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A NARROWLY ENDEMIC, WHITE-FLOWERED *CIRSIUM* (ASTERACEAE) IN NORTHEASTERN MÉXICO

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ABSTRACT

Cirsium chionanthum Nesom & García-Mor., **sp. nov.**, is known from four localities in close proximity in the Cerro Peña Nevada area along the Nuevo León-Tamaulipas border. It is similar in many features to *C. lappoides* of lower elevations in central Mexico but differs most conspicuously in its shorter, white corollas. The new species is illustrated by herbarium collections and field photos.

Studies in the herbarium and field have brought to light a previously undescribed species of white-flowered *Cirsium* from the region of northeastern Mexico centered around Cerro Peña Nevada along the Nuevo León-Tamaulipas border. The known localities are within a radius of about 16 kilometers (Fig. 1).

CIRSIUM CHIONANTHUM Nesom & García-Mor., **sp. nov. TYPE**: **MÉXICO**. **Nuevo Leon**. [Mpio. General Zaragoza]: Dulces Nombres, and just E of border into Tamaulipas, moist, densely wooded N-facing slopes, 1690 m, 13 Jul 1948, *F.G. Meyer & D.J. Rogers 2753* (holotype: US 2158387-Fig. 2 and 2158388-Fig. 3, one plant on 2 sheets; isotype: MO).

Similar to *Cirsium lappoides* in its leaves with broadly clasping, non-decurrent bases and villous adaxial surfaces and its phyllaries with a broad, glandular midregion and apically attenuate into a spinose point; distinct in its phyllaries narrower (ovate-lanceolate vs. narrowly oblong-triangular) without tuberculate lateral areas (vs. with) and corollas white (vs. lavender) and shorter (15–16 mm long vs. 20–26 mm).

Perennials, rhizomatous (see Fig. 3). **Stems** 1–2 m tall, villous with multicellular hairs, not tomentose. **Leaves** persistently white-silvery-tomentose abaxially, glabrescent-green adaxially with prominent multicellular hairs, basal and lower cauline pinnatifid, mid cauline broadly ovate, broadly clasping, not decurrent. **Heads** in loose terminal clusters, on ultimate peduncles 2.5–7 cm long, sometimes subtended by 1–2 small, spiny-margined bracts. **Involucres** 1.8–3 cm wide; phyllaries glabrous, narrowly oblong-triangular with a oblong-elliptic, glandular, dark-drying midregion (white and thickened-raised-glandular when fresh) on the distal 2/3–3/4, margins thin-scarious, smooth, apex triangular-attenuate to a spreading or reflexed, flattened, spinescent tip 3–5 mm long, margins without spines. **Corollas** 15–16 mm long, tube 7–8 mm long, throat 4 mm long, lobes 4 mm long; stigmatic branches 3.5–4 mm long.

Nuevo León and Tamaulipas. Mostly in pine-oak woods and chaparral; (1700–)2000–3000 m; flowering May-October.

Additional collections. Nuevo Leon. Mpio. Aramberri: Cerro El Viejo, oak and pine woods, 2050 m, 24 May 1993, *Hinton et al. 22823* (GBH-Figs. 4 and 6-8, NY, TEX). **Tamaulipas**. Mpio. Hidalgo Galindo: 7 km SE de Puerto Purificación, bosque mesófilo de montaña, 6 Jun 1990, *González Medrano 17490* (MEXU-Figs. 5, 10). Mpio. Miquihuana: Km 12 La Peña-El Aserradero, bosque *Pinus-Quercus,* 2660 m, 20 Jul 2014, *García Morales 2954* (ITCV); 500 m E km 13.5 La Peña-El Aserradero, bosque *Pinus-Quercus*, 2800 m, 30 Aug 2015, *García-Morales 4540* (ITCV); 2 km W km 16.5 camino La Peña-El Aserradero, chaparral de *Quercus* con *Pinus*, 2850 m, 30 Aug 2015, *García-Morales 4586b* (ITCV); km 20 camino La Peña-El Aserradero, chaparral de *Quercus* con *Pinus*, 3090 m, 2 Jun 2017, *García-Morales* 6597 (ITCV); km 24 camino La Peña-ElAserradero, bosque *Pinus-Quercus-Populus*, 2995 m, 23 Aug 2020, *García-Morales 6633* (ITCV).

Cirsium chionanthum is similar to *C. lappoides* (Less.) Sch.Bip. in leaf morphology, stem and leaf vestiture, and phyllary morphology (Nesom in prep.), but the narrower phyllaries and white, much shorter corollas are immediately distinctive and the long geographic disjunction and ecological difference are evidence of an evolutionary separation. *Cirsium lappoides* ranges from Guanajuato to Querétaro, Hidalgo, Veracruz, Puebla, Morelos, and Oaxaca at elevations of (900–)1300–2200(–2700) meters, flowering February-May(-July). The two perhaps are sister species.

