

**Added to California Rare Plant Rank 2.3 on August 20, 2012****Rare Plant Status Review: *Artemisia tripartita* ssp. *tripartita*  
Proposed New Add to Rank 2.3, G5T3T5 / S2**

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Changes made to the original document appear in blue text.

**Background**

*Artemisia tripartita* ssp. *tripartita* is a perennial shrub in the Asteraceae known mostly throughout the Snake River and Columbia River basins, extending north through central British Columbia. It was first discovered in California in the early 2000's by Adrian Juncosa, who sent a specimen for verification to L. Shultz (*The Jepson Manual, Second Edition* and *Flora of North America* treatment author for *Artemisia*) in 2011. Shultz (pers. comm. 2011 and 2012) verified the plant as *A. tripartita* ssp. *tripartita*, and is confident in her determination. *Artemisia tripartita* ssp. *tripartita* is included in *Flora of North America*, Vol. 19 (*FNA*; available online at: [http://www.efloras.org/florataxon.aspx?flora\\_id=1&taxon\\_id=250068080](http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=250068080)), but was unknown from California until after the *Artemisia* manuscript was submitted for publication in *The Jepson Manual, Second Edition (TJM 2)*, and is therefore not included thereof. *Artemisia tripartita* ssp. *tripartita* was originally described by Nuttall (1841) as *A. trifida*, was later treated by Rydberg (1900) as *A. tripartita*, and holds numerous other synonyms that were ascribed thereafter. It is similar to *A. tridentata*, but is typically smaller (20-150(-200) cm vs. 40-200(-300) cm tall), with longer leaves (1.5-4 cm vs. 0.5-3.5 cm) and longer, narrower leaf lobes (lobes 1/3+ blade lengths, linear to 0.5 mm wide vs. lobes 1/3 blade lengths, 1.5+ mm wide, rounded; *FNA*). *Artemisia tripartita* ssp. *tripartita* can also be differentiated from *A. tridentata* in sometimes having leaf lobes that are 3-cleft (Abrams 1960, Hitchcock et al. 1964, Cronquist et al. 1972, Hitchcock and Cronquist 1973), appearing to have 5 to 7 or even 9 leaf lobes instead of 3 (A. Juncosa pers. comm. 2012). *Artemisia tripartita* ssp. *tripartita* is also similar to *A. rigida* when reviewing herbarium material, however, *A. rigida* is not known from California and these taxa are also not suspected to hybridize (Cronquist et al. 1972).

On the other hand, hybridization of *A. tripartita* ssp. *tripartita* with other members of the *A. tridentata* complex is quite evident, as seen with *A. tridentata* ssp. *wyomingensis* in Clark County, Idaho (Cronquist et al. 1972), and with *A. tridentata* ssp. *vaseyana* in California (A. Juncosa pers. comm. 2012). *Artemisia tripartita* ssp. *tripartita* may also be one of the parents in the presumed hybrid origin of *A. arbuscula* ssp. *thermopola* (*FNA*), a taxon that was previously thought to occur in California and was included in *The Jepson Manual* (1993), but later found to be a misidentification (*TJM 2*). This has led to some confusion with the identification of *A. tripartita* ssp. *tripartita* from California; when trying to key *A. tripartita* ssp. *tripartita* in *The Jepson Manual* (1993), it can lead one to *A. arbuscula* ssp. *thermopola*, which may have led others to misidentifications in the past (A. Juncosa pers. comm. 2012). Further confusion lies in a herbarium record of *A.*

*tripartita* (L. Ahart 8957, JEPS102624) that may actually be *A. arbuscula* ssp. *thermopola*, as well as records of *A. arbuscula* ssp. *thermopola* currently in the Consortium of California Herbaria (CCH 2012) that may actually be correctly identified as *A. arbuscula* ssp. *thermopola*. These records were unknown to the *TJM 2* treatment author prior to publication, and after recent analysis, *A. arbuscula* ssp. *thermopola* may actually occur in California after all, however, its occurrence in California should be recognized as unconfirmed until further review of herbarium specimens and field work can be completed (L. Shultz pers. comm. 2012). *Artemisia tripartita* ssp. *tripartita* flowers outside of California from July through September (Abrams 1960, Hitchcock et al. 1964), but has only been observed flowering in California in August (A. Juncosa pers. comm. 2012).

In California, *Artemisia tripartita* ssp. *tripartita* occurs in arid, wind swept montane slopes in shrubland openings of upper montane coniferous forest; growing in rocky, volcanic soil at an approximate elevation of 2,200 to 2,600 meters (A. Juncosa pers. comm. 2012). Outside of the state it is known from dry plains and hills (Abrams 1960); occurring in deep loam soils that are usually igneous in origin, at an approximate elevation of 900 to 1,900 meters (FNA). It is also often in somewhat moister or more favorable sites, or at higher elevations than typical *A. tridentata* (Hitchcock et al. 1964).

