 4.2), *Apium angustifolium*, *Avena fatua*, *Benitoa occidentalis* (CRPR 4.3), *Caulanthus flavescens*, *Chlorogalum pomeridianum*, *Deinandra halliana* (CRPR 1B.2), *Delphinium hesperium* subsp. *pallescens*, *Eriogonum ordii*, *E. covilleanum*, *E. gracile*, and *Salvia columbariae* (Calflora 2026, CCH2 2026, O'Dell 2016 and 2026 pers. comm., including photographs). Plants are more common on slopes with reduced competition from non-native species, such as steep slopes with bare soil due to landsliding (mudslides) (O'Dell 2026

pers. comm.). Plants have been observed in flower from late March through August (rarely to November) and at elevations of 75–929 meters (Calflora 2026, CCH2 2026, CNDDB 2026, iNaturalist 2026).

It should be noted that the soil type cited for this species in the RPI is clay or serpentine (CNPS 2026). However, searches of the data and literature as well as a consultation with a botanist familiar with this species (Calflora 2026, CCH2 2026, O'Dell 2026 pers. comm.) revealed only one specimen mentioning the species growing "on a clay slope that is related to serpentine" (*Clifton 23190* DAV). An examination of soil maps indicates that one of the Santa Clara County locations (San Juan Bautista Hills – now Communications Hill) originally had some serpentine rock outcrops (NRCS 2026). The statement that this species occurs on ultramafic soil was first mentioned in the 1988 edition of the CNPS Rare Plant Inventory, likely added by one of the edition's many reviewers (CNPS 1988). After 1988, the statement that it occurs on serpentine recurred in all subsequent versions of the Inventory (CNPS 1994, 2001) as well as some floras (see Hickman 1993, Mathews 1998, Reveal and Rosatti 2012). A more accurate statement is that this species is a clay soil endemic and rarely occurs on clay soils derived from serpentine.

Distribution and Abundance
Historically, *Eriogonum argillosum* has been documented at 25 occurrences in Fresno, Monterey, San Benito, and Santa Clara counties of which ten are recent (seen in the past 20 years) (Gowen 2015 pers. comm., Calflora 2026, CCH2 2026, CNDDB 2026, iNaturalist 2026, O'Dell 2026 pers. comm.). The ten recent occurrences have been documented mostly due to the exploration and fieldwork of Ryan O'Dell who has attempted to find this species in locations with suitable habitat (O'Dell 2016, 2026 pers. comm.). Based on aerial imagery, the locations of the two 19th century Santa Clara County occurrences at the San Juan Bautista Hills and Evergreen have been fully developed, and the occurrences are presumed to be extirpated (CCH2 2026, NatureServe 2026). In addition, after examination of aerial imagery, the historical 1937 occurrence at Tres Pinos Creek Canyon in San Benito County is likely extirpated due to agricultural, housing, and other development (CCH2 2026). The five Monterey County occurrences are all historical with the most recent dating from 1991, two dating from the 1950s, and two dating from the 1930s (CCH2 2026).

Without the three presumed extirpated occurrences, *Eriogonum argillosum* is known from 22 occurrences of which ten are recent and located in Fresno and San Benito counties. Two of the recent San Benito County occurrences (CNPS record #s 10 and 17) have a tentative identification as *Eriogonum argillosum* made at a distance based on plant color and habitat (due to land ownership restrictions) (Calflora 2026, O'Dell 2026 pers. comm.). Land ownership of the 22 locations is as follows: Bureau of Land Management (4 occurrences), Pinnacles National Park (1 occurrence), and unknown (17 occurrences). Population estimates have been recorded for seven confirmed recent occurrences and one historical occurrence. Record #2 has close to 50,000 plants, record #23 has between 10,000 and 20,000 plants, record #14 has approximately 5,000 plants, record #s 15, 18, and 20 have approximately 500 plants each, record #19 has approximately 70 plants, and record #22 has only 5 plants (Calflora 2026, CCH2 2026, CNDDB 2026, O'Dell 2026 pers. comm.).

At the bottom of the location table are 14 records that were not included in the distribution analysis due to problems georeferencing the location, unconfirmed presence, or likely misidentification (CCH2 2026, CNDDB 2026, iNaturalist 2026, O'Dell 2026 pers. comm.).

