

Rare Plant Status Review: *Pentachaeta aurea* ssp. *allenii*
Nicholas Jensen (CNPS) and Roxanne Bittman (CNDDDB)
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Background

Pentachaeta aurea ssp. *allenii* is an annual herb in the Asteraceae. This taxon was recently described by David Keil in the *Madroño* 54 (4): 343-344 (2007). Although not included in the current *Jepson Manual* (1993), *P. aurea* ssp. *allenii* will be included in the upcoming edition. The lamina tips on the ray corollas of living plants of *P. aurea* ssp. *allenii* turn bright white after being exposed to 1-2 hours of direct sunlight. In contrast, the lamina tips of ray corollas in *P. aurea* ssp. *aurea* fail to change color when exposed to sunlight. All other characters exhibited by *P. aurea* ssp. *allenii* appear to fall within the normal range of variability of *P. aurea*.

P. aurea ssp. *allenii* is known from approximately 14 occurrences in southwestern Orange County. The occurrence of *P. aurea* at Horseshoe Bend along the Santa Ana River may represent an additional population of *P. aurea* ssp. *allenii*, but its identification to subspecies needs to be verified. At this time little information about the demographics of any of the populations of *P. aurea* ssp. *allenii* is available.

P. aurea ssp. *allenii* grows on a wide range of soils in grasslands and openings within coastal scrub between 75-520 meters in elevation.

The type locality of *P. aurea* ssp. *allenii* at Lomas de Santiago is within Limestone Canyon Wilderness Park and is managed by The Nature Conservancy. Although David Keil's description of the taxon in *Madroño* 54(4) indicates that the population at Dana Point was likely extirpated, Fred Roberts (pers. comm. 2008) states that the population was actually conserved. Three occurrences of *P. aurea* ssp. *allenii* have likely been extirpated, primarily due to urbanization. The status of a number of the populations of this taxon (including those located in Sierra Canyon, Sycamore Canyon, and Trabuco Canyon) needs to be verified. Attempts should be made to locate additional populations of *P. aurea* ssp. *allenii* in areas with suitable habitat in Orange County.

The habitat of *P. aurea* ssp. *allenii* is highly threatened by ongoing and proposed development in Orange County. Habitat alteration, in the form of the management activities that promote the loss of the openings within coastal scrub preferred by this taxon, and off road vehicle use are threats at the Dana Point population and possibly others (F. Roberts, pers. comm. 2008). Other populations occur in grassland habitats dominated by introduced Mediterranean grasses (D. Keil 2007). Consequently, *P. aurea* ssp. *allenii* may be threatened by competition from non-native plants.

Based on the available information the CNPS and CNDDDB recommend that *Pentachaeta aurea* ssp. *allenii* be added to List 1B.1.

Recommended Actions

CNPS: Add to CNPS List 1B.1

CNDDDB: Add to CNDDDB as G4T2 / 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

Pentachaeta aurea Nutt. ssp. *allenii* Keil

white-tipped pentachaeta

Asteraceae

List 1B.1

Orange

052B [3311746/Dana Point], 071D [3311757/Laguna Beach], 070B [3311766 /El Toro], 087C [3311776/Black Star Canyon], 070A [3311765/Santiago Peak]

Valley and foothill grasslands, coastal scrub (openings); elevation 75-520 meters.

Annual herb, blooms March-June

Known from fewer than 20 occurrences. Threatened by development, habitat alteration, and vehicles. Possibly threatened by non-native plants. Not in *The Jepson Manual* (1993). See *Madroño* 55 (4): 343-344 (2007) for original description.