

A NEW GYPSOPHILOUS SPECIES OF *ERIGERON* (ASTERACEAE: ASTEREAE) FROM NORTHEASTERN MEXICO

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ABSTRACT

Erigeron heleniae Nesom, sp. nov., is described from a gypsum outcrop northwest of Monterrey in Nuevo León, Mexico. It is characterized by its diminutive, suffruticose habit, thickened taproot, hirsute-glandular vestiture, linear and subclasping leaves, and tiny, solitary heads with white, filiform rays.

RESUMEN

Erigeron heleniae Nesom, sp. nov., se describe de un surgimiento yesífero en el noroeste de Monterrey en Nuevo León, México. Se caracteriza por su hábito sufruticoso diminuto, raíz engrosada, indumento hirsuto-glandular, hojas lineares y subapretadas, y cabezuelas diminutas solitarias con radios blancos filiformes.

Gypsum outcrops in northeastern Mexico have fostered the evolution of many endemic species. Yet another is described here, known only from a single collection by George S. Hinton, whose botanical acuity and persistence (along with that of his father, Jaime Hinton) have greatly expanded knowledge of the region's plants.

Erigeron heleniae Nesom, sp. nov. (**Figs. 1–2**). TYPE: MEXICO. NUEVO LEÓN: Mpio. Mina: N of Los Molina, 26°04'09.23" N, 100°44'27.57" W, gypsum hillside, [open gypsum exposures, flats and gentle slopes, with scattered ocotillo and other low perennials], 737 m elev, 4 Sep 2005, George S. Hinton 28412 (HOLOTYPE: TEX).

Erigeronti gypsovero Nesom similis sed differt radice palari lignea, capitulis minoribus corollis radii brevioribus filiformibus, foliis subamplexentibus, vestimento hirsuto-glanduloso, et pappo externo squamarum prominentium.

Suffruticose perennials from a thickened, woody taproot, individual plants up to 25 cm wide; stems intricately branched proximally, 5–8 cm high, hirsute to hirsute-villous, hairs strongly deflexed on proximal third, spreading above; leaves, and phyllaries hirsute with white, erect-arching hairs 0.4–1 mm long, hairs arising from thickened, orange-resinous basal cells, minutely stipitate-glandular, the phyllaries densely so. Leaves linear to linear-oblongate, flat, 7–10(–15) mm long, 0.8–1 mm wide, even-sized to immediately below the heads, slightly but distinctly auriculate and subclasping. Heads solitary on bracteate peduncles 3–7 mm long; involucre turbinate-campanulate, 3.5–5 mm wide; phyllaries in 3(–4) subequal series, elliptic-lanceolate, 2.5–3 mm long, with a dark orange-resinous midvein, densely minutely glandular. Ray florets 22–30, white or slightly pink-tinged, 3–3.5 mm long, ligules 0.2–0.4 mm wide, apparently not reflexing or coiling. Disc florets 1–1.6 mm long. Achenes obovate-oblong, 0.7 mm long, 2-nerved, sparsely strigose; pappus of 10–12 persistent bristles 0.8–1 mm long, outer pappus of prominent scales 0.1 mm long.

Etymology.—*Erigeron heleniae* is named for Helen Hinton, mother of George S. Hinton and wife of Jaime Hinton. She has been close witness to the excitement of discovery by her family of so many of the region's beautiful and unusual species.

The new species occurs on gypsum outcrops about 55 kilometers northwest of the city of Monterrey. There are two large gypsum outcrops in the immediate area, about 5.5 kilometers apart and covering a total of about 3.5 hectares. Essentially the same set of gypsophilic species occurs on both outcrops; *Erigeron heleniae* is common on both and prefers slopes to flat areas. As with many other gypsophilic endemics from this region of Mexico, this area of outcrops probably is the total extent of the range of the new species.

Erigeron heleniae is similar in its diminutive habit and narrow leaves to *E. gypsoverus* Nesom, which is

