

TWO NEW SPECIES OF *ERIGERON* (ASTERACEAE: ASTEREAEE)  
FROM MÉXICO

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ABSTRACT

*Erigeron macdonaldii* sp. nov. (sect. *Imbarba*) is described from the peak of Cerro Mohinora in southern Chihuahua, where apparently it is narrowly endemic. *Erigeron vicinus* sp. nov. (sect. *Olygotrichium*) is described from the Sierra Madera del Carmen in northwestern Coahuila.

KEY WORDS: *Erigeron*, Asteraceae, Astereae, México

Two previously undescribed species have come to light in studies of Mexican *Erigeron*. One is from an area of high elevation in southern Chihuahua, the other from a montane area of northwestern Coahuila.

*Erigeron macdonaldii* Nesom, sp. nov. TYPE: MÉXICO. Chihuahua: Mpio. Guadalupe y Calvo, ca. 13 mi SW of Guadalupe y Calvo; rock faces on NW side of uppermost summit of Cerro Mohinora; plants in crevices at lip of precipice, with scattered, "krumholz" pines, 3250 m, 21 Aug 1988, McDonald & Nesom 2472 (HOLOTYPE: TEX!; Isotypes: GUADA!, GH!, MEXU!, NY!, US!).

*E. fraternus* E. Greene similis sed plantis parvioribus, capitulis solitariis, floribus radii parvioribus, et acheniis setas pappi efferentibus differt.

Perennial herbs from a system of short, slender, lignescent rhizomes with fibrous roots. Stems basally ascending, 9-13 cm tall, sparsely pubescent with spreading to ascending appressed hairs, eglandular. Leaves eglandular, strigose adaxially with closely appressed hairs, nearly glabrous abaxially, the basal leaves persistent, spatulate, 15-50 mm long with petioles 1/2-2/3 the length of the leaf, the blades 4-10 mm wide, entire or usually with 1-2(-3) pairs of teeth or shallow lobes, the cauline leaves narrowly oblanceolate, not clasping, entire, 5-12 mm long, widely and evenly spaced, little reduced upward. Heads solitary,

5-9 mm wide; phyllaries purple tipped, sparsely strigose hirsute, eglandular, in 2-3 series of nearly equal length, the longest 3-4 mm long. Ray flowers (9-)13-24 in a single series, the corollas 8-9 mm long, the ligules 1.5-2.0 mm wide, white, drying white to purplish, remaining essentially straight at maturity. Disc corollas 2.5-2.8 mm long, funnellform, not swollen or indurated; style branches with triangular collecting appendages 0.2 mm long. Achenes ca. 1.5 mm long, 2 nerved, sparsely strigose; pappus of 5-7 basally persistent bristles  $1/2$ - $2/3$  the length of the disc corollas, with an outer series of minute squamellae ca. 0.1 mm long.

The epithet commemorates Dr. Andrew McDonald, who will be remembered for his comprehensive systematic studies of the Convolvulaceae as well as his surveys of the alpine vegetation of México.

In its geographic location and its rhizomatous habit, toothed leaves, erect buds, and basally 3 ridged phyllaries, *Erigeron macdonaldii* clearly is most similar to the seven species of sect. *Imbarba* Nesom (Nesom 1989b, 1989c), which are restricted to México and Guatemala, and primarily to the Sierra Madre Occidental of México. Particularly in their sparse vestiture, small heads with few, short rays, and thin, obovate-spatulate, strongly toothed leaves, the plants of *E. macdonaldii* are most similar to *E. fraternus* E. Greene. The latter ranges from central Chihuahua to central Durango and grows in the immediate area of Cerro Mohinora, although it is not found on the highest part of the peak itself.

*Erigeron macdonaldii* differs from *E. fraternus* in features summarized in the following couplet.

