

**Added to California Rare Plant Rank 2B.1 of the CNPS Inventory on
January 18, 2017**

**Rare Plant Status Review: *Eriodictyon sessilifolium*
Proposed Addition to California Rare Plant Rank 2B.1, G4 / S1**

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December 5, 2016

Changes made to the original document are in blue text.

Background

Eriodictyon sessilifolium Greene is a perennial shrub in the Namaceae (formerly Boraginaceae) previously known as a Baja California endemic (Rebman and Roberts 2012). A recent collection by Fred Sproul and Jacqueline Holland in 2015 (6015, SD244830; Consortium of California Herbaria 2016) confirms its occurrence in California from in the Mira Mesa community of the City of San Diego, San Diego County. *Eriodictyon sessilifolium* is currently not included in the *Jepson eFlora* (Hannan 2016), but will be included in an updated treatment of *Eriodictyon* in the *eFlora* by Gary Hannan in the near future (B. Baldwin pers. comm. 2016). It was discovered in California by Jacqueline Holland while conducting habitat restoration monitoring of a nearby project, and later confirmed by Fred Sproul (pers. comm. 2016) and verified by Jon Rebman (annotation of *Sproul and Holland 6015, SD244830*). *Eriodictyon sessilifolium* is within the capitate trichome group which also includes *E. tomentosum* and *E. traskiae*. It is easily distinguished from these two species in having capitate trichomes on its leaves, stems, and peduncles, and pubescent stamen filaments, while *E. tomentosum* and *E. traskiae* only have capitate trichomes on their sepals, petals, and pedicels, and have glabrous stamen filaments (Hannan 1988). *Eriodictyon sessilifolium* has also been classified from many other *Eriodictyon* taxa in having sessile leaves and herbage that is more or less hirsute versus herbage that is glutinous or tomentose, not hirsute (Abrams and Smiley 1915).

In California, the single individual of *E. sessilifolium* occurs in Diegan coastal sage scrub with *Artemisia californica*, *Encelia californica*, and *Salvia mellifera* on San Miguel Exchequer soils of Santiago Peak metovolcanics (*Sproul and Holland 6015, SD244830*; Sproul pers. comm. 2016). It is known from an approximate elevation of 170 meters (Google, Inc. 2015) and was observed blooming blooms in July, though is known to flower from March to July in Baja California (Wiggins 1980).

Eriodictyon sessilifolium is currently only known from one plant in California, from the Mira Mesa community of the City of San Diego, San Diego County. It is described as “One enigmatic small clone 7 ft. tall” that has suckers or sprouts surrounding the tallest stems (*Sproul and Holland 6015, SD244830*; F. Sproul pers. comm. 2016). Based on the disposition of the observation site, it cannot be discerned whether this lone California occurrence of *E. sessilifolium* is natural or non-natural. The observed individual is located within the San Diego County Water Authority (Water Authority) Second San Diego Aqueduct right of way and is in an area that was disturbed for the

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trench-based installation of Pipeline 3 in 1960, and possibly again for trench installation of Pipeline 4 in 1972. The plant occurrence is located immediately adjacent to a Water Authority gravel access road that is patrolled by Water Authority maintenance staff. The Water Authority conducted a pipeline reline project in 2010-2012 that disturbed an area just north of the observation location for development of a temporary construction portal, followed by native habitat restoration of the disturbed areas, but this recent disturbance did not encompass the *E. sessilifolium* site (D. Chadwick pers. comm. 2016, Sr. Water Resource Specialist, SDCWA). Furthermore, the plant is in an area that is situated between a single-family residential development to the west and the Interstate 15 corridor to the east, so the observation location is not in a pristine, native state (D. Chadwick and A. Hardy pers. comm. 2016). ~~There is currently no evidence to suggest that the California occurrence is non-natural.~~

In his original description of the species, Greene (1885) referenced a collection of *E. sessilifolium* from "Southern California" (*Hutchings s.n.*, GH112971), indicating that "the species occurs somewhere doubtless within the limits of the State". The closest known natural occurring populations of *E. sessilifolium* are about 80 miles south of the California occurrence, near Ensenada. According to F. Sproul (pers. comm. 2016), the likelihood of someone planting *E. sessilifolium* in California seems remote; "Two native plant nurseries that I have contacted say that the genus is very reluctant to germinate from seed under most normal techniques and my cuttings haven't been readily successful." Dispersal from car tires ~~is a potential source, but would be impossible to demonstrate or conclude.~~ ~~also seems unlikely unless the San Diego County The Water Authority trucks do not drive in Baja. (SDCWA), who owns the right of way, would have been driving around Baja or perhaps at another yet to be discovered population of the plant somewhere else in San Diego County (F. Sproul pers. comm. 2016).~~ ~~The Water Authority has employed several consultants for biological resources impact assessments and habitat restoration services, and these consultant vehicles could have driven in Baja prior to using the Water Authority access roads, but such a source would be speculative. Other access road users and potential visitors to the site include City of San Diego staff and contractors, as well as park users, any of whom could have introduced the specimen. Any of these parties could have driven in Baja or another yet-to-be-discovered population of the plant somewhere else in San Diego County and brought a seed to this site (D. Chadwick and A. Hardy pers. comm. 2016).~~

It's somewhat alarming that such a large shrub has apparently gone unnoticed in California until now; "This is a fairly large plant and if it does occur elsewhere locally it would be difficult to miss – especially considering all the botanists that wonder around" (F. Sproul pers. comm. 2016). Yet with the recent discovery of *Abutilon abutiloides* and other plants from adjacent Baja California in San Diego County (such as *Calyptidium arizonicum* and *Gilia mexicana*), it is not all that surprising, and reminds us that there are still more discoveries to be made in the California flora. In Baja California, *E. sessilifolium* is apparently relatively common, with approximately 73 records in *The Flora of Baja California* (2013) distributed from Costa del Pacifico to Santa Maria Arroyo.