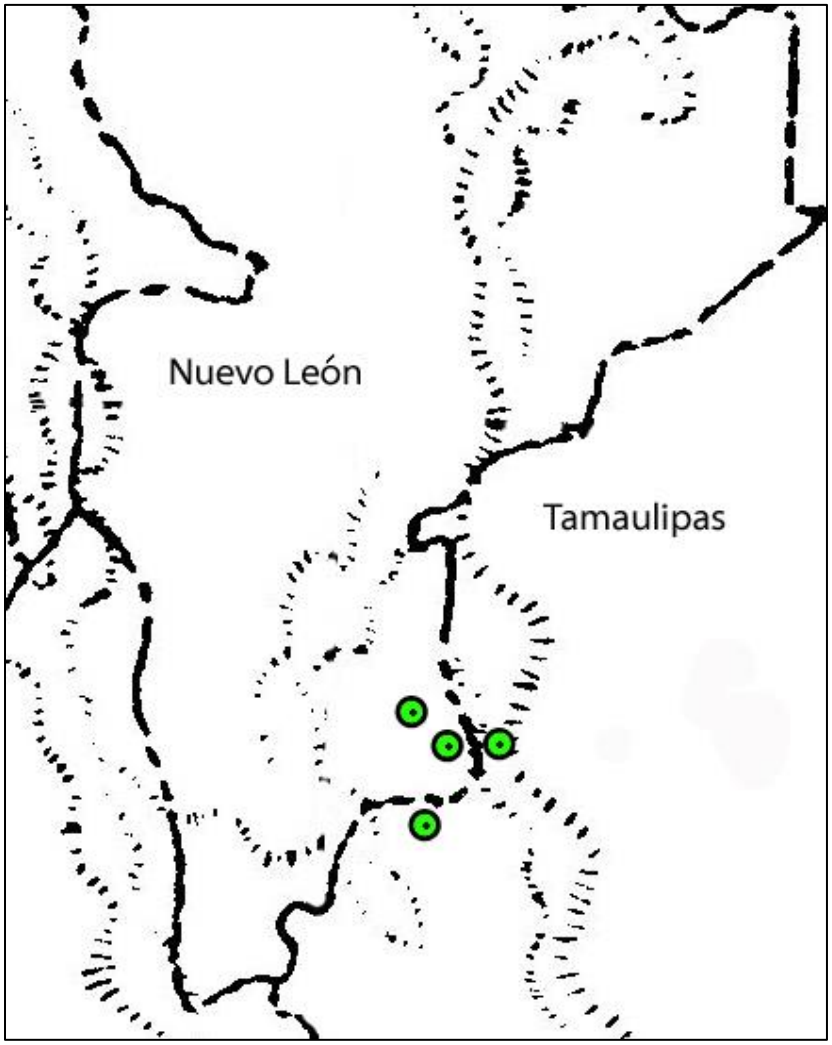

Figure 1. Distribution of *Cirsium chionanthum*.

Figure 2. *Cirsium chionanthum*. Holotype (US, 1st sheet).

Figure 3. *Cirsium chionanthum*. Holotype (US, 2nd sheet).

Figure 4. *Cirsium chionanthum*. Cerro El Viejo, Nuevo León, *Hinton 22823* (GBH).

Figure 5. *Cirsium chionanthum*. Mpio. Hidalgo, Tamaulipas, *Medrano 17490* (MEXU).

Figure 6. *Cirsium chionanthum*. Details of vestiture from *Hinton 22823* (GBH).

Figure 7. *Cirsium chionanthum*. Details from *Hinton 22823* (GBH).

Figure 8. *Cirsium chionanthum*. Details from *Hinton 22823* (GBH).

Figure 9. *Cirsium chionanthum*. Details from the holotype (US).

Figure 10. *Cirsium chionanthum*. Details from Figure 5 (*González-Medrano 17490*).

Figure 11. *Cirsium chionanthum*, Mpio. Miquihuana, Tamaulipas. Photo by L. García-Morales, 30 August 2015 (voucher, *García-Morales 4540*, ITCV).

Figure 12. *Cirsium chionanthum*, Mpio. Miquihuana, Tamaulipas. Photo by L. García-Morales, 23 August 2020 (voucher, *García-Morales 6633*, ITCV).

Figure 13. *Cirsium chionanthum*, Mpio. Miquihuana, Tamaulipas. Adaxial leaf surface, basal leaf. Photo by L. García-Morales, 23 August 2020 (voucher, *García-Morales 6633*, ITCV).

Figure 14. *Cirsium chionanthum*, Mpio. Miquihuana, Tamaulipas. Abaxial leaf surface. Photo by L. García-Morales, 23 August 2020 (voucher, *García-Morales 6633*, ITCV).