Element Code: PDPGN082P6

# Changed from California Rare Plant Rank 4.2 to 1B.2 in the CNPS Inventory on June 15, 2015

Rare Plant Status Review: *Eriogonum heermannii* var. *occidentale*Proposed Change from CRPR 4.2, G5T3 / S3 to 1B.2, G5T2 / S2

Aaron E. Sims (CNPS), Caroline Tippets (CNPS), and Roxanne Bittman (CNDDB)

May 5, 2015

Changes made to the original document appear in blue text.

# **Background**

Eriogonum heermannii Dur. & Hilg. var. occidentale S. Stokes is a perennial deciduous shrub in the Polygonaceae that is mostly known from the Diablo Range southern San Benito County, with a small number of occurrences from eastern Monterey and western Fresno counties. It has been included on California Rare Plant Rank (CRPR) 4.2 of the CNPS Inventory since the 5th Edition (Skinner and Pavlik 1994), and is included in both The Jepson Manual, Second Edition (Reveal and Rosatti 2012; available online at: http://ucjeps.berkeley.edu/cgi-bin/get\_IJM.pl?tid=58574) and Flora of North America (Reveal 2005) treatments. Eriogonum heermannii var. occidentale differs from the typical form in having larger leaves (blades 1.5-3(4) cm versus 0.5-1.5 cm) that are more generally tomentose, inflorescence branches that are more slender, and in geographic distribution (central Inner South Coast Ranges versus southern High Sierra Nevada, Tehachapi Mountain Area, southeast Outer South Coast Ranges, and northern Transverse Ranges for var. heermannii) (Reveal and Rosatti 2012).

Despite the type collection on "clay and shale slope" (*Howell 8062*), *E. heermannii* var. *occidentale* is actually mostly known from floodplains of deposited serpentine alluvium and along serpentine road banks. It is also known from a much lower elevational range than currently represented in the CNPS Inventory, from approximately 105 to 795 meters versus 600 to 1,000 meters (Google Inc. 2013). The low elevation of 105 meters, however, is based on a single historical collection from King City and is therefore not representative of its general elevational range, which is mostly from 310 meters and higher. *Eriogonum heermannii* var. *occidentale* blooms in the heat of the dry season, typically from July to October.

Although currently a CRPR 4 taxon, *E. heermannii* var. *occidentale* is presently only known from approximately 16 45 occurrences, 12 41 of which are considered historical (occurrences not "seen" in the past 20 years are considered historical by the CNDDB), with 10 of its 16 45 occurrences having not been re-documented in over 50 years. It is mostly known from the Diablo Range of southern San Benito County, which comprises 12 of its total occurrences. The largest known occurrence is on BLM land at the confluence of Clear Creek with San Benito River, San Benito County. Only two occurrences are known from Monterey County; one was last documented in 2013 from Lewis Creek Road along the Monterey / San Benito County line, and one is based on a single collection from King City from 1931 (*Rose 678*). There is only a single occurrence from Fresno County, known from Warthan Canyon (*Yadon s.n.*). The original description

of *E. heermannii* var. *occidentale* (Stokes 1932) describes it from Ventura County based on three collections: *Hall 7637*, *Abrams & McGregor 207*, and *Elmer 3946*. However, a search in the Consortium of California Herbaria (CCH 2015) for these referenced collections revealed that none of them are actually *E. heermannii* var. *occidentale*. Hall's collection is of *Heuchera parishii* (originally identified as *H. abramsii* and later annotated to *H. parishii*); Abrams and McGregor's #207 collections include a number of different taxa collected outside of Ventura County; and Elmer's collection, the most honorable mistake, was actually var. *heermannii* (CCH 2015).

With only 16 15 known occurrences, E. heermannii var. occidentale appears to be quite rare. However, based on its late blooming period, locations of most collections along roadsides, and high amount of private property within its range, it is quite possibly merely under-collected and actually much more common than documented. In order to get a better understanding of its true frequency and distribution, we contacted the most recent collectors and observers of this taxon to get their opinions. Vern Yadon (pers. comm. 2015) feels that most collections of it are likely from roadsides because the terrain where it occurs when blooming is hot and dry, when only die-hards with special interests are likely to be collecting. He also feels that finding its true range and abundance would require a lot more surveys in private range lands. Chris Winchell (pers. comm. 2015) agrees, stating that later flowering species can be neglected in remote areas, particularly on privately owned lands, where there is likely to be more occurrences of this taxon. At the same time, Winchell points out that its habitat preference is not uncommon throughout its known region, and it is a showy plant when in flower, so if it is more common elsewhere in the region, he would expect to see more collections. He has also spent a few seasons in its region of occupancy and has not encountered any additional locations. Dean Taylor (pers. comm. 2015) is of the opinion that, even though it blooms in the heat of the dry season, it is a large bush that is geographically restricted and ecologically limited, and its range is so narrow that it ought to have been a CRPR 1B plant two decades ago. Lastly, Ryan O'Dell (pers. comm. 2015) attests that it is guite rare and not just under-collected. Based on field observations, he feels that there are probably no more than 2,000 total individuals of this taxon. Except for the largest known occurrence along Clear Creek Road, other recent occurrences are only known from 10 to 50 individuals (see attached "Locations EriogonumHeermanniiOccidentale" spreadsheet). As a CRPR 4 taxon for over 20 years. E. heermannii var. occidentale should have been sought after by land managers and botanists, and despite its late flowering period, it is surprising that more occurrences haven't been documented since its initial CNPS Inventory status.

