

# A NEW GYPSOPHILIC SPECIES OF GALIUM (RUBIACEAE) FROM NORTH-CENTRAL MEXICO

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## ABSTRACT

A new species, *Galium dempsterae*, is described from gypseous deposits in north-central Mexico. It is known from only two collections, both obtained from Cerro Peña in southern Nuevo Leon. The taxon is related to yet another gypsophile, *G. juniperinum*, from areas about Cerro Potosi, Nuevo Leon; both of these taxa relate to *G. lacrimiforme*, a suspected gypsophile of the same broad region.

Explorations, both past and recent, of the numerous and often locally large gypseous outcrops in north-central Mexico have yielded a number of interesting endemics, some of them quite bizarre (Turner 1973, Turner and Powell 1979, Higgins and Turner 1982). Detection of the species of *Galium* described below is surprising because the genus recently received a thorough taxonomic treatment by Dempster (1977).

***Galium dempsterae*** B. L. Turner, sp. nov.

*G. juniperino* Standley simulans sed foliis nonadpressis glabris, pedicellis longioribus, pilis fructuum brevibus valde incuratis (Fig. 1).

Polygamous suffrutescent rhizomatous coarse perennials, 10–12 cm tall; stems costate, divaricately branched, glabrous except for a circle of hairs ca. 0.1 mm long below each node; leaves in 4's, longer than the nodes except in inflorescence, glabrous, (2.5–)3–4(–5.2) mm long, 0.7–1.0 mm wide, subulate, pungent, spreading, thickish, faintly 1-nerved, sessile; glandular cells absent; inflorescence strict, the flowers in axillary 3(–5)-flowered dichasia in the upper leaf axils; peduncles 1.0–4.2 mm long, leafy bracts 2, 2–4 mm long, pedicels 1.7–4.0 mm long; corollas rotate, glabrous, yellowish-green, 2.0–3.3 mm wide, lobes 4, ovate, apices acute to acuminate; filaments 0.2–0.3 mm long; anthers yellow, 0.2–0.3 mm long; style 0.6–0.7 mm long (wet), divided ca. halfway to base; fruits dry (immature), set with very short, upwardly directed strongly incurved hairs, 0.1–0.2 mm long.

TYPE: Mexico, Nuevo Leon; gypsum outcrops on nw. slope of Cerro Peña Nevada, ca. 7 km ne. of San Antonio Peña Nevada (ca. 30 km nw. of Doctor Arroyo), Jul 1977, C. Wells & G. Nesom 514 (Holotype LL).

