

**Kept as California Rare Plant Rank 4 and changed threat rank to .3 in the CNPS Inventory on October 31, 2016**

**Rare Plant Status Review: *Viguiera laciniata***

**Proposed Deletion ~~Change~~ from California Rare Plant Rank 4.2, ~~G4/S4~~ to 4.3**

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Changes made to the original document are in blue text.

**Background**

*Viguiera laciniata* A. Gray is a perennial herb in the Asteraceae that has been included as a plant of limited distribution in the CNPS Inventory since the 1st edition (Powell 1974). It is currently recognized as *Bahiopsis laciniata* (A. Gray) E. E. Schilling & Panero (Keil 2012), but is referenced as *Viguiera laciniata* throughout the remainder of this document for consistency and clarity. The CNPS Online Inventory indicates *V. laciniata* as endemic to Baja California, Sonora Mexico, and two counties from Southern California. Additional observations indicate *V. laciniata* occurring in five counties in Southern California as well as into Baja California and Sonora Mexico. There is one collection from Santa Clara County (*Finley s.n.*, CDA8974; Consortium of California Herbaria 2016) that is well outside of the expected range for *V. laciniata*. In addition to being well outside of the range for this species, it was collected from a heavily utilized urban trail that is potentially landscaped, and we are therefore treating it as a non-natural record. *Viguiera laciniata* is most common within the southern portion of the expected range, mostly covering the southwestern portion of San Diego County.

The transfer of *V. laciniata* from *Viguiera* to *Bahiopsis* is not controversial; *Bahiopsis* is a lineage distinct from *Viguiera* and should be accepted (D. Keil pers. comm. 2015). The taxonomic name change is non-substantive; it does not change the concept of the species and therefore does not affect its conservation status. Instead, it appears that *V. laciniata* has been under-reported in the past and is much more common than previously known. In a taxonomic treatment of *Viguiera*, Schilling (1990) only cited and mapped one California specimen, from “near Potrero” in San Diego County (*Abrams 3450*). This is probably the reason it maintained inclusion in the CNPS Inventory, and it seems like a case for delisting based on improved information (D. Keil pers. comm. 2015).

In the past, assessing the rarity status of California Rare Plant Rank (CRPR) 4 plants has been problematic. The detailed manner with which CNPS maps and analyzes preliminary occurrences to evaluate CRPR 1B and 2B plants becomes extremely time-consuming when applied to plants with a hundred or more occurrences, as is the case with many CRPR 4 taxa. Some plants have remained on CRPR 4 without evaluation for deletion, while others have yet to have been reviewed for addition, simply because CNPS and CNDDDB have not had the staff and resources to evaluate their rarity status at the same level of detail as CRPR 1B or 2B species. Current technologies, along with the advancement of newly available public database repositories, have allowed CNPS

and CNDDDB to develop new tools that allow us to estimate a rough number of occurrences for these more common plant taxa.

Our new general procedure for determining an approximate number of occurrences for CRPR 4 plants starts with georeferenced herbarium records and field observations included in GBIF (2016), which are then used to calculate the number of records that overlap over a distance of 3/8 mile from one another. California Rare Plant Rank 1B and 2B plants are mapped in CNDDDB specifically with occurrences separated by 1/4 mile being counted as separate, individual occurrences. For CRPR 4 plants, CNPS has decided to use the 3/8 mile separation distance (1/4 mile plus an additional 1/8 mile) to take into account the uncertainty involved in georeferencing specimens as well as uncertainty regarding spatial accuracy and population sizes of those occurrences. It has been well-documented that collection records without coordinates on their labels are georeferenced by various individuals using different strategies and tools, and quality control is inconsistent. In addition, specimens may have been collected from the late 1800's or as recent as 2016 with spatial accuracy being quite variable over that time frame. Most specimen records are lacking information on population size as well so it's not possible to determine whether an occurrence is made up of a few individual plants covering a mere meter of ground or having thousands of individuals that span 100 meters or more. CNPS feels that the use of 3/8 of a mile distance to auto-delineate potential occurrences based on georeferenced records is an adequate method to get a rough assessment of the rarity status of CRPR 4 taxa.