The sole occurrence of *E. sessilifolium* in California is located immediately adjacent to a gravel road that is in the SDCWA right of way easement owned by the City of San Diego. The SDCWA relined two aqueducts in the vicinity of *E. sessilifolium* between 2010 and 2012, and the City of San Diego completed revegetation following impacts (D. Chadwick pers. comm. 2016, Sr. Water Resource Specialist, SDCWA). The *E. sessilifolium* observation is not associated with the Water Authority habitat restoration following the pipeline relining project (D. Chadwick and A. Hardy pers. comm. 2016). The revegetation areas are of much lower stature than the shrubs surrounding the *Eriodictyon*, and have a somewhat different composition, including *Bahiopsis laciniata*, which doesn't occur in the immediate vicinity of *E. sessilifolium*. It appears to be within an area that has not been otherwise recently disturbed, impacted, or restored; none of the Google aerial photos of the site, past or present, show any disturbance of the site where *E. sessilifolium* is located (F. Sproul pers. comm. 2016). According to D. Chadwick (pers. comm. 2016), the pipeline maintenance in this area was long-term, and there is currently no further maintenance construction expected for another 20 years or more (SDCWA, 2013 Regional Water Facilities Optimization and Master Plan Update). However, due to its proximity to the road, it is potentially subject to maintenance impacts. For example, tree suckers or sprouts nearest the road have been trimmed, but the remaining stock was leafing out when observed in November 2016 (D. Chadwick pers. comm. 2016).

Further to the north of *E. sessilifolium* is home to an occurrence of *Ferocactus viridescens* (CRPR 2B.1; EO #158) and an occurrence of *Adolphia californica* (CRPR 2B.1; EO #75). Approximately 0.25 air miles to the north of the occurrence of *E. sessilifolium* is the southern boundary of Canyon Hills Park and Open Space owned by the City of San Diego. This area has recently been proposed to undergo improvements by the City of San Diego to include hiking/interpretive trails, picnic areas, limited parking, shade shelters, benches/seating areas, interpretive signs, and public art, in addition to the development of a bathroom and new road to a viewing plateau (Mira Mesa Recreation Council 2016). Although *E. sessilifolium* is outside of the proposed improvement area, there is a possibility that increased recreation and road use could affect the plant and its habitat over time. The rare *Adolphia californica*, on the other hand, occurs within the area of improvement of Canyon Hills Park and Open Space, and should be included in any current and future improvement plans for the park.

~~Immediate threats to *E. sessilifolium* in California are considered minimal at this time. It occurs in habitat classified as Coastal Sage Scrub, which is highly valuable and often protected according to the San Diego Multiple Species Conservation Program (F. Sproul pers. comm. 2016), and therefore may receive protection by the City of San Diego.~~

Based on the available information, CNPS and CNDDDB recommend adding *Eriodictyon sessilifolium* to California Rare Plant Rank 2B.1 of the CNPS Inventory. Although no current threats are known, we propose a threat rank of .1 based on our knowledge of only a single plant in California, and the potential threat of stochastic events or other unforeseen risks that could be detrimental to its sole existence in the state. If knowledge

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on the distribution, threats, and rarity status of *E. sessilifolium* changes in the future, we will re-evaluate its status at that time.

Recommended Actions

CNPS: Add *Eriodictyon sessilifolium* to CRPR 2B.1

CNDDDB: Add *Eriodictyon sessilifolium* to G4 / S1

Draft CNPS Inventory Record

Eriodictyon sessilifolium Greene

sessile-leaved yerba santa

Namaceae

CRPR 2B.1

San Diego

Baja California

Poway (022A) 3211781

Coastal scrub / volcanic; elevation 170 meters.

Perennial shrub. Blooms July.

Discovered in California by J. Holland in 2015. Differentiated from other *Eriodictyon* spp. in having capitate trichomes on its leaves, stems, and peduncles. See *Bulletin of the California Academy of Sciences* 1(4):201-202 (1885) for original description, and *American Journal of Botany* 75(4):579-588 (1988) for taxonomic treatment.

Literature Cited

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Greene, E.L. 1885. Studies in the botany of California and parts adjacent, II: 2. Miscellaneous species, mostly new. *Bulletin of the California Academy of Sciences* 1(4): 201-202.

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[MMRC] Mira Mesa Recreation Council. 2016.

Rebman, J. P. and N. C. Roberts. 2012. Baja California plant field guide, 3rd edition. San Diego Natural History Museum, San Diego CA. 451 pp.

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