Threats to *E. heermannii* var. *occidentale* are currently unknown. At Clear Creek, San Benito County, *E. heermannii* it was once impacted by motorcycle activity (D. Taylor pers. comm. 2015), but the population has since been fenced off from motor vehicles, eliminating this threat (R. O'Dell pers. comm. 2015) current impacts at this location are unknown. Past vehicle activity at the site, however, has likely altered the sediment dynamics in the watershed, possibly causing watershed destabilization and flooding, which should be considered a threat (D. Taylor pers. comm. 2015). Eight Only two of its occurrences are on BLM lands, and all but one of the others (*Rose 678*; too vague) are

Element Code: PDPGN082P6

known from private lands have an unknown land ownership (R. O'Dell pers. comm. 2015), making it difficult to assess potential threats based on land use.

Based on the available information, CNPS and CNDDB recommend re-ranking *Eriogonum heermannii* var. *occidentale* from CRPR 4.2 to 1B.2 in the CNPS Inventory. A threat rank of .2 is suggested due to its limited number of occurrences, small population sizes, historical status of most occurrences, and because the majority of occurrences have an unknown land ownership. If additional information becomes available in the future which might constitute a change in the rarity status of *E. heermannii* var. *occidentale*, CNPS and CNDDB will re-evaluate its status at that time.

### **Recommended Actions**

CNPS: Change from CRPR 4.2 to 1B.2

CNDDB: Change from G5T3 / S3 to G5T2 / S2

# **Current CNPS Inventory Record**

Eriogonum heermannii Dur. & Hilg. var. occidentale S. Stokes

western Heermann's buckwheat

Polygonaceae

**CRPR 4.2** 

Fresno, Monterey, San Benito

Rock Spring Peak (340B) 36120D8

Cismontane woodland (clay or shale); elevation 600 – 1,000 meters.

Perennial deciduous shrub. Blooms July to October.

See *Leaflets of Western Botany* 1(4):30 (1932) for original description, and *Phytologia* 66(4):314-316 (1989) for taxonomic treatment.

(http://www.rareplants.cnps.org/detail/1662.html)

# **Revised CNPS Inventory Record**

Eriogonum heermannii Dur. & Hilg. var. occidentale S. Stokes

western Heermann's buckwheat

Polygonaceae

CRPR 1B.2

Fresno, Monterey, San Benito

Smith Mountain (316D) 3612015, San Lucas (318A) 3612121, Thompson Canyon (318B) 3612122, Idria (339B) 3612046, San Benito Mtn. (339C) 3612036, Hernandez Reservoir (340A) 3612047, Rock Spring Peak (340B) 3612048, Lonoak (340C) 3612038, Hepsedam Peak (340D) 3612037, Topo Valley (341A) 3612141, Panoche (362D) 3612057, Bickmore Canyon (363C) 3612152, Tres Pinos (385D) 3612173 Cismontane woodland (openings) / often serpentinite; usually roadsides or alluvium floodplains, rarely clay or shale slopes; elevation 105 – 795 meters.

Perennial deciduous shrub. Blooms July to October.

Previously CRPR 4.2; rarer than originally thought. Possibly threatened by hydrological alterations caused by past vehicles use. See *Leaflets of Western Botany* 1(4):30 (1932) for original description, and *Phytologia* 66(4):314-316 (1989) for taxonomic treatment.

Element Code: PDPGN082P6

#### **Literature Cited**

Calflora. 2015. Information on wild California plants for conservation, education, and appreciation. Website http://www.calflora.org/ [accessed 28 April 2015]. (Cited in localities spreadsheet.)

CalPhotos. 2015. CalPhotos: Plants. Regents of the University of California, Berkeley. Website http://calphotos.berkeley.edu/flora/ [accessed 28 April 2015]. (Cited in localities spreadsheet.)

Consortium of California Herbaria, CCH. 2015. Data provided by the participants of the Consortium of California Herbaria. Regents of the University of California, Berkeley. Website http://ucjeps.berkeley.edu/consortium/ [accessed 28 April 2015].

Google Inc. 2013. Google Earth (Version 7.1.2.2041) [software]. Available from https://www.google.com/earth/.

Reveal, J.L. 1989. Eriogonoid flora of California (Polygonaceae). Phytologia 66(4):295-414. (Taxonomic treatment.)

\_\_\_\_. 2005. *Eriogonum*. Online eFlora (www.eFloras.org), Flora of North America Editorial Committee (eds.), Flora of North America North of Mexico, Vol. 5: Magnoliophyta: Caryophyllidae, part 2. Oxford University Press, New York, NY.

\_\_\_ and T.J. Rosatti. 2012. *Eriogonum*, wild buckwheat. Pp. 1083-1111 in Baldwin, B.G, D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (eds.), The Jepson manual: vascular plants of California, second edition. University of California Press, Berkeley, Los Angeles, London.

Skinner, M.W. and B.M. Pavlik (eds.). 1994. California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California. Special Publication No. 1 (Fifth Edition). California Native Plant Society, Sacramento. 338 pp.

Stokes, S.G. 1932. New western *Eriogonums*. Leaflets of Western Botany 1(4):30. (Original description.)