Element Code: ?

Added to California Rare Plant Rank 2.1 on August 17, 2011

Rare Plant Status Review: *Calyptridium arizonicum*
Proposed New Add to Rank 2.1, G2G3 / S1

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Background

Calyptridium arizonicum is an annual herb in the Montiaceae (formerly Portulacaceae) family that was previously known only from Arizona and northwestern Mexico. It was discovered in 2004 in Anza Borrego Desert State Park in San Diego County, California, by Larry Hendrickson, and will be included in *The Jepson Manual, Second Edition* as *Calyptridium parryi var. arizonicum* (available online at http://ucjeps.berkeley.edu/tjm2/review/treatments/montiaceae.html#55521). It was not included in *The Jepson Manual* (1993). It differs from three varieties and another variant of *Calyptridium parryi* (var. *hesseae*, var. *nevadense*, var. *parryi*, and "martirense") in that it has smooth, large (0.7-0.8 mm) seeds (Simpson et al. 2010). Previously treated as *C. parryi* var. *arizonicum*, *C. arizonicum* was determined to be a separate species based on morphological analyses, as recent genetic analyses could not define clear relationships among several *Calyptridium* species (Simpson et al. 2010). *Calyptridium arizonicum* has been observed flowering in California in March and April, but is known to flower from February to May in Arizona (Bair et al. 2006).

In California and throughout its range, *Calyptridium arizonicum* occurs in washes and on coarse, well-drained soils of Sonoran Desert scrub (*The Jepson Manual, Second Edition*; Bair et al. 2006). The California occurrences were found at elevations between 610 and 790m, while the plant is found between 800 and 1300 meters in Arizona (Bair et al. 2006).

Within California, *Calyptridium arizonicum* is known only from two occurrences in Anza Borrego Desert State Park: vicinity of the North Pinyon Mountains (SD159960, SD186004), in Plum Canyon and a nearby minor tributary wash (CCH 2011). Efforts to re-locate populations of this annual species in subsequent years have been unsuccessful. However, this should not be taken as evidence of extirpation, as desert annuals often migrate, and may not appear in certain years (Larry Hendrickson pers. comm. 2011). *Calyptridium arizonicum* may be more common in the North Pinyon Mountains than is currently known and there have been no attempts to map its distribution or abundance in that region (Larry Hendrickson pers. comm. 2011). Future surveys should be conducted for *C. arizonicum* in the North Pinyon Mountains and on other high desert mountains throughout San Diego County.

Calyptridium parryi is threatened by recreational activities in Anza Borrego Desert State Park. The Plum Canyon area is accessible by an unpaved access road.

Sent to ES/D, L. Hendrickson, K. Dice, S. McLaughlin, E. Hollenbeck, M. McDonald on 07/12/2011

The area is also used for primitive camping, and the main wash contains a high use trail used by hikers and equestrian riders. Therefore, *C. arizonicum* is potentially at risk of being trampled by recreational users of the park (Larry Hendrickson pers. comm. 2011).

Recommended Actions
CNPS: Add to CNPS 2.1
CNDDB: Add to CNDDB G2G3 / S1

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
Calyptridium arizonicum (J.T. Howell) M.G. Simpson, M. Silveira & Guilliams
Arizona pussypaws
Montiaceae
Synonyms: *Cistanthe parryi var. arizonica, Calyptridium parryi var. arizonicum*
Rank 2.1
San Diego
Arizona; Baja California, Sonora, Mexico
Earthquake Valley (032C) 3311614
Sonoran Desert scrub/metamorphic, washes; elevation 610-790 meters.
Annual herb. Blooms Mar-Apr.
Discovered in CA in 2004; known in CA from fewer than 5 occurrences in the vicinity of the North Pinyon Mtns. in Anza-Borrego Desert SP. Threatened by vehicles. Potentially threatened by foot traffic and recreational activities. Not in *The Jepson Manual* (1993). See *C. parryi* var. *arizonicum* in *TJM* 2. See *Leaflets of Western Botany* 4(8):214-216 (1945) for original description, and *Madroño* 57(3):145-160 (2010) for taxonomic treatment.