

**Considered But Rejected on September 6, 2011****Rare Plant Status Review: *Cuscuta veatchii*****Proposed New Add to CA Rare Plant Rank 2.1, G4 / SH**

Danny Slakey (CNPS), Aaron Sims (CNPS), and Roxanne Bittman (CNDDDB)

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**Background**

*Cuscuta veatchii* is an annual parasitic vine in the Convolvulaceae (formerly Cuscutaceae) known from Baja California and three localities in Southern California. It was included as a synonym of *C. denticulata* in *The Jepson Manual, First Edition*, but will be included in the second edition as *C. veatchii*, as a taxon extirpated from California (available online at:

[http://ucjeps.berkeley.edu/tjm2/review/treatments/convolvulaceae\\_all.html#21435](http://ucjeps.berkeley.edu/tjm2/review/treatments/convolvulaceae_all.html#21435)). It was considered a synonym of both *C. nevadensis* and *C. denticulata* var. *veatchii* in Beliz (1986; not seen), the USDA Plants Database, and NatureServe. Some sources have mistakenly spelled the name *C. denticulata* var. *vetchii* or *C. vetchii* (Jepson Interchange 2011). Costea et al. (2005) showed that *C. veatchii* is unique from two closely related taxa, *Cuscuta denticulata* and *Cuscuta nevadensis*, based on morphological analyses. *Cuscuta veatchii* is distinguished from *C. denticulata* by its umbellate cymes, as well as acute to acuminate floral buds and calyx lobe apices. It is distinguished from *C. nevadensis* by its relatively short flowers, corolla tubes, and anthers, among other characters. *Cuscuta veatchii* has a narrow geographic range disjunct from the other two species, further separating it out as a unique taxon (Costea et al. 2005). The species is known to flower from March to October, but sometimes as late as December (Costea et al. 2005; *The Jepson Manual, Second Edition*).

*Cuscuta veatchii* is found in Sonoran and Mojavean desert scrub, and is specific to its host plants, which are members of the genera *Bursera* and *Pachycormus*, both stem-succulent trees (Costea et al. 2005; *The Jepson Manual, Second Edition*). *The Jepson Manual, Second Edition* notes that it occurs from 500 to 1400 meters (this data is presumably from Baja California collections, as collection data from California are too vague).

*Cuscuta veatchii* is known from three historic occurrences in California: in San Bernardino, San Diego, and Inyo counties. Collection dates are unknown, but two of the collections were made before 1921, and the Inyo collection was made at least prior to 1986.

NatureServe has ranked *Cuscuta denticulata* var. *vetchii* (sic), but it is considered synonymous with both *C. nevadensis* and *C. vetchii* (sic) by that source. Therefore, new G ranks should be applied to both *C. nevadensis* and *C. veatchii* to reflect the taxonomic changes outlined by Costea et al. (2005). Outside of California, *C. veatchii* is only known from Baja California, where it is very common in parts of the Central Desert and the northern Vizcaino Desert (J. Rebman pers. comm. 2011; Wiggins 1980; *The Jepson Manual, Second Edition*).

Although all occurrences of *C. veatchii* in California are more than 20 years old, it may be premature to consider it extirpated from California; *Cuscuta* spp. are infrequently surveyed and collected, so *C. veatchii* should be searched for on populations of its host taxa (M. Costea pers. comm. 2011).

Threats to *C. veatchii* are unknown, but given its limited distribution in California and host specificity, it should be considered of conservation concern. Both of these factors make *C. veatchii* more sensitive than generalist parasites (Costea and Stefanović 2009).

### **Recommended Actions**

CNPS: Add to CNPS 2.1

CNDDDB: Add to CNDDDB G4 / SH

Please review the draft CNPS Inventory record below, respond Yes or No on the proposal to add this species to the Inventory and CNDDDB, and provide any edits/comments. If responding No, please provide supporting information.

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### **Draft CNPS Inventory Record**

*Cuscuta veatchii* Brandegees

Veatch's dodder

Convolvulaceae

CA Rare Plant Rank 2.1

Inyo(?), San Bernardino(?), San Diego(?); Baja California

Needles (172D)(?) 3411475

Sonoran desert scrub, Mojavean desert scrub; elevation 400-1500 meters

Annual parasitic vine. Blooms Mar-Oct (Nov-Dec).

Known from fewer than five historic occurrences; need field surveys. Occurs on *Bursera* and *Pachycormus* spp., both stem-succulent trees. Similar to *C. denticulata* and *C. nevadensis*. See *C. denticulata* in *The Jepson Manual* (1993). Treated as extirpated in *TJM* 2. See *Proceedings of the California Academy of Sciences* 2(2):189 (1889) for original description and *Brittonia* 57(3):264-272 (2005) for taxonomic treatment.