Status and Threats
Currently, *Eriogonum argillosum* is ranked CRPR 4.3, has a global rank of G3G4 rounded to G3 (vulnerable), and a California state rank of S3S4 rounded to S3 (vulnerable) (CNPS 2026, NatureServe 2026). These rankings were based on an estimated number of occurrences between 6 and 80, a range extent of 6,065 square kilometers, and a very low threat level (NatureServe 2026). In this Status Review, we have found that *Eriogonum argillosum* has been observed at 25 locations, three of which are likely extirpated (Gowen 2015 pers. comm., Calflora 2026, CCH2, CNDDB 2026, iNaturalist 2026, O'Dell 2026 pers. comm.). Of the 22 presumed extant occurrences, 10 are recent and located in Fresno and San Benito counties; all five occurrences from Monterey County are historical with the most recent observation from 1991 (Calflora 2026, CCH2 2026). The calculated range extent for presumed extant occurrences in the attached location table is approximately 2,800 square kilometers (GeoCat; Bachman et al. 2011). Based on observations made in the field by O'Dell (2016 and 2026 pers. comm.), this species is highly threatened by competition with non-native species, especially annual grasses (such as *Bromus rubens* and *Avena barbata*). Most suitable clay-soil habitat in its range has a high cover of non-native species, and it is most common in areas where competition with non-native species is low, such as on landslides (mudslides) (O'Dell 2026 pers comm.). In addition, many of the historical San Benito County locations have been investigated by O'Dell, and those occurrences have not been relocated (O'Dell 2016 pers. comm.).

Summa~~ry~~
Based on the available information, CNPS and CNDDB propose changing *Eriogonum argillosum* from CRPR 4.3 to California Rare Plant Rank 1B.2 in the CNPS Inventory. If knowledge of the distribution, threats, or rarity status of *Eriogonum argillosum* changes in the future, it may be re-evaluated at that time.

Recommended Actions
CNPS: Change *Eriogonum argillosum* from CRPR 4.3 to 1B.2
CNDDB: Change *Eriogonum argillosum* from G3G4 / S3S4 to G2G3 / S2S3

Draft CNPS Inventory Record (Changes to the original record are in green text)
Eriogonum argillosum J.T. Howell
common name: clay buckwheat
Family: Polygonaceae
USDA Plants Symbol: ERAR9
Synonym(s)/Other Names: none
CRPR ~~4.3~~1B.2
Counties: Fresno, Monterey, San Benito, Santa Clara
States: CA
Quad name (code): Bickmore Canyon (3612152), Cherry Peak (3612162), Ciervo Mtn. (3612045), Hernandez Reservoir (3612047), Hollister (3612174), Lonoak (3612038), Monarch Peak (3612027), Nattrass Valley (3612028), North Chalone Peak (3612142), Paicines (3612163),

Pancho Rico Valley (3612017), Priest Valley (3612026), Rock Spring Peak (3612048~~), San Benito (3612151),~~ San Jose East (3712137), Topo Valley (3612141), Tres Pinos (3612173)
General Habitat: Valley and foothill grassland, cismontane woodland (clay~~, serpentine~~)
Microhabitat Details: Clay endemic, found in areas where competition with non-native plants is reduced, such as landslides (clayslides).
Microhabitat: clay (usually), sandy clay (sometimes)
Elevation: elevation 75–930 meters (245–3050 ft) [erase all the old elevation information]
Life form: annual herb
Blooms: March to August (November) [erase the old bloom information]
Notes: ~~See *Phytologia* 66(4):376 (1989) for taxonomic treatment.~~ Serpentine previously included in general habitat based on one specimen record from SCL Co. collected "on a clay slope that is related to serpentine" (*Clifton 23190*, DAV); now considered extirpated from SCL Co. and no other occurrences have been documented on serpentine or serpentine-derived soils.
Threats: Threatened by competition from non-native plants, development, urbanization, and agriculture.
Taxonomy: Sometimes confused with *E. angulosum* (which has an un-ribbed, hairy involucre and glandular hairy perianth vs a ribbed, glabrous involucre and glabrous perianth in *E. argillosum*) and *E. ordii* (which has a densely hairy perianth vs a glabrous perianth in *E. argillosum*).
Selected References:
- CNPS Status Review: Proposed change from CRPR 4.2 to 1B.2, G2G3 / S2S3 (2026)
- Original Description: *Leaflets of Western Botany* 1: 11–14 (1932)
- Taxonomic Treatment: *Phytologia* 66(4): 376 (1989)

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Personal Communications

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