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| 1. Plants from a relatively diffuse system of slender rhizomes; stems 9-13 cm tall; basal leaves 4-10 mm wide; heads solitary; ray flowers 9-24; pappus of 5-7 short, persistent bristles .....                          | <i>E. macdonaldii</i> |
| 1. Plants usually with a definite caudex, producing basal offsets; stems mostly 15-60 cm tall; basal leaves mostly 5-17(-23) mm wide; heads few, but in a loose corymb; ray flowers 18-80; pappus without bristles ..... | <i>E. fraternus</i>   |

The new species is the only member of sect. *Imbarba* to consistently produce a pappus with bristles, although the bristles are relatively few and short. *Erigeron fraternus* rarely produces one or two, apparently vestigial bristles, 0.3-1.0 mm long, but like the other species of the section, a short corona may be produced but the pappus normally is completely without bristles. In this respect, *E. macdonaldii* may be regarded as the most primitive among its immediate relatives.

*Erigeron macdonaldii* is known only from a single site and one collection from the uppermost reaches of the peak of Cerro Mohinora, where the plants grow on the steep rock walls that shear off toward the northwest. This peak and

the surrounding area in southern Chihuahua is particularly rich in species of *Erigeron*. Four species of sect. *Polyactis* (Nesom 1989a) are primarily restricted in geographic range to that area, and *E. mohinorensis* Nesom of sect. *Imbarba* is endemic to the open pine-fir woods in the area immediately around the peak.

*Erigeron vicinus* Nesom, *sp. nov.* TYPE: MÉXICO. Coahuila: Mpio. Ocampo, Sierra Madera del Carmen, logging road ca. 1 km past Campo 4 in mesic forest, ca. 2500 m, 15 Apr 1976, *D. Riskind & T. Patterson 1988* (HOLOTYPE: TEX!; Isotypes: MEXU!, TEX!).

*E. pubescenti* Kunth similis sed plantis rhizomata breves efferentibus et caulibus prope basim pilosis differt.

Fibrous rooted perennials producing slender, ligneous, rhizomelike basal offsets 1-7 cm long. Stems basally ascending, 10-30 cm tall, monocephalous or sometimes with a single branch, reddish at base, strigose above, pilose with spreading-deflexed hairs on the basal third or the very base. Basal leaves persistent, spatulate, blades obovate, entire or with 1(-2) pairs of shallow teeth, 2-4 cm long, the blades 5-11 mm wide, stiffly pilose with long-ciliate petioles, the cauline oblanceolate, not clasping, strigose. Heads 7-10 mm wide, solitary on nearly naked peduncles 4-12 cm long; phyllaries in 2-3 series of nearly equal length, the longest 4-5 mm long, sparsely hirsute, sometimes sparsely and minutely granular glandular. Ray flowers 65-95 in 1-2 series, the corollas 7-10 mm long, the ligules 0.4-0.8 mm wide, white above with a lilac midstripe beneath. Disc corollas 1.8-2.2 mm long, slightly swollen above the tube. Achenes sparsely strigose, 2 nerved, 0.6-0.8 mm long; pappus of 8-11 fragile bristles slightly shorter than the disc corollas, with an outer series of squamellae ca. 0.1 mm long.

Coahuila (Sierra Madera del Carmen); pine to pine-fir woods, 2200-2500 m; flowering April-August.

Additional collections examined: MÉXICO. Coahuila. Mpio. Ocampo, Sierra Madera del Carmen: upper end of Dos Canyon at road fork to Campo Uno, 23 Jun 1976, *Fryzell 2724* (LL); logging road from Campo 4 at head of mesic draw, 28 May 1975, *Riskind & Patterson 1817b* (LL); Campo El Tres, 5 Aug 1974, *Wendt & Adamcewicz 492* (LL); Cañon El Dos, ca. 3/4 mi SE of Campo Dos, above moist mesic central part of canyon, 3 Apr 1974, *Wendt, et al. 129c* (LL).

*Erigeron vicinus* is clearly a member of sect. *Olygotrichium* (Nesom 1989c) and in its perennial duration, fibrous roots, strigose upper stems, and ray corollas with a lilac midstripe, it is most similar to *E. pubescens* Kunth and the *E. modestus* A. Gray-*E. metrius* S.F. Blake complex. Particularly, in its stems that are reddish and pilose near the base, it is similar to *E. modestus* and *E. metrius*, but I have seen no other plants among hundreds of collections of these,

with the distinctive rhizomatous habit of *E. vicinus*. The new species appears to be highly localized geographically, and the five known collections are all very similar among themselves. The epithet is intended to reflect the locality of the species, which is near the international boundary between México and the United States.

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