Using the above methods and tools, CNPS estimates that *Viguiera laciniata* is currently known from approximately 208 occurrences, spanning 49 USGS 7.5' quadrangles and five counties in Southern California (see Map 1 of Appendix 1). It is also common in Baja California (SEINet 2016, The Flora of Baja California 2016), and confirmed from Sonora Mexico (SEINet 2016). The attached "Locations\_ViguieraLaciniata" spreadsheet contains two worksheet tabs: one titled "Localities\_All" that includes all georeferenced records, and another titled "Localities\_Non-dups" that includes representative records that make up a single approximated occurrence (omitting duplicate records from the same collector, collector number, and date, as well as records that are within 3/8 of a mile from one another). It's important to re-emphasize the point that our analysis to approximate the number of occurrences of *V. laciniata* only includes previously georeferenced occurrences. The Consortium of California Herbaria (2016) currently includes 85 records of *Viguiera laciniata* / *Bahiopsis laciniata* that are not georeferenced, and the CNDDDB has obtained 199 records (including reports and field survey forms) that are not georeferenced or included in our total occurrence count. Without further assessment it is unknown whether one or more of these 284 records may actually make up additional potential occurrences. ~~However, since currently known from at least approximately 208 occurrences, we feel that *V. laciniata* is justifiably known as common.~~

Although this estimated occurrence record is high, new information provided by botanists in southern California indicate that the majority of observations of *V. laciniata* outside of San Diego County in California are not natural (D. Cooper, K. Morse, R.

Preston, V. Scheidt, pers. comms. 2016). Others indicate that its populations have been highly fragmented by sprawl and urbanization and other land use changes (J. Andre, T. Oberbauer, V. Scheidt, pers. comms. 2016).

Based on ~~new information its high approximate occurrence number~~, *Viguiera laciniata* is ~~too~~ fairly common in a relatively small area in southern San Diego County, and due to its restricted range and threats from urbanization, still qualifies for California Rare Plant Rank 4 in the CNPS Inventory. ~~but more or less to continue being considered of limited distribution in California, and CNPS and CNDDDB recommend changing its threat rank from .2 to .3 deleting it from California Rare Plant Rank 4.2 of the CNPS Inventory. It will be placed on the Considered But Rejected list as previously being included in the Inventory, but being too common for inclusion at this time.~~

### Recommended Actions

CNPS: Delete ~~Change~~ *Viguiera laciniata* from California Rare Plant Rank 4.2 to 4.3

CNDDDB: Delete ~~Keep~~ *Viguiera laciniata* from ~~as~~ G4 / S4

### Current CNPS Inventory Record

*Viguiera laciniata* Gray

San Diego County viguiera

Asteraceae

CRPR 4.2

Orange, San Diego

Chaparral, Coastal scrub; elevation 60-750 meters.

Perennial shrub. Blooms February – August

Locally common. Threatened by development.

Available online at <http://www.rareplants.cnps.org/detail/1543.html>

### Revised CNPS Inventory Record

*Viguiera laciniata* Gray

San Diego County viguiera

Asteraceae

CRPR 4.3

San Diego

Barrett Lake (009B) 32116F6, Tecate (009C) 32116E6, Dulzura (010A) 32116F7, Jamul Mountains (010B) 32116F8, Otay Mesa (010C) 32116E8, Otay Mountain (010D)

32116E7, National City (011A) 32117F1, Point Loma (011B) 32117F2, Imperial Beach

(011D) 32117E1, Sombrero Peak (019D) 32116G3, San Vicente Reservoir (021B)

32116H8, El Cajon (021C) 32116G8, Alpine (021D) 32116G7, Del Mar (022B)

32117H2, La Jolla (022C) 32117G2, La Mesa (022D) 32117G1, San Pasqual (034C)

33116A8, Valley Center (035A) 33117B1, Rancho Santa Fe (035C) 33117A2,

Escondido (035D) 33117A1, San Luis Rey (036A) 33117B3, Encinitas (036D) 33117A3,

Margarita Peak (051B) 33117D4, San Clemente (052A) 33117D5, ~~Lake Elsinore (069A)~~

~~33117F3~~

Chaparral, Coastal scrub; elevation 60-750 meters.