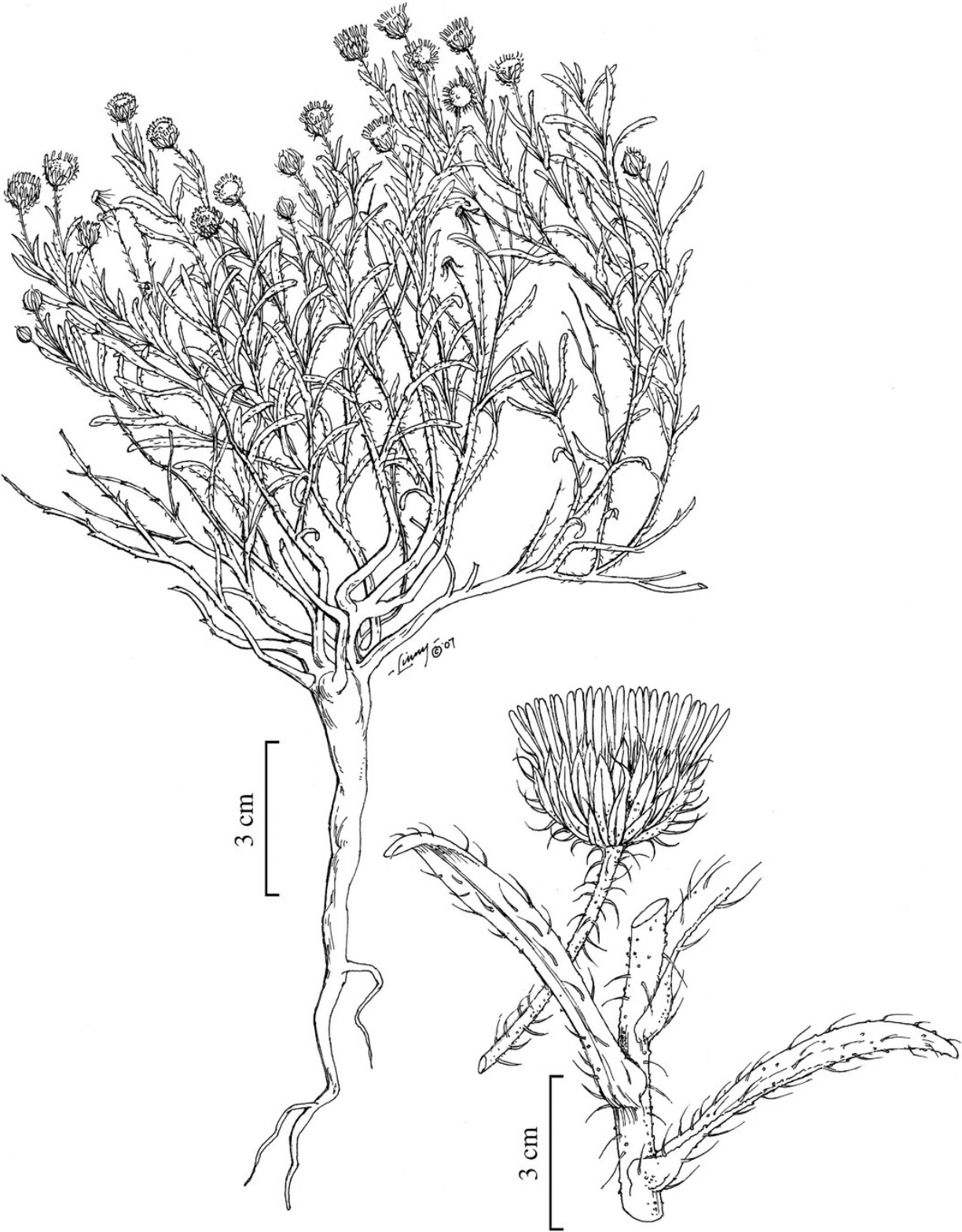


FIG. 1. Habit and details of *Erigeron heleniae*, from the holotype.



FIG. 2. Habit (top) and close-up (bottom) of a large individual of *Erigeron heleniae* at type locality. Photos by George Hinton.

relatively common in the open pine woods in the gypseous region around Galeana, Nuevo León, and known from numerous collections. *Erigeron heleniae* occurs about 140 kilometers north of the closest population of *E. gypsoverus* and at a lower elevation. Both species apparently are obligate gypsophiles, but the two probably are not even closely related within the genus. Contrasts below distinguish them.

1. Stems, leaves, and phyllaries closely strigillose, eglandular; taproot slender; proximal branches elongate, stolon-like; leaves not at all basally auriculate or clasping; involucre 5–7 mm wide; ray florets 5–6 mm long; outer pappus of inconspicuous setae; 1050–2280 m elev. _____ ***Erigeron gypsoverus***
1. Stems, leaves, and phyllaries hirsute, minutely stipitate-glandular; taproot thickened; proximal branches intricately branched; leaves slightly but distinctly auriculate and subclasping; involucre 3.5–5 mm wide; ray florets 3.5–5 mm long; outer pappus of prominent scales; ca. 750 m elev. _____ ***Erigeron heleniae***

Morphological features shared by *Erigeron heleniae* and *E. dryophyllus* A. Gray (of central Nuevo León and adjacent Tamaulipas) suggest that these two species may be closely related: subclasping leaves and hispid-villous vestiture, the hairs sharply deflexed on proximal portions of the stem. *Erigeron dryophyllus* differs most conspicuously in its rhizomatous habit, broad and lobed leaves, much larger heads on long peduncles, and habitats primarily over limestone.

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