

## Taxonomy of *Physaria purpurea* (Brassicaceae)

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### ABSTRACT

*Physaria purpurea* (A.Gray) O’Kane & Al-Shehbaz is recognized as a widespread variable species without infraspecific taxa, much as accorded the taxon by Rollins (1993) in his last appraisal of the species. Distribution maps of the reputed infraspecific categories are provided, along with an overall reappraisal of the complex. Published on-line [www.phytologia.org](http://www.phytologia.org) *Phytologia* 95(4): 321-323 (Nov. 1, 2013). ISSN 030319430

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Rollins and Shaw (1973) provided an excellent taxonomic treatment of the species, *Lesquerella purpurea* (A. Gray) Wats., recognizing the taxon as having two infraspecific taxa, subsp. *purpurea* and subsp. *foliosa* (Rollins) Rollins & Shaw, according to the authors, these presumably intergrading in Trans-Pecos, Texas. The characters used to identify the infraspecific taxa were given as follows (this largely abstracted from their account):

1. Stems sparsely leaved and extending well beyond the basal leaves; petals ca 7-12 mm long, having a distinct blade and claw; trichomes 0.3-0.4 mm in diameter.....subsp. **purpurea**
1. Stems but little extended beyond the basal leaves, and/or the stems leafy and branched in the upper half; petals 4-8 mm long, and often w/o distinct blades and claws; trichomes 0.4 mm or more in diameter.....subsp. **foliosa**

The type of subsp. **purpurea**, according to Rollins, is a Wright collection from El Paso Co., Texas; the type of subsp. **foliosa** is a Johnston & Mueller collection from the Sierra San Carlos, a small mountain range just south of the Big Bend region of Texas.

Early on, I mapped the infraspecific taxa, as shown in Fig. 1, largely from the sites posited by Rollins and Shaw. Rollins (1993) subsequently, without explanation, treated *Lesquerella purpurea* as lacking infraspecific units. Nevertheless I preferred to accept the earlier interpretation of Rollins and Shaw, and when transferring these to the genus *Physaria*, following the work of O’Kane and Al-Shehbaz (2002), I inexcusably misstated (Turner 2004) that the latter workers treated *P. purpurea* var. *foliosa* as a subspecies, which they did not.

To complicate things further, in my Atlas of the Vascular Plants of Texas (Turner et al., 2003) I accepted the treatment of Rollins (1993), in which no infraspecific taxa were recognized, this after examining newly assembled plants from both the USA and Mexico. In short, I now accept *Physaria purpurea* (A.Gray) O’Kane & Al-Shehbaz as an exceedingly variable taxon occurring throughout the south-central USA into north-central Mexico, from Coconino Co., Ariz. to as far south as San Luis Potosi, as shown in Fig. 2, much as did Rollins (1993) in his ultimate appraisal of the complex, this without explanation.

### ACKNOWLEDGEMENTS

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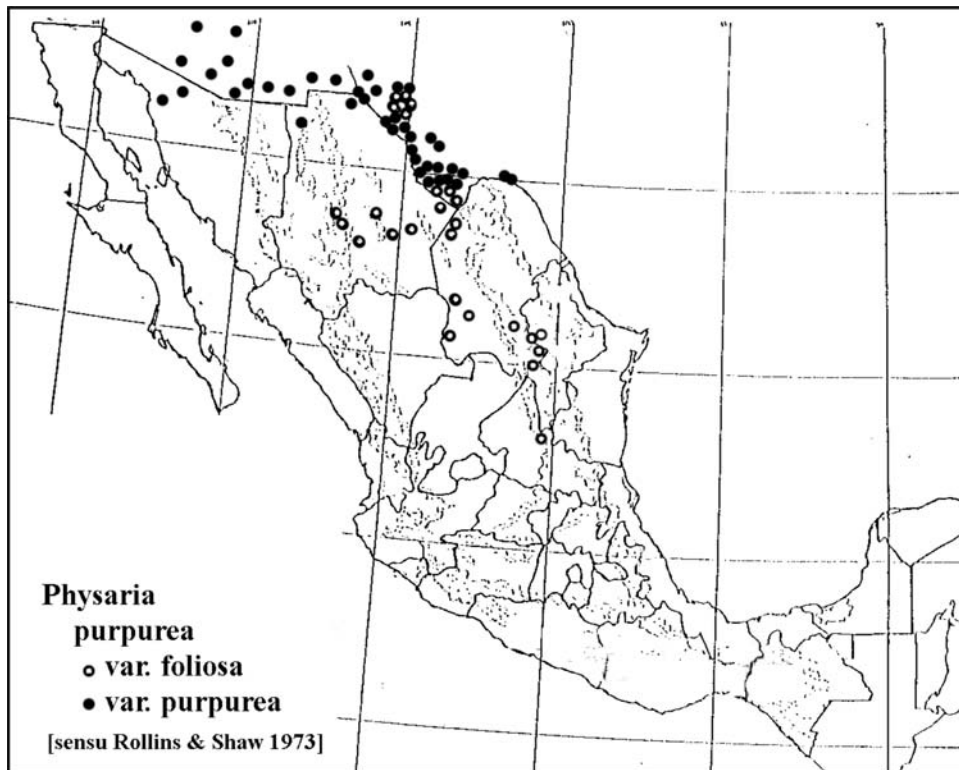


