

Added to CRPR 1A of the CNPS Inventory on November 27, 2012

Rare plant Status Review: *Castilleja leschkeana*

Proposed Re-addition to Rank 1A, GH / SH

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Background

Castilleja leschkeana is a perennial hemiparasitic herb in the Orobanchaceae family that is only known from the Point Reyes Peninsula and may be extinct. It was included as presumed extinct in the CNPS Inventory from the 1st through 4th editions, but was rejected from the 5th and 6th editions due to its synonymy with *Castilleja chrymactis*. In *The Jepson Manual* (TJM 1993), it is treated as a synonym of *C. chrymactis*, a coastal species from Alaska. The plant at Point Reyes was thought to be accidentally introduced, explaining the large disjunction (TJM 1993). *The Jepson Manual, Second Edition* (TJM 2) treatment ignores the plant from Point Reyes, noting that the name *C. chrymactis* was misapplied in TJM (1993), and that it belongs to another taxon that was not indicated (Jepson Interchange 2012). The *Flora of North America* treatment for Orobanchaceae is not yet available, but *C. leschkeana* will be recognized as a distinct species in it (A. Tomaino pers. comm. 2010). In the original description, Howell (1948) noted that *C. leschkeana* is similar to *C. miniata* (a widespread plant in California), but it differs from the latter in that it has different floral morphology and a “peculiar subcinereous pubescence” on the upper leaves and floral bracts. Egger (2010) believes that *C. leschkeana* is not within the *C. miniata* complex. He also describes how *C. leschkeana* differs from *C. chrymactis*: the former has shorter flowers, shorter bracts and bract lobes, and different types of hairs on the bracts when compared to *C. chrymactis*. Although taxonomic comparisons are difficult with only a single specimen, Egger (2010) feels that *C. leschkeana* may actually be more closely-related to *C. affinis* and *C. wightii*, which occur in the local area. *Castilleja leschkeana* has only been observed flowering in June, but the flowering season could extend into other months.

Castilleja leschkeana has only been observed growing in marshes and swamps, in particular from “swampy ground behind the dunes” at Point Reyes (Howell 1948). A single specimen of *Castilleja miniata* was collected from a similar habitat in San Francisco in 1861 (*Bolander* UC26523), but otherwise, no other *Castilleja* spp. from the region grow in swampy ground (Heckard 1977; Consortium of California Herbaria, CCH, 2012). Based on the habitat description provided by Howell (1948), we estimated that *C. leschkeana* grows between 0 and 10 meters in elevation.

A single plant was discovered at Point Reyes by J.T. Howell in 1947, and this served as the type specimen for its original description by Howell in 1948. A similar plant, collected by H. MacGavin in ca. 1969 along the road to McClure’s Beach (although other accounts indicate 1960), was brought to a flower show and photographed, but it was not preserved; it may also have been *C. leschkeana* (Egger 2010, Heckard 1977, D. Smith pers. comm. 2012). *Castilleja leschkeana* may be extinct, as M. Egger (2010) and other botanists have searched for it unsuccessfully for decades (D. Smith, S.

Minnick pers. comm. 2012). However, the extensive rough terrain along the coast at Point Reyes could have kept the plant hidden from botanists, so it could potentially be re-discovered (Egger 2010).

Based on the available information, CNPS and CNDDDB recommend re-adding *C. leschkeana* to California Rare Plant Rank 1A of the CNPS Inventory. If *C. leschkeana* is re-discovered, or if more information becomes available regarding its taxonomy, CNPS and CNDDDB will re-evaluate its status at that time.

Recommended Changes:

CNPS: Add *Castilleja leschkeana* to California Rare Plant Rank 1A

CNDDDB: Add *Castilleja leschkeana* to GH / SH

Draft CNPS Inventory Record

Castilleja leschkeana J.T. Howell

Point Reyes paintbrush

Orobanchaceae

Rank 1A

Marin

Tomales (485B) 3812228, Drakes Bay (485C) 3812218

Marshes and swamps (coastal); elevation 0 – 10 meters.

Perennial hemiparasitic herb. Blooms June.

Known only from a single plant at Pt. Reyes NS from 1947; a similar plant was collected along the road to McClure's Beach in the 1960s, but was not preserved for verification.

Suitable habitat exists, but re-discovery attempts have been unsuccessful; needs field surveys. Similar to *C. affinis* and *C. wightii*, but occurs in different habitat. A synonym of *C. chrymactis* in *TJM* (1993); name misapplied. Not in *TJM 2*. See *Leaflets of Western Botany* 5(5):91-92 (1948) for original description.