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***Cirsium coahuilense* (Asteraceae), a New Species from Northern Mexico**

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ABSTRACT. *Cirsium coahuilense* G. Ownb. & Pinkava occurs naturally in the desert areas of Coahuila, Mexico. Morphologically, the new species is most closely allied to *C. excelsius* (Robins.) Petrak from San Luis Potosí.

The first collections of this new species seen by the writers were made by S. S. White at Monclova and later at Cuatro Ciénegas, Coahuila, in 1939. E. G. Marsh also collected it at Cuatro Ciénegas later in the same year. More recent collecting, principally by botanists associated with the Chihuahuan Desert Flora project, have made available abundant and representative material from which the following diagnosis is drawn:

***Cirsium coahuilense* G. Ownb. & Pinkava, sp. nov.**

Herba canescens biennis vel perennis; caulis 0.5–3.0 m altus radice palari; folia subtus tomentosa supra tomentosa ad glabrata sed non hispida, margine infirme aculato vel ubi dentato quoque dente spina 1.0–3.5 mm longa terminato; folia caulina principalia infirme ad valde lobata prorsus decurrentia alis prominentibus; folia caulina supera elliptica ad lanceolata, integra ad infirme lobata, summa ad bracteas aciculares reducta; ramuli ultimi minute bracteati, quoque ramulo capitulum erectum pedunculatum terminale et interdum subtus in axillis bractearum capitula subsidiaria plerumque abortiva subtus ferente; involucrum sub anthesi 1.2–1.4 cm latum, 1.7–2.0 cm altum; phyllaria in 5–6 seriebus valde imbricata tomentulosa marginibus arachnosis linea mediale glutinosa, spina terminale acute divergente 1.8–3.2 mm longa; phyllaria interioria anguste elongata innocua; corolla dilute lavendula 18–23 mm longa, tuba 7–10 mm longa, limbo 11–14 mm longo, lobis anticis 6–8 mm longis; apices antherarum 0.6–0.8 mm long, attenuati; rami styli 3.4–4.6 mm longi; pappus albus ad alutaceus setis 14–18 mm longis; achenia alutacea vel parum olivacea, praeter labrum stramineum concolora, 1.4–1.8 mm lata, 3.5–5.0 mm longa.

Very leafy, canescent biennial or short-lived perennial; stem 0.5–3.0 m tall, arising from a tap root, widely and diffusely branched at the middle and upward, tomentulose at first, glabrate in age, not at all hispid, very leafy along the main axis and bases of the branches, the extremities of the branches nearly naked (except in depauperate plants) due to reduction of leaves to bracts; all the leaves tomentose below, tomentose,

tomentulose to glabrate above, not hispid, the margin weakly prickly or, when toothed or lobed, the main vein terminated by a spine 1.0–3.5 mm long as are also the main veins of the decurrent bases; first juvenile leaves entire, lance-elliptic, the blade tapering to both base and apex; basal leaves of flowering plants entire or divided to three-fourths the distance to the midrib; lower cauline leaf blades oblanceolate, entire, shallowly lobed or more deeply lobed to three-fourths the distance to the midrib; middle cauline leaves fully decurrent, the prominent wings reaching the insertion of the next leaf below, the leaves less decurrent towards the top and bottom of the stem, the middle and upper cauline leaf blades entire or shallowly lobed, progressively oblanceolate to elliptic to lanceolate and very rapidly reduced upward, at length becoming acicular bracts on the outer extremities of the main stem and branches; heads erect, borne singly at the ends of the ultimate branches on minutely bracteate peduncles, the peduncles mostly 1–5 cm long at anthesis, with small, abortive heads present in the axils of the bracts; involucre at anthesis about 1.2–1.4 cm wide but appearing much wider when pressed, 1.7–2.0 cm high; phyllaries in 5 or 6 series, strongly imbricate; exposed surfaces of phyllaries tomentulose, arachnose marginally, the medial line conspicuously glutinous; outer and middle phyllaries terminated by a sharply divergent or reflexed spine, the spine 1.8–3.2 mm long, purplish at the base; apex of inner phyllaries slenderly elongate, not at all expanded laterally, purple, innocuous; corollas exceeding the innermost phyllaries by 6–8 mm at anthesis, pale lavender, 18–23 mm long, the tube 7–10 mm long, the limb 11–14 mm long, the anterior lobes 6–8 mm long; anther tip 0.6–0.8 mm long, attenuate; filaments pubescent; maximum post-anthesis extrusion of the style beyond the anther tips to 3.5 mm; style branches above the node 3.4–4.6 mm long; pappus white to pale tan or tawny, the longest bristles 14–18 mm long; achenes tan or barely olivaceous, concolorous except for the pale stramineous rim, 1.4–1.8 mm wide, 3.5–5.0 mm long from point of attachment to outer edge of rim, the rim-band about 0.3 mm wide.