Fig. 1. Distribution of infraspecific categories of *Physaria purpurea*, sensu Rollins and Shaw (1973).

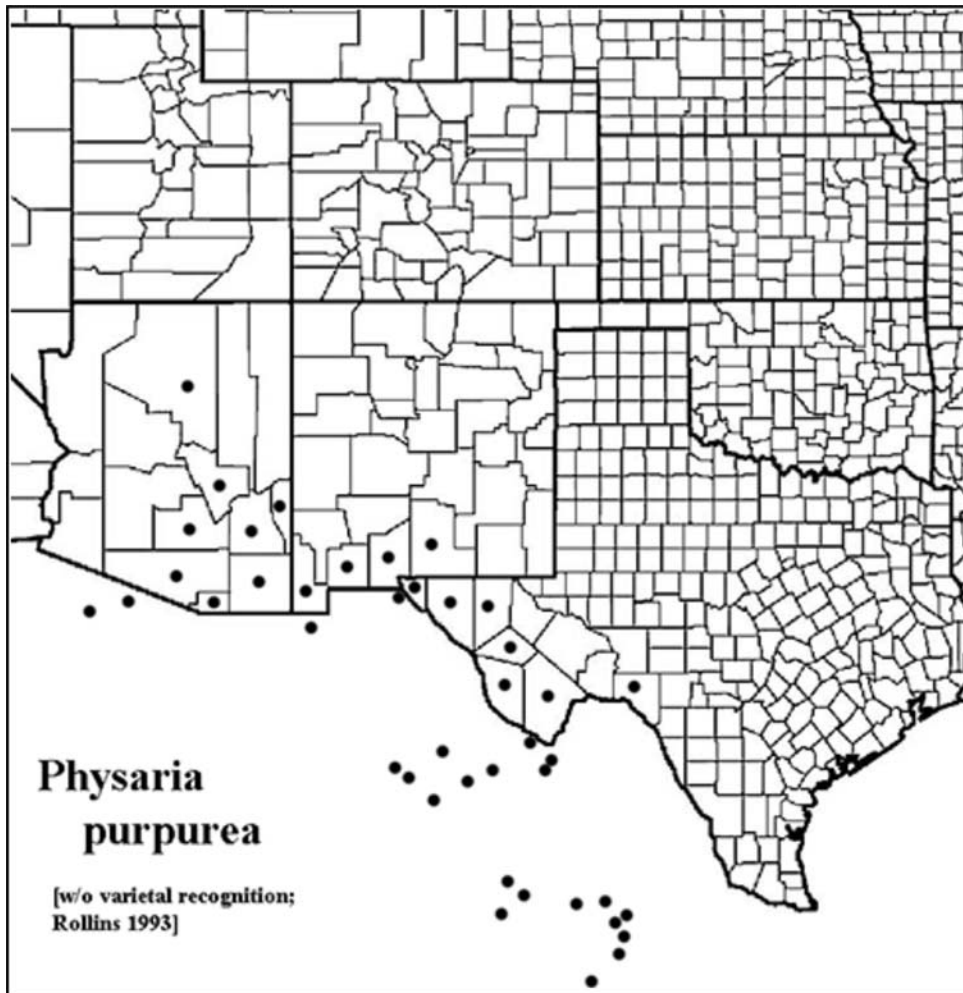


Fig. 2. Distribution of an intergrated *Physaria purpurea* (sensu Rollins 1993).