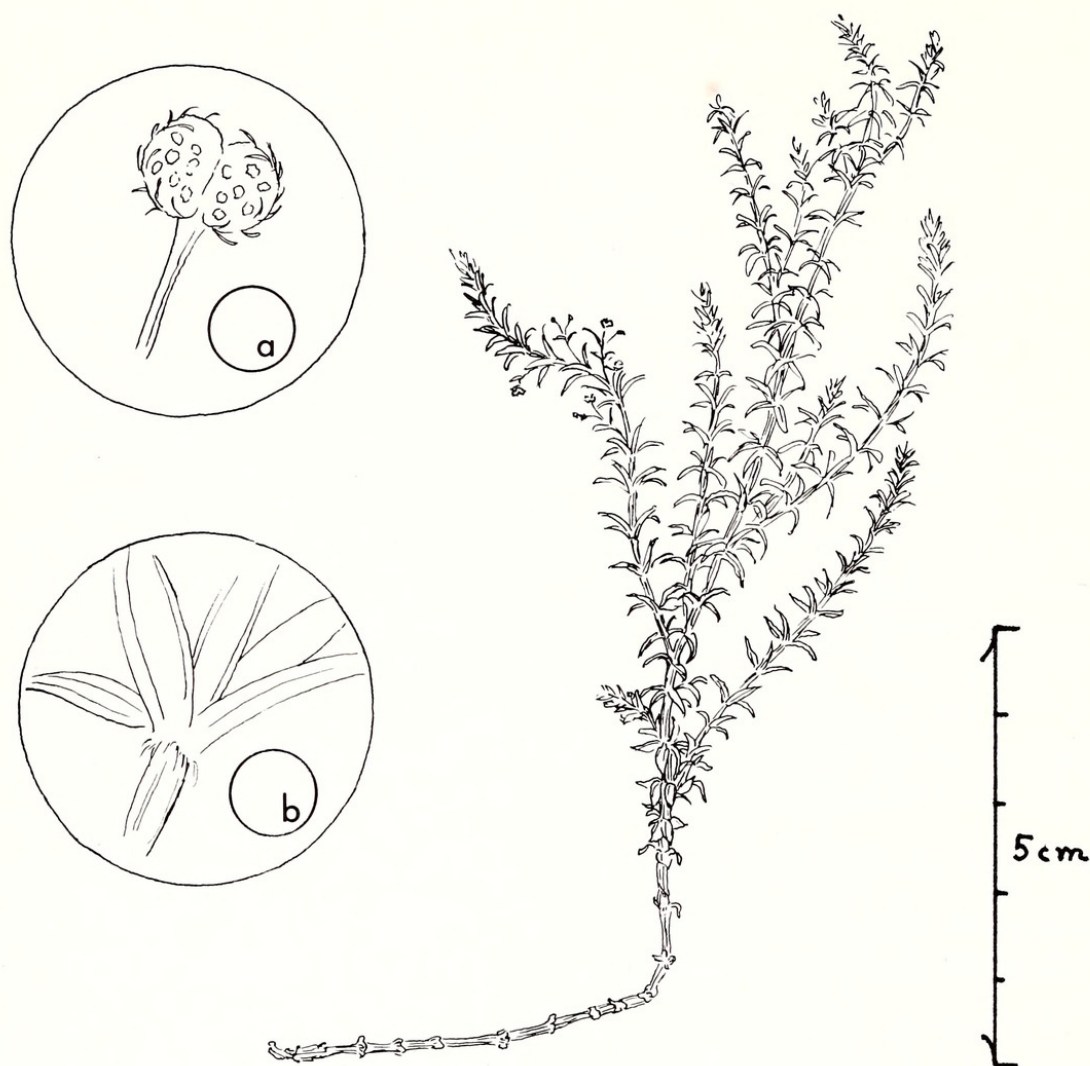


FIG. 1. Habit sketch of *Galium dempsterae* ( $\times 1$ ). Inserts: a, fruit ( $\times 10$ ); b, node, showing hairs ( $\times 6$ ).

PARATYPE: Nuevo Leon: ca. 30 km ene. of San Antonio de Peña Nevada, base of Cerro Peña Nevada, "large area of gypsum outcrops," 6600 ft, 3–5 Aug 1981, *G. Nesom* 4262 (TEX).

The species is apparently most closely related to yet another gypsophile, *Galium juniperinum* Standl., which occurs as a local dominant on the largely barren white gypseous soils about the village of Galeana some 120 km due north of the present site. Dempster (1977) in her critical, delightful, treatment of *Galium* for Mexico and Central America notes only a single collection (the type) of *G. juniperinum*. We have noted the species several times on gypseous outcrops near Galeana and have collected it on gypsum substrates on the north-eastern lower slopes of Cerro Potosi, ca. 7.5 km northwest of Galeana (*Turner & Davies* A-10, TEX).

The fruit of *Galium dempsterae* is presumably similar to what we



suspect is yet another gypseous endemic, *G. lacrimiforme* Dempster, known only from a single collection, ca. 13 km east of Dulces Nombres, Nuevo Leon, a region where gypseous outcrops are known to occur. Additional new taxa are likely to be found upon the various isolated, largely unexplored, gypseous outcroppings in north-central Mexico (Turner and Powell 1979).

It is a pleasure to name this species for Lauramay T. Dempster, whose very sound treatment of this difficult genus made easy our assessment of the present contribution. We are grateful to Dr. M. C. Johnston for providing the Latin diagnosis and to Dr. J. Henrickson for helpful suggestions.

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