TYPE: Mexico, Coahuila, Cuatro Ciénegas, 732 m (2400 ft), 18–22 July 1939, *White 1927* (holotype: MICH; isotype: US).

Chromosome number: $2n = 30$, determined from seedlings. Voucher: Coahuila, road to San Pedro, 11.3 km (7 mi) W of Cuatro Ciénegas, *Kral 25773* (MIN, fragments of inflorescence).

This species is confined to the deserts and low mountain ranges of southern Coahuila. It grows at elevations of 610–1189 m (2000–3900 ft), in well-watered sites, near springs, streams and seepages, frequently in saline soils.

Cirsium coahuilense is similar in many ways to *C. excelsius* (Robins.) Petrak, a completely disjunct species occurring in wet habitats in deserts of San Luis Potosí. Features common to both species include velvety tomentum covering all parts of the plants when young; strongly decurrent middle cauline leaves; and erect, imbricate phyllaries with sharply diver-

gent, weak terminal spines and glutinous median lines. The heads of *C. coahuilense* are, however, borne singly on bracteate peduncles, not in clusters of 2–5 or more at the ends of the branches as in *C. excelsius*; the primary involucre of the former are 1.2–1.4 by 1.7–2.0 cm; in the latter they are 1.0–1.2 by 1.4–1.6 cm. The flowers of *C. coahuilense*, although of like proportions, are much larger, the corollas 18–23 mm long vs. 14–16 mm long in *C. excelsius*. The achenes of *C. coahuilense* are also much larger, about 1.4–1.8 by 3.5–5.0 mm vs. 1.2–1.4 by 3.0–3.5 mm in *C. excelsius*. Finally, the styles of *C. coahuilense* are extruded as much as 3.5 mm beyond the anther tips in more extreme cases and the style branches to the node are 3.4–4.6 mm long while in *C. excelsius* the styles are not at all extruded and the branches measure 1.6–2.0 mm long to the node. *Cirsium coahuilense* does, nevertheless, appear to be closely related to *C. excelsius* and, in Petrak's (1917) classification, belongs with *C. excelsius* in subg. *Eucirsium* sect. *Onotrophe* subsect. *Botrycephala* series *Parviflora*. This disposition of the new species would be strengthened if the somatic chromosome number of *C. excelsius*, not yet determined, is in the 30–34 range.

Specimens examined: Mexico, Coahuila, ca. 51.5 air km NE of San Pedro, 1.6 km SW of Las Delicias, 26°14'N, 102°49'W, *Henrickson* 6053 (?); 9.5 road km SW of Cuatro Ciénegas along Hwy. 30, *Henrickson* 7957 (ASU, LL); ca. 116 air km SW of Cuatro Ciénegas, 2.4 km SW of Las Delicias, near 26°12'N, 102°50'W, *Henrickson* 12252 (LL); Parras de la Fuente, *Johnson and Johnson* 1608 (MIN); Point San Marcos, *Lewis s.n.* (ASU, MIN); Cuatro Ciénegas, *Marsh* 2029 (TEX); 0.8 km W of Sacramento, *Ownbey* 4178 (MIN); junction road and Rio Mesquites, 9 km SSW of Cuatro Ciénegas, *Cole, Minckley and Pinkava* P3668 (ASU); Rio Mesquites at Los Corralos, *Cole, Minckley and Pinkava* P4130 (ASU); along Cuatro Ciénegas highway S of town between Poso de la Becerra Canal and turnoff to Laguna Salada, *Lehto, Keil, and Pinkava* P5075 (ASU, MIN); ca. 11 km S of Cuatro Ciénegas, *Powell and Turner* 2284 (TEX, WIS); along Rio Churince, just below Pozos Bonitos, Cuatro Ciénegas basin, 26°50'30"N, 102°08'15"W, *Wendt, Wood, Budnik and Moore* 658 (ASU); Monclova, *White* 1710 (MICH).

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