Perennial shrub. Blooms February – August  
Locally common in southern SDG Co.; occurrences outside of SDG Co. in CA are introduced. Threatened by development and urbanization.  
~~Considered But Rejected: Previously CRPR 4.2; more common than originally thought.~~

### Literature Cited

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Consortium of California Herbaria. 2016. 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 5 August 2016].

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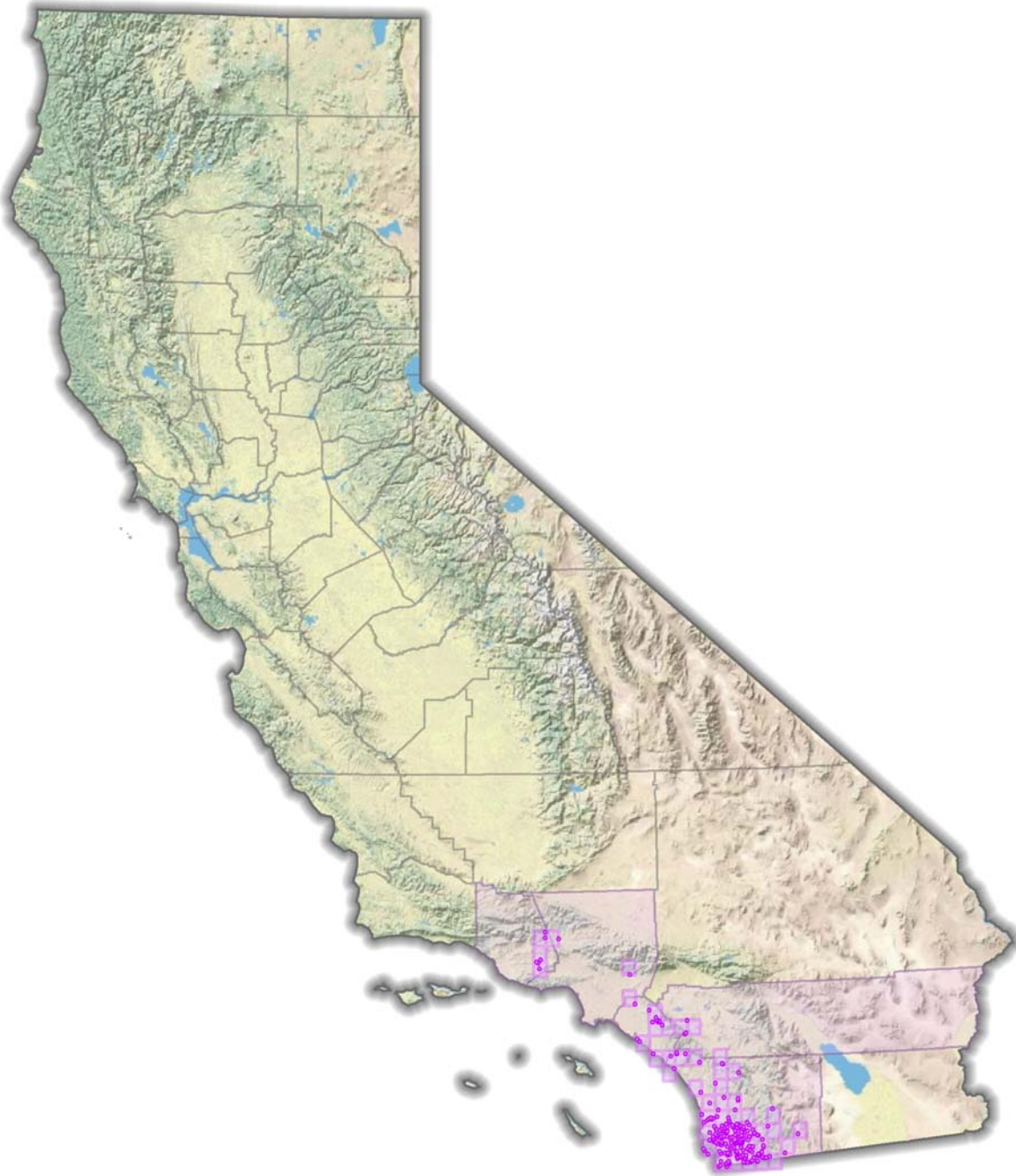
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## Appendix I - Maps



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Map 1. Distribution of *Viguiera laciniata* / *Bahiopsis laciniata* in California based on GBIF (2016) data.