Rare Plant Status Review: *Castilleja angustifolia* var. *flavescens*
Proposed Addition to California Rare Plant Rank 4.3, G5T4 / S3
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8 May 2026

Background and Taxonomy

Castilleja angustifolia (Nutt.) G. Don var. *flavescens* (Pennell ex Edwin) N.H. Holmgren is a perennial, hemi-parasitic herb in the Orobanchaceae previously thought to occur only outside of California in Idaho, Nevada, and Utah (Egger et al. 2020, NRCS 2026). Botanical exploration by Ann Howald, Tim Messick, Barbara Castro, and others led to the discovery of this variety within the borders of California (Howald 2021, CCH2 2026, iNaturalist 2026). *Castilleja angustifolia* var. *flavescens* was first published as *Castilleja flavescens* in 1959 based on specimens from White Pine County, Nevada, collected by Pennell and Schaffer in 1938 (Edwin 1959); the varietal name was published in *Intermountain Flora* in 1984 (Holmgren 1984). *Castilleja angustifolia* var. *flavescens* was not included in *The Jepson Manual* (Chuang and Heckard 1993), although the species (*angustifolia*) was recognized. Neither the species nor the variety are included in the *Jepson eFlora*, as the populations previously assigned to *C. angustifolia* in the 1993 *Jepson Manual* were reevaluated and assigned to *C. chromosa* (Wetherwax et al. 2024). Both the species and variety are included in *Flora of North America* (Egger et al. 2020), and there are plans to include *C. angustifolia* var. *flavescens* in a future update of the *Jepson eFlora* (House 2025 pers. comm.). *Castilleja angustifolia* var. *flavescens* differs from *C. chromosa* in having inflorescence bracts that are usually tipped with pink, reddish pink, yellow, yellow-orange, or white (often variable within a population) vs usually bright red, scarlet, or orange red; also the corolla beaks in var. *flavescens* are 8–15 mm long vs 9–18 in *C. chromosa* (Egger et al. 2020). The epithet "flavescens" means pale yellow or turning yellow (Gledhill 1992).

Ecology

In California, *Castilleja angustifolia* var. *flavescens* is found in pinyon and juniper woodland and Great Basin scrub with *Pinus monophylla*, *Juniperus osteosperma*, *Artemisia arbuscula* and other *Artemisia* spp., *Lupinus* spp., *Cercocarpus ledifolius*, *Purshia tridentata*, *Penstemon humilis*, *Erigeron aphanactis*, *Astragalus iodanthus* var. *iodanthus*, and *Packera multilobata* (CCH2 2026). It is found in rocky areas at elevations from 1310 to 2591 m (4298 to 8500 ft), and substrates include sand, silt, clay and gravel, sometimes of volcanic origin (Eggert 2020, Howald 2021, CCH2 2026, iNaturalist 2026). In dry years, *C. angustifolia* var. *flavescens* remains dormant, and the plants are only recognizable in wetter years when the inflorescences create a multi-colored display (Howald 2026 pers. comm.). Bloom period is generally May through early July, with one record from late April (CCH2 2026, iNaturalist 2026). This variety is often associated with *Artemisia arbuscula*, its likely host plant (Eggers et al. 2020).

Distribution and Abundance

In California, *Castilleja angustifolia* var. *flavescens* is known from approximately 18 occurrences in Modoc, Lassen, Alpine, and Mono counties in the Modoc Plateau (MP) and East of the Sierra (SNE) Jepson geographic subdivisions (Hickman 1993, CCH2 2026, iNaturalist 2026). The occurrences in California are considered recent, having been documented in the past 20 years. It was documented in Lassen County by Barbara Castro in 2015 and then in the Bodie

Hills of ~~Modoc~~ Mono County by Ann Howald and Tim Messick in 2018–2019; since then it has been documented in more locations in Lassen, Modoc, and Alpine counties (Howald 2021, CCH2 2026, iNaturalist 2026). Considering that this taxon is not yet in the *Jepson eFlora*, the number of documented locations is impressive and likely will increase once this variety is included in an identification key to California *Castilleja*. Those familiar with this plant believe that more populations will be found near the Alpine/Mono County line along Highway 89, as there are old volcanics throughout that area similar to those in the Bodie Hills (Howald 2026 pers. comm.). Its associate and likely host plant *Artemisia arbuscula* is also widespread in these areas (CCH2 2026).

The largest known population is at CNPS record location #1 in the Bodie Hills where the number of plants is estimated to be in the 10s of thousands (Howald 2026 pers. comm.). Record location #s 2–4 have populations ranging from ca. 75 to 200 plants (Howald 2026 pers. comm., Messick 2026 pers. comm.). Population sizes for the other locations are not known. However, it is likely that there are large populations in the vicinity of Schaffer Mountain in Lassen County where location record #s 10–14 are located (iNaturalist 2026). The Schaffer Mountain location records are based on 13 iNaturalist observations. Several observations in this area had such large coordinate errors that they were combined with record location #11 (iNaturalist 2026).