*Artemisia tripartita* ssp. *tripartita* is currently known from only ~~three~~ **four** occurrences in California; at Ward Peak and Sawtooth Ridge in Placer County, ~~and~~ at western Castle Peak in Nevada County (A. Juncosa pers. comm. 2012), **and along the Diamond Mountains crest in Plumas County (D. Lepley pers. comm. 2012)**. All of the occurrences have been documented in the past 20 years (occurrences not seen in 20 years are considered historical by the CNDDDB). It is known from the Tahoe National Forest, private property (ski resorts), and from the Lake Tahoe Basin Management Unit. When initially reported, the records of *A. tripartita* ssp. *tripartita* from California were thought to possibly be relicts from former revegetation sites. Reclamation sites often get seed from sources that are not verifiable, and the populations could potentially be waifs (L. Shultz pers. comm. 2012). This hypothesis, however, is highly unlikely for a number of reasons. The Sawtooth Ridge and Castle Peak occurrences of *A. tripartita* ssp. *tripartita* are mostly in complete wilderness, with the Sawtooth occurrence having a ski development area further down slope, but not in the vicinity of the plants. At the Ward Peak occurrence there has been some soil stabilization in the past, but no woody plants were used; furthermore, any past revegetation would not have included *Artemisia* seed, especially not seed that had been grown within the Great Basin where *A. tripartita* ssp. *tripartita* could have blown in. Lastly, the **three sites in Placer and Nevada counties** are very similar ecologically; in arid montane slopes with volcanic, rocky soils and rather difficult growing conditions. On the contrary, with more detailed studies (perhaps involving a DNA analysis), these highly disjunct occurrences of *A. tripartita* ssp. *tripartita* may turn out to be an undescribed subspecific taxon (A. Juncosa pers. comm. 2012).

*Artemisia tripartita* ssp. *tripartita* is ranked S1? (Critically Imperiled) in Wyoming and S4 (Apparently Secure) in British Columbia, and is unranked in other states by NatureServe (2012). Due to its similarity to common *A. tridentata*, it is likely that *A. tripartita* ssp.

*tripartita* has been overlooked for many years. Additional occurrences throughout the northern Sierra Nevada, particularly within the Lake Tahoe Basin area, are expected.

Threats to *Artemisia tripartita* ssp. *tripartita* are currently low. One of its occurrences lies within the Lake Tahoe Watershed, and since the Tahoe Regional Planning Agency (TRPA) is currently in the process of updating their regional plan, the TRPA should be sure to include *A. tripartita* ssp. *tripartita*, which is presently not represented in their plan (Ascent Environmental, Inc. 2012). With two of its occurrences near existing ski areas, *A. tripartita* ssp. *tripartita* is potentially threatened by ski area development and maintenance. However, the occurrences should be easily avoidable once known. One of the occurrences of *A. tripartita* ssp. *tripartita* is within habitat that crosses a very popular trail, but the trail has been used for decades and the plants still remain intact, and are therefore not expected to be threatened by foot traffic (*A. Juncosa* pers. comm. 2012).

Based on the available information, CNPS and CNDDDB recommend that *Artemisia tripartita* ssp. *tripartita* be added to California Rare Plant Rank 2.3. If current records in California are later found to be an under-representation of its actual distribution and frequency, it will be re-evaluated by CNPS at that time.

### Recommended Actions

CNPS: Add to CNPS 2.3

CNDDDB: Add to CNDDDB G5T3T5 / 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.

### Draft CNPS Inventory Record

*Artemisia tripartita* Rydberg ssp. *tripartita*

threetip sagebrush

Asteraceae

Rank 2.3

Colorado, Idaho, Montana, Nevada, New York, Oregon, Utah, Washington, Wyoming  
Placer, Nevada, [Plumas](#)

[Diamond Mtn. \(622C\) 4012036](#), Tahoe City (538B) 3912022, Truckee (554C) 3912032,  
Norden (555D) 3912033.

Upper montane coniferous forest (openings) / rocky, volcanic; elevation 2200 – 2600 meters.

Perennial shrub. Blooms August.

Potentially threatened by ski area development and maintenance. Similar to *A. tridentata*; hybridizes with *A. tridentata* ssp. *vaseyana*. Keyable to *A. arbuscula* ssp. *thermopola* in *TJM* (1993); not in *TJM* 2. See *Transactions of the American Philosophical Society* II 7:398 (1841) for original description and *Memoirs of the New York Botanical Garden* 1:432 (1900) for taxonomic treatment.