

**Rare Plant Status Review: *Pedicularis rigginsiae***  
**Proposed Addition to California Rare Plant Rank 1B.1, G1 / S1**  
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Changes made to the original document are in blue text.

### Background and Taxonomy

*Pedicularis rigginsiae* D. J. Keil is a hemi-parasitic, perennial herb in the Orobanchaceae known only from the Arroyo de la Cruz area of northwestern San Luis Obispo County, California. It is not included in *The Jepson Manual* (Vorobik 1993) and *Jepson eFlora* (Vorobik 2012); this family has not yet been treated in *Flora of North America* (1993+). *Pedicularis rigginsiae* was first described by David Keil in 2019. The San Luis Obispo populations included in *P. rigginsiae* were first discovered in the 1980s and previously included in *P. dudleyi* Elmer, a CRPR 1B.2 species with a more northern distribution that now includes Monterey, Santa Cruz, and San Mateo counties; the two species do not grow sympatrically, and the southernmost population of *P. dudleyi* is approximately 80 km to the northwest of the Arroyo de la Cruz area (Riggins 1983, Keil 2019, CNDDDB 2021). There are no taxonomic or nomenclatural synonyms for the names *P. rigginsiae* and *P. dudleyi* (Tropicos 2021).

*Pedicularis rigginsiae* is distinguished from similar species by having leaves 1.5–4 cm wide, proximally widened inflorescence bracts 9–15 mm wide, calyx 6–9 mm long, white to pink (sometimes aging rose-purple) corolla 6–9 mm long, lower corolla lip 2–3.5 mm long, and straight galea (upper lip) 8–13 mm long (Keil 2019). Two other species of *Pedicularis* occur in California's South Coast Ranges: the above-mentioned *P. dudleyi* and *P. densiflora* Hook. Phylogenetic analyses by Robart et al. (2015) indicate that *P. dudleyi* and *P. densiflora* are closely related, and the two appear as sister taxa in their phylogenies. *Pedicularis densiflora* is distinguished from *P. rigginsiae* by its wider leaves (4–15 cm) and longer, red or maroon corollas (23–36 mm). *Pedicularis dudleyi* differs from *P. rigginsiae* in having wider leaves (4–6 cm), a longer lower corolla lip (6 mm), and a distally bent galea (Keil 2019).

The specific epithet honors Dr. Rhonda Riggins, Professor Emeritus at California Polytechnic State University, San Luis Obispo (Keil 2019).

### Ecology

*Pedicularis rigginsiae* is restricted to clay-rich soils (at least partly derived from highly weathered ultramafic parent materials) on windswept, stairstep, Pleistocene coastal terraces in dwarfed maritime chaparral at an elevation of 100 to 155 meters. It blooms from late January to May (Keil 2019, CCH2 2021). Associates include rare shrubs such as *Arctostaphylos cruzensis* (CRPR 1B.2), *A. hookeri* subsp. *hearstiorum* (CRPR 1B.2), *Ceanothus maritimus* (CRPR 1B.2), and *C. hearstiorum* (CRPR 1B.2), as well as more widespread taxa such as *Arctostaphylos tomentosa* subsp. *tomentosa* and *Adenostoma fasciculatum*. It is probable that *P. rigginsiae* establishes root connections with both *Arctostaphylos hookeri* subsp. *hearstiorum* and *Adenostoma fasciculatum*, but attachments to the putative hosts have not been documented (Keil 2019).

**Distribution and Abundance**

*Pedicularis rigginsiae* is currently known from just three occurrences (in close proximity to one another) located north of San Simeon, directly south of Arroyo de la Cruz, and about a mile east of Highway 1. These occurrences are included in the CNDDDB under *P. dudleyi* (EO8, EO10, EO18) (CNDDDB 2021). All three occurrences are listed as historical in the CNDDDB, based on specimens and observation dates in the 1980s. However, one more recent herbarium collection of *P. rigginsiae* was made by Keil in 2002 from the vicinity of EO8 or EO18 (Keil 29742 [between Cinnabar Hill and Oak Knoll], OBI100074) (Keil 2019, CCH2 2021). In the 1980s, the populations at EO8 and EO10 were estimated to be 100 plants and 50 plants, respectively; the population at EO18 has not been censused. With three occurrences removed, *P. dudleyi* is now known from only eight occurrences and its CRPR 1B.2 status is not recommended to change.