Outside of California, the variety is known from southeastern Idaho, Nevada, southeast Oregon, and Utah (Egger et al. 2020, iNaturalist 2026). It is most common in Nevada where there are 97 iNaturalist observations and approximately 60 herbarium collections of the variety that group into 70 to 100 occurrences (iNaturalist 2026, SEINet 2026); there are approximately 19 iNaturalist observations and 90 herbarium collections from Utah that fall into approximately 70 occurrences, and there are many fewer populations documented in Idaho and Oregon (iNaturalist 2026, SEINet 2026).

Status and Threats
This variety has no conservation status in California. NatureServe (2026) ranks *C. angustifolia* var. *flavescens* as G5T4 (variety apparently secure). However, this variety has not been reviewed since 1992 (NatureServe 2026). It is unranked in Utah and Oregon, S1 (Critically Imperiled) in Idaho, and S3 (Vulnerable) in Nevada (NatureServe 2026). In California, this variety is found on lands managed by the US National Forest Service (5 occurrences), at least partially by the BLM (11 occurrences), or private owners (2 occurrences). Threats to this variety are mainly documented at CNPS record location #4 which is near a pull-off on Highway 89. Threats at this location include recreational foot traffic and invasive non-native plants; potential threats at this location and others include mining, inappropriate grazing, and off-road vehicles (Howald 2026 pers. comm.).

Summary
Based on its broad distribution, land ownership, the steadily increasing number of documented California occurrences, and other available information, CNPS and CNDDB propose adding *Castilleja angustifolia* var. *flavescens* to California Rare Plant Rank 4.3 of the CNPS Inventory. If knowledge of the distribution, threats, or rarity status of *C. angustifolia* var. *flavescens* changes in the future, it may be re-evaluated at that time.

Recommended Actions
CNPS: Add *Castilleja angustifolia* var. *flavescens* to CRPR 4.3
CNDDB: Add *Castilleja angustifolia* var. *flavescens* to G5T4 / S3

Draft CNPS Inventory Record
Castilleja angustifolia (Nutt.) G. Don var. *flavescens* (Pennell ex Edwin) N.H. Holmgren
northwestern paintbrush
Orobanchaceae
USDA Plants Symbol: CAANF
Synonym(s)/Other Name(s): None
CRPR 4.3
Counties: Alpine, Lassen, Modoc, Mono
States: CA, ID, NV, OR, UT
Quad name (code): Aurora (3811838), Bridgeport (3811932), Dome Hill (3811931), Kirkwood Spring (3811828), Little Hat Mtn. (4112011), Topaz Lake (3811965)
General Habitat: Pinyon and juniper woodland, Great Basin scrub
Microhabitat Details: Rocky areas (often volcanic) with sandy, gravelly, silty or clay soil. Often associated with *Artemisia arbuscula*, its likely host plant
Microhabitat: Rocky (usually), volcanic (often), gravelly (often), sandy (sometimes), clay (sometimes)
Elevation: 1310–2590 m (4300 to 8500 ft),
Life form: Perennial herb, hemiparasitic
Blooms: (April) May to July
Notes: First confirmed in the southern Warner Mountains of LAS Co. by Mark Egger in 2015, then in the Bodie Hills of MNO Co. in 2018.
Threats: Threatened by recreational foot traffic and invasive non-native plants. Potentially threatened by mining, inappropriate grazing, and off-road vehicles.
Taxonomy: The name *Castilleja angustifolia* was included in TJM (1993), but those populations were assigned to the name *C. chromosa* in TJM 2 (2012). *Castilleja angustifolia* var. *flavescens* differs from *C. chromosa* in having inflorescence bracts that are usually tipped with pink, reddish-pink, yellow, yellow-orange, or white (often variable within a population) vs usually bright red, scarlet, or orange red. Additionally, the corolla beaks in var. *flavescens* are 8–15 mm long vs 9–18 mm long in *C. chromosa*.
Selected References:
- CNPS Status Review: Proposed addition to CRPR 4.3, G5T4 / S3 (2026)
- Original Description: *Leaflets of Western Botany* 9: 45 (1959)
- Revised Nomenclature: *Intermountain Flora* 4: 488 (1984)

Literature Cited
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[CCH2] Consortium of California Herbaria Portal 2. 2026. 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 January 2026].

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Personal Communications

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Howald, Ann. 2026. Botanist and expert on the flora of Mono County, especially the Bodie Hills. Email about occurrences of *Castilleja angustifolia* var. *flavescens* in California. Personal communication 10 January 2026.

Messick, Tim. 2026. Botanist and expert on the flora of Mono County, especially the Bodie Hills. Email about occurrences of *Castilleja angustifolia* var. *flavescens* in California. Personal communication 10 January 2026.