

**Added to CNPS Inventory on July 5, 2011**

**Rare Plant Status Review: *Boechea tularensis***

**Proposed New Add to Rank 1B.2 3, G2 / S2**

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May 4, 2011

Changes made to original document appear in blue text.

**Background**

*Boechea tularensis* is a perennial herb in the Brassicaceae known from the high southern Sierra's. It is included in the *Flora of North America* (Volume 7), and will be included in *The Jepson Manual, Second Edition* (available online at: [http://ucjeps.berkeley.edu/tjm2/review/treatments/brassicaceae\\_all.html#85439](http://ucjeps.berkeley.edu/tjm2/review/treatments/brassicaceae_all.html#85439)). *Boechea tularensis* was previously identified as *Arabis holboellii* var. *retrofracta* (*Boechea retrofracta*) or var. *pinetorum* (*Boechea pinetorum*). Windham and Al-Shehbaz (2007) propose that *B. tularensis* is an apomictic triploid species that clearly shares *retrofracta* and *rectissima* genomes with *B. pinetorum*, along with a third genome derived from *B. stricta*. *Boechea tularensis* differs from the sexual diploid *B. retrofracta* and apomictic triploid *B. pinetorum* by having proximally pubescent stems with subsessile, 2-rayed trichomes and longer, subbiseriate seeds. It also differs from *B. retrofracta* by having pubescent basal leaves with larger, less-branched trichomes and descending to reflexed fruits that are not appressed at maturity; and differs from *B. pinetorum* in having pubescent leaves with subsessile trichomes, glabrous fruiting pedicels, and wider fruits. *Boechea tularensis* is known to flower from June to July.

*Boechea tularensis* occurs along rocky slopes of upper montane and subalpine coniferous forest. It grows at an approximate elevation of 1,825 to 3,350 meters.

*Boechea tularensis* is known from approximately 28 ~~27~~ occurrences in the southeastern Sierra Nevada's; mostly within Fresno and Tulare counties. It was last documented in July of 1996 in the Kings River Basin, Fresno County (*Dana York 1157* CAS1031754), and all other known records are historic (occurrences that have not been "seen" in the past 20 years are considered historic by the CNDDDB). One collection near Emerald Bay, Lake Tahoe, from 1930 (*Wiggins 5077* DS191872) represents a disjunct northern occurrence, **however, the area has intact habitat in State Parks that is underlain by granitic rocks, and the occurrence should not be considered extirpated (D. Taylor pers. comm. 2011)** ~~that may be extirpated~~. Future surveys throughout the known range of *B. tularensis* should be conducted in attempts to update historic records, in addition to potentially discovering new populations.

Threats to *Boechea tularensis* are unknown.

### Recommended Actions

CNPS: Add to CNPS 1B.2 3

CNDDDB: Add to CNDDDB G2 / S2

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

*Boechera tularensis* Windham & Al-Shehbaz

Tulare rockcress

Brassicaceae

Rank 1B.2 3

El Dorado(?), Fresno, Inyo, Madera, Mariposa, Mono, Tulare  
Courtright Reservoir (395C) 3711818, Dogtooth Peak (396A) 3711921, El  
Capitan (437B) 3711966, Emerald Bay (523A) 3812081(?), Half Dome (437A)  
3711965, Kern Peak (330D) 3611833, Lundy (470C) 3811912, Mineral King  
(331A) 3611845, Monache Mountain (306B) 3611822, Mt. Abbot (415A)  
3711847, Mt. Darwin (394B) 3711826, Slide Bluffs (374B) 3611886, Templeton  
Mtn. (329C) 3611832

Subalpine coniferous forest, Upper montane coniferous forest/Rocky slopes;  
elevation 1825 to 3350 meters.

Perennial herb. Blooms Jun-Jul.

Historical occurrences need field surveys. Similar to *B. pinetorum* and *B. retrofracta*. See *Harvard Papers in Botany* 12(1):235-257 (2007) for original description.