

Added to List 2.1 on October 28, 2010

Rare Plant Status Review: *Mentzelia tricuspis*

Proposed New Add to List 2.2 1

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September 22, 2010

Changes made since original document are in blue.

Background

Mentzelia tricuspis is an herbaceous annual in the Loasaceae. It is included in the *Jepson Manual* (1993) and will be included in the *Jepson Manual*, 2nd Edition (<http://ucjeps.berkeley.edu/tjm2/review/treatments/loasaceae.html#33292>). An inconsistent form of *M. tricuspis* in the Mojave Desert having rounded, reduced lobes on the outer stamens was referenced in the past as *Acrolasia tridentata* and *M. tricuspis* var. *brevicornuta* (Shreve and Wiggins 1964). Both of the aforementioned taxa are now treated as a synonym of *M. tridentata*.

Twisselmann (1995) referenced *M. tricuspis* var. *brevicornuta* as “known from the mud hills in upper Red Rock Canyon”. It is likely that currently unknown whether Twisselmann was referring to the inconsistent form of *M. tridentata* rather than or to *M. tricuspis*, as both taxa have been referenced to occur in Red Rock Canyon as the latter has been searched for with no resolve, while *M. tridentata* is known to occur rarely in this area (D. Silverman pers. comm. 2010). This vague, potentially additional occurrence is therefore currently not recognized until further information is available. *Mentzelia tricuspis* differs from *M. tridentata* by having seeds that are narrowed at the middle and anther stalks between filament lobes that are generally smaller in size than the lobes themselves. Although *Mentzelia tricuspis* has been referenced to occur in the Sonoran Desert (Jepson 1993; Jepson 2nd Edition) and the Lower Sonoran Zone of California (Abrams 1951; Shreve and Wiggins 1964), it is only known from one voucher in this area (JEPS2647; J. Andre pers. comm. 2010), which should be re-annotated to *M. hirsutissima* (D. Silverman pers. comm. 2010). Therefore, it is likely that *M. tricuspis* is restricted to the Mojave Desert in California. ~~*Mentzelia tricuspis* also occurs in the Sonoran Desert in addition to the Mojave Desert of California whereas *M. tridentata* is restricted to the Mojave Desert alone. *Mentzelia tricuspis* flowers between March and May.~~

Mentzelia tricuspis typically grows in sandy and/or gravelly slopes and washes within Mojave and Sonoran Desert scrub habitats from approximately 150 to 1280 meters in elevation.

In California, *M. tricuspis* is known from approximately 16 22 occurrences in the eastern Sonora and southeastern Mojave Desert within Kern, Imperial, Inyo, Riverside, and San Bernardino Counties. Of the 16 22 known occurrences, only 1 has 2 have been documented in the last 20 years (occurrences that have not been “seen” in the past 20 years are considered historic by the CNDDDB), and at least 9 43 are represented by herbarium specimens more than 50 years old (with

only 2 known vouchers from Riverside County that are both over 120 years old). Suitable habitat within and beyond the known range of *M. tricuspis* in California should be searched for additional occurrences. *Mentzelia tricuspis* is ranked as a G4 taxon (apparently secure) by NatureServe. Outside of California, *M. tricuspis* occurs in Arizona, Nevada (where it is unranked, SNR) and Utah (where it is ranked as critically imperiled, S1).

Mentzelia tricuspis is possibly threatened by renewable energy development projects.

Based on this information CNPS and CNDDDB recommend that *M. tricuspis* be added to CNPS List 2.2 [1](#).

Recommended Actions

CNPS: Add to CNPS List 2.2 [1](#)

CNDDDB: Add to CNDDDB as G4 / S2 [1](#)

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

Mentzelia tricuspis A. Gray

Spiny-hair blazing star

Loasaceae

List 2.2 [1](#)

~~Imperial, Inyo, Kern, Riverside?, San Bernardino; Arizona, Nevada, Utah
In-Ko-Pah Gorge (007A) 321166, Cantil (235C) 3511738, Needles (172D)
3411475, Flattop Mtn. (173D) 3411477, Bannock (173A) 3411487, Yermo (181A)
3411687, Daggett (181C) 3411678~~

~~SDSer, MDScr / sandy, gravelly, slopes, washes; elevation 150-1280 meters.~~

~~Herbaceous annual. Blooms Mar-May.~~

~~Possibly threatened by renewable energy development.~~