The Arroyo de la Cruz area, known for its high endemism, is situated between the shoreline and the Santa Lucia Range (Keil 2019). Although the lands to the west of Highway 1 were transferred to state ownership in 2005, the Hearst Corporation retained possession of the area east of the highway where *Pedicularis rigginsiae* grows. The Hearst Ranch lands are part of an active cattle ranch with a conservation easement in place and restricted public access. Nearby areas of similar habitat have not been thoroughly explored (Keil 2019).

**Status and Threats**

As a newly described species endemic to California, *Pedicularis rigginsiae* has no current conservation status in California or elsewhere. The three known occurrences of *P. rigginsiae*, which occupy approximately two square miles, were previously placed within *P. dudleyi*, which is a CRPR 1B.2 plant with a Global Rank of G2 and a State Rank of S2 (CNPS 2021). Although the area of the Hearst Ranch where *P. rigginsiae* occurs is under a conservation easement and the ranch has been conservatively managed, the site is part of an active cattle ranch (Keil 2019). In addition, the total number of plants of *P. rigginsiae* may be under 200, making the species vulnerable to an extinction event.

**Summary.**

Based on the available information, CNPS and CNDDDB recommend adding *Pedicularis rigginsiae* to California Rare Plant Rank 1B.1 of the CNPS Inventory. If knowledge on the distribution, threats, and rarity status of *P. rigginsiae* changes in the future, we will re-evaluate its status at that time. In addition, the distribution of *P. dudleyi* should be modified in the CNPS and CNDDDB databases to reflect removal of the San Luis Obispo County populations; no changes to the conservation status of *P. dudleyi* are recommended at this time.

**Recommended Actions**

CNPS: Add *Pedicularis rigginsiae* to CRPR 1B.1

CNPS: Remove San Luis Obispo County populations from *P. dudleyi*; retain status of *P. dudleyi* as CRPR 1B.2

CNDDDB: Add *Pedicularis rigginsiae* to G1 / S1

CNDDDB: Remove San Luis Obispo County occurrences (EOs 8, 10, 18) from *P. dudleyi*; retain status of *P. dudleyi* as G2/S2

**Draft CNPS Inventory Record**

*Pedicularis rigginsiae* D. J. Keil

Arroyo de la Cruz lousewort

Orobanchaceae

CRPR 1B.1

Counties: San Luis Obispo

Endemic to California

San Simeon (271B) 3512162, 1 (272A) 3512163

Maritime chaparral (dwarfed) / highly weathered ultramafics, clay / 100-155 meters

Perennial hemi-parasitic herb. Blooms January to May.

Threatened by low population numbers. Potentially threatened by ranching activities and development. Previously included in *Pedicularis dudleyi*. See *Phytoneuron* 2019-2: 1-8 (2019) for original description.

### Revised CNPS Inventory Record (changes to original record are in green text)

*Pedicularis dudleyi* Elmer

Dudley's lousewort

Orobanchaceae

CRPR 1B.2

~~San Simeon (271B) 3512162, Piedras Blancas (272A) 3512163~~ Big Sur (344D)

3612137, Soquel (387B)\* 3612188, Big Basin (408B) 3712222, Mindego Hill (428C)

3712232, ~~Woodside (429A) 3712243~~

~~Chaparral, Broadleaved upland forest~~ Lower montane coniferous forest / serpentinite, clay / 60-900 m

Perennial herb. Blooms Apr-June

Threatened by foot traffic, road and trail maintenance, fire suppression, river flooding, and bank erosion. Potentially threatened by development. **Previously included plants from Arroyo de la Cruz (SLO Co.) that are now recognized as *P. rigginsiae*.** ~~Plants from Arroyo de la Cruz (SLO Co.) are somewhat different and warrant further study.~~ See *Botanical Gazette* 41:316-317 (1906) for original description.

### Literature Cited

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