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TWO NEW COMBINATIONS IN WESTERN NORTH AMERICAN ASTERACEAE

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ABSTRACT

Two new combinations that will be used in the second edition of The Jepson Manual are proposed for western North American Asteraceae: **Helianthus petiolaris** subsp. **canescens** and **Cirsium scariosum** var. **loncholepis**.

Key words: Asteraceae, *Cirsium*, *C. scariosum*, *Helianthus*, *H. petiolaris*, Jepson Manual, La Graciosa thistle, nomenclature, taxonomy.

In taxonomic treatments of *Helianthus* and *Cirsium* in the forthcoming second edition of The Jepson Manual (TJM2; B. G. Baldwin in prep.), the following names will be used.

Helianthus petiolaris Nutt. subsp. **canescens** (A.Gray) D.J.Keil, comb. nov.—TYPE: Texas. Western Texas to El Paso, New Mexico, 5 Sep 1849, *C. Wright* 335 (lectotype GH).

Basionym: *Helianthus petiolaris* Nutt. var. *canescens* A.Gray, *Smithsonian Contr. Knowl.* 3 (art. 5): 108 (1852).

In his treatment of *Helianthus petiolaris* for the Flora of North America North of Mexico, Schilling (2006: 152) noted that one of three subspecies “has yet to be named at that rank in *Helianthus petiolaris*; it has been called *H. petiolaris* var. *canescens* A.Gray.” This taxon was treated by Heiser et al. (1969) and Keil (1993) as *H. niveus* (Benth.) Brandegee subsp. *canescens* (A.Gray) Heiser. Schilling (2006: 152) noted that “molecular and morphologic data appear to favor a placement within *H. petiolaris*.” I plan to treat this taxon as a subspecies of *H. petiolaris* in the forthcoming second edition of The Jepson Manual, and I here establish the name at that rank. Subspecies *canescens* differs from the other two subspecies of *H. petiolaris* in its dense gray-canescens herbage and phyllaries.

Cirsium scariosum Nutt. var. **loncholepis** (Petr.) D.J.Keil, comb. et stat. nov.—TYPE: California. Santa Barbara Co.: near La Graciosa, 3 Jun 1906, *A. Eastwood* 859 (holotype CAS).

Basionym: *Cirsium loncholepis* Petr., *Beih. Bot. Centralbl.*, *Abt.* 2 35: 375 (1917).

Cirsium loncholepis (La Graciosa thistle) historically has been treated as a lowland, coastal wetland species endemic to southwestern San Luis Obispo and northwestern Santa Barbara counties, California (Petrak 1917; Howell 1960; Munz 1968; Hoover 1970; Smith 1976, 1998; Keil and Turner 1993). In my treatment of *Cirsium* for the Flora of North America (Keil 2004, 2006), I recognized a broadly defined and polymorphic *C. scariosum* with eight varieties that are widely distributed in western North America. I included *C. loncholepis* within *C. scariosum* var. *citrinum* (Petr.) D.J.Keil, a southern California race of this species.

Cirsium loncholepis was recognized in 1990 by the State of California as threatened and in 2000 by the U.S. Fish and Wildlife Service as endangered (California Native Plant

Society 2009). My decision to merge it into *C. scariosum* var. *citrinum* has been met with concern from conservationists, agency biologists, and land managers in that the plant has been perceived as a distinct entity. Submergence of *C. loncholepis* within *C. scariosum* var. *citrinum* called into question its conservation status.

The coastal populations (localized in the lower valley of the Santa Maria River) that comprised *C. loncholepis* strongly resemble the upland populations of *C. scariosum* that occur near the head of the Cuyama River in the Mount Abel-Mount Pinos area (the Cuyama River is a major tributary of the Santa Maria River). Few, if any, morphological features separate plants from these two populations. Ecologically, they differ in that the lowland plants exist in a nearly frost-free coastal area whereas the upland populations occur in meadows within a montane zone (1500–2000 m) and are subject to severe winter weather with frost. Coastal and montane populations are separated by about 150 km. No populations are known in intermediate areas. No studies have investigated the ability of coastal plants to live in the more severe upland climates or of upland plants to live in coastal situations. I am not aware of any attempts to artificially cross these plants, but I would expect them to form hybrids. Even very dissimilar *Cirsium* species often are able to hybridize, sometimes forming hybrid swarms, and races of *C. scariosum* are known to hybridize with at least six other species (Keil 2006).

Because of the ecological differences of the coastal plants from the otherwise upland populations of *C. scariosum* var. *citrinum*, I plan to recognize the coastal plants as varietally distinct in the second edition of The Jepson Manual. This is consistent with the taxonomic concepts policy adopted in the Guide for Authors Contributing to the Second Edition of The Jepson Manual and to the Jepson Flora Project (Jepson Flora Project 2004), allowing the recognition of “taxa that do not differ in any readily determined morphological characteristics but that do differ consistently in geography and/or ecology.”

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