Rare Plant Status Review: *Mentzelia tricuspis*
Proposed New Add to List 2.2
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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 CNDDB), 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 CNDDB recommend that *M. tricuspis* be added to CNPS List 2.2 1.

**Recommended Actions**
- CNPS: Add to CNPS List 2.2 1
- CNDDB: Add to CNDDB 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 CNDDB, 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  
SDScr, MDScr / sandy, gravelly, slopes, washes; elevation 150-1280 meters.  
Herbaceous annual. Blooms Mar-May.  
Possibly threatened by renewable energy development.