

**Added to California Rare Plant Rank 2B.1 of the CNPS Inventory on  
August 28, 2013**

**Rare Plant Status Review: *Panicum hirticaule* ssp. *hirticaule***

**Proposed New Add to Rank 2B.1, G5T5 / S1**

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Changes made to the original document appear in blue text.

**Background**

*Panicum hirticaule* subsp. *hirticaule* is an annual herb in the Poaceae that is known from the deserts of California, east to Texas and south to Mexico and South America. It is included in *The Jepson Manual, Second Edition* (Freckmann and Webster 2012; available online at: [http://ucjeps.berkeley.edu/cgi-bin/get\\_IJM.pl?tid=85303](http://ucjeps.berkeley.edu/cgi-bin/get_IJM.pl?tid=85303)) and *Flora of North America, Vol. 25* (Freckmann and Lelong 2003). *Panicum hirticaule* subsp. *hirticaule* is similar to *P. miliaceum* subsp. *miliaceum* (naturalized in California) and *P. capillare* (native to California). It differs from *P. miliaceum* subsp. *miliaceum* in having a spikelet that is less than 4 mm (vs. greater than 4 mm), an open (vs. closed) panicle, and spikelets that are mostly well separated (vs. spikelets in overlapping clusters). *Panicum hirticaule* subsp. *hirticaule* differs from *P. capillare* in having lower palea present (vs. no lower palea present), and in generally having paired crescent-shaped scars on the base of its upper floret (vs. no paired crescent-shaped scars on base of upper floret) (Freckmann and Webster 2012). *Panicum hirticaule* subsp. *hirticaule* is known to flower from August to December (Freckmann and Webster 2012), but most commonly flowers from September to October (CCH 2013).

*Panicum hirticaule* subsp. *hirticaule* occurs in many desert habitats, including desert dunes, creosote bush scrub, Sonoran Desert scrub, and Joshua tree woodland. Its most common associates include *Larrea tridentata* and *Hoffmannseggia densiflora*, and it grows in sandy soils and silty depressions. In California, *P. hirticaule* subsp. *hirticaule* is known from an approximate elevation of 45 to 1315 meters (CCH 2013; SEINet 2013).

*Panicum hirticaule* subsp. *hirticaule* is known from approximately ten occurrences in California; from Mojave, Colorado, and Sonoran deserts of Imperial, Riverside, and San Bernardino counties. It is mostly documented from approximately 18 to 24 miles west of Blythe along Interstate 10 in Riverside County. Half of its occurrences are on lands owned by the Bureau of Land Management, and the remaining occurrences are in Joshua Tree National Park (two) and on lands with an unknown ownership (three). Half of its occurrences are also historical (occurrences not “seen” in the past twenty years are considered historical by the CNDDDB), and three are from herbarium records that are over 50 years old. A record in the Consortium of California Herbaria (CCH 2013) from Stanislaus County (*Crampton 3183, UCD88156*) is likely in error, as *P. hirticaule* subsp. *hirticaule* is well documented as a summer annual of California’s deserts (J. Andre pers. comm. 2012). Also, according to Jepson (1960), *P. hirticaule* is known from “Jamacha”

in San Diego County; however, this account is likely from a 1937 collection that was actually *P. capillare* (Gander 4361, POM229052).

In addition to the ten occurrences noted above, J. Andre (pers. comm. 2013) documented three small populations designating a single occurrence in the Castle Peaks/Barnwell region in the fall of 2012. It is also likely to be found following summer precipitation in places like the Piute Range, given an increased attention to surveying for summer annuals by botanists (J. Andre pers. comm. 2013).

*Panicum hirticaule* (not including subspecies) is ranked S1 in Texas and unranked in other states by NatureServe (2013). It is apparently uncommon in Nevada, where known from about four locations (SEINet 2013), though it could just be underrepresented in herbarium collections for this state. In the United States it is most common in Arizona, where known from over 400 collection records, and is fairly common in New Mexico, with over 100 records (SEINet 2013). *Panicum hirticaule* subsp. *hirticaule* is also apparently known from Oklahoma (NatureServe 2013; USDA 2013) and Washington (CPNWH 2013; NatureServe 2013; USDA 2013), as well as Idaho (Idaho Fish and Game 2013); however, its occurrence in these states should be verified as it is well documented as a desert annual from California to Texas, Mexico, and South America (Munz 1974; Wiggins 1980; Freckmann and Lelong 2003; Freckmann and Webster 2012). According to Hitchcock (1950) and Shreve and Wiggins (1964), *P. hirticaule* is also known from Arkansas, though we could not find any other sources that verify it as occurring in this state. It is possible that records of *P. hirticaule* from Arkansas, Idaho, Oklahoma, and Washington are actually misidentifications of *P. capillare*; a similar and common species that is known throughout the United States and Canada (NatureServe 2013; USDA 2013), and that previously had the misapplied name of *P. capillare* var. *hirticaule* (ITIS 2013; USDA 2013). We therefore intend not to include these states in the CNPS Inventory record for *P. hirticaule* subsp. *hirticaule* until/if its occurrence in these states can be verified with more recent documentation.

Most of the known occurrences of *P. hirticaule* subsp. *hirticaule* in California are threatened by solar and wind energy development as they are within existing and proposed project sites (J. Andre pers. comm. 2012; D. Bell pers. comm. 2012). Furthermore, *P. hirticaule* subsp. *hirticaule* occurs in a specific habitat of sandy soils and silty depressions, and a lot of its potential habitat is currently being bulldozed for energy development (D. Bell pers. comm. 2012). [The main area in which \*P. hirticaule\* subsp. \*hirticaule\* has been vouchered is proposed to be an industrial zone starting in the Chuckwalla Valley all the way to Blythe, and it is therefore indirectly threatened due to being on the edge of a developed area \(T. LaDoux pers. comm. 2013\).](#)

Based on the available information, CNPS and CNDDDB recommend adding *Panicum hirticaule* subsp. *hirticaule* to California Rare Plant Rank (CRPR) 2B.1 of the CNPS Inventory. Its magnitude and immediacy of threats, as well as historical status of half of its known occurrences, indicate that it should promptly be added to CRPR 2B.1 of the CNPS Inventory.

### Recommended Actions

CNPS: Add to CRPR 2B.1

CNDDDB: Add to CNDDDB G5T5 / S1

### Draft CNPS Inventory Record

*Panicum hirticaule* J. Presl ssp. *hirticaule*

roughstalk witch grass

Poaceae

CRPR 2B.1

Arizona, New Mexico, Nevada, Texas; Baja California; Sonora, Mexico; South America  
Imperial, Riverside, San Bernardino

Mammoth Wash (027B) 3311522, Araz (012C) 3211476, Clyde (013B) 3211488,  
Hopkins Well (059C) 3311458, Ford Dry Lake (060A) 3311561, East of Aztec Mines  
(060D) 3311551, Hayfield (062B) 3311566, San Bernardino Wash (079B) 3311586,  
Clarks Pass (100D) 3411515, Hart Peak (224D) 3511531, [Castle Peak \(224C\) 3511532](#)  
Desert dunes, Joshua tree "woodland", Mojavean desert scrub, Sonoran desert scrub /  
sandy, silty, depressions; elevation 45 to 1315 meters.

Annual herb. Blooms August to December.

Many occurrences historical; need field surveys. Seriously threatened by solar and  
wind energy development. [Threatened by urbanization](#). Similar to *P. capillare* and *P.*  
*miliaceum* ssp. *miliaceum*. See *Reliquiae Haenkeanae* 1(4–5):308 (1830) for original  
description.

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