

NEW SPECIES AND COMBINATIONS IN *HOFMEISTERIA* (ASTERACEAE, EUPATORIEAE)

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ABSTRACT

A new species, *Hofmeisteria gayleana* B. Turner, is described from the Sinaloa-Durango border along highway 40, and *H. urenifolia* (Hook. & Arn.) Walp. var. *meziae* (B.L. Robins.) McVaugh is elevated to specific rank, *H. mexiae* (B.L. Robins.) B. Turner, *stat. et comb. nov.* Both species are related to *H. urenifolia* and a key to the complex is constructed, along with a map showing the distribution of critical taxa. An illustration of *H. gayleana* is also provided.

KEY WORDS: Asteraceae, Eupatorieae, *Hofmeisteria*, México

Hofmeisteria gayleana B. Turner, *sp. nov.* Fig. 1. TYPE: MEXICO. Sinaloa: Mpio. Concordia, Potrerillos a La Peteca, bosque mesófilo en transición con bosque de pino-encino, suelo pedregoso, ca. 1600 m, 25 Feb 1990, *Rito Vega A. 3680* (HOLOTYPE: TEX!; Isotype: EACS).

Hofmeisteriae urenifoliae (Hook. & Arn.) Walp. similis sed capitulis majoribus, involucris 9-11 mm altis (vs. 5-7 mm), flosculis numerosioribus (400+ vs. 100-180), et ramis styli roseis (vs. albis) differt.

Perennial rhizomatous herbs 20-60 cm high. Stems erect to recumbent, moderately pilose with crisp hairs up to 3 mm long. Midstem leaves mostly 6-8 cm long, 3-4 cm wide; petioles 2-4 cm long; blades mostly 5-7 pinnatifid, the ultimate segments ovate in outline, the margins irregularly dentate. Heads (pressed) 12-15 mm high, 15-20 mm wide, solitary on minutely glandular pubescent peduncles up to 16 cm long. Involucres campanulate, the bracts numerous (80+) 5-6 seriate, graduate, the outermost elliptic-lanceolate, ca. 3

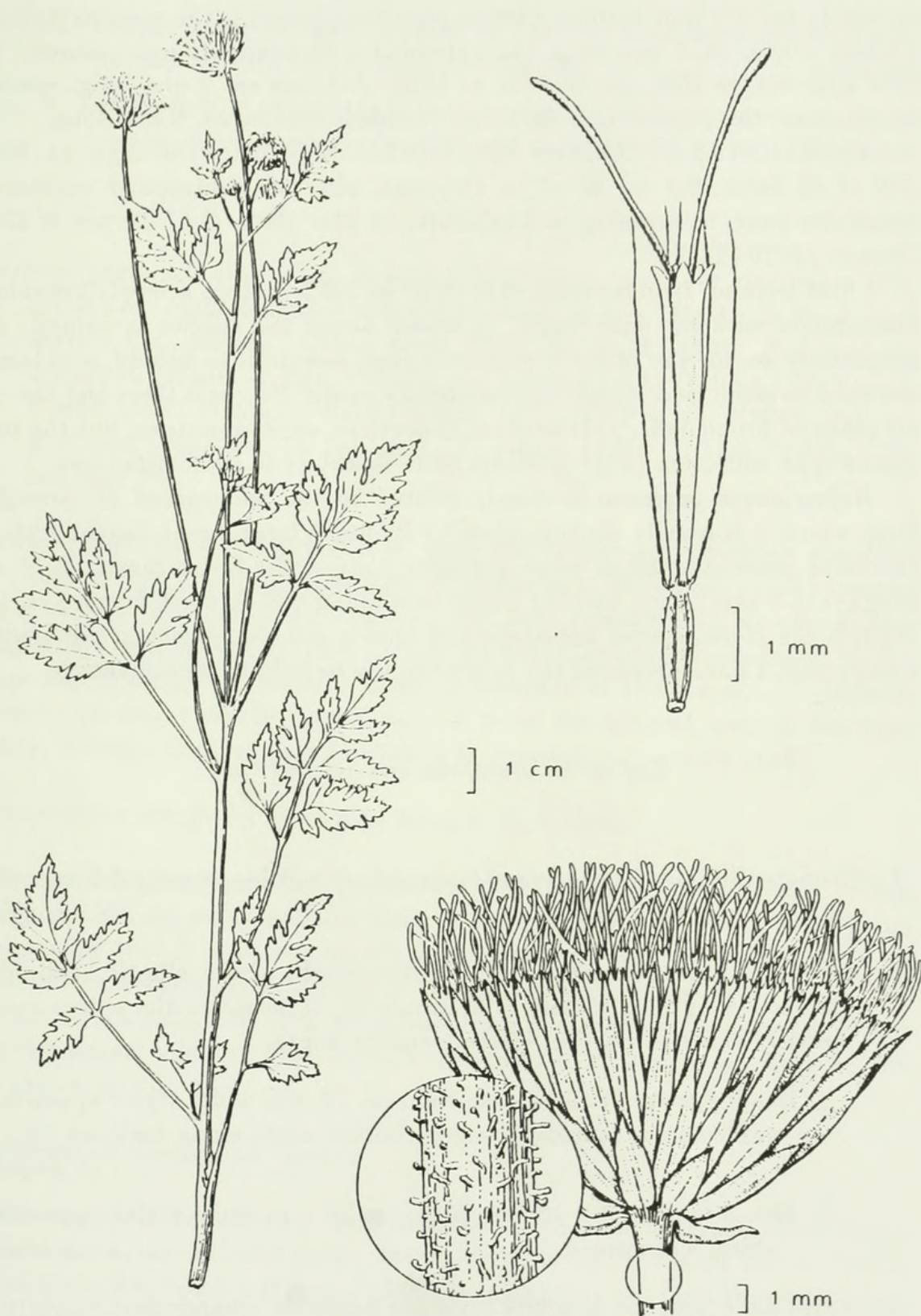


Fig. 1. *Hofmeisteria gayleana*, from holotype.

mm long, the innermost linear-lanceolate, ca. 10 mm long. Receptacle epaleate or nearly so, 4-5 mm across. Florets numerous (400+), the corollas tubular, pinkish white, ca. 5 mm long, the extended style branches rose colored. Anther appendages thin, ca. as wide as long. Achenes ca. 2 mm long, sparsely hispidulous, the pappus of 5 barbellate reddish bristles ca. 6 mm long.

ADDITIONAL SPECIMEN EXAMINED: MEXICO. Durango: ca. 60 mi SW of El Salto, 9.8 mi W of La Fraquita, pine-oak-subtropical vegetation, transition zone, in dripping wet habitats, 18 Mar 1982, *B.L. Turner & Gayle Turner 15070* (TEX).

I first became familiar with this plant in 1982, during a brief "botanical" honeymoon with my wife Gayle, in whose honor the species is named. Appropriately so, for the taxon is relatively rare, beautiful to behold, and largely confined to semicloud forests surrounded by exotic *Bocconia* trees and the pastel pinks of bromeliads. Our original collections were immature, but the more recent type collection (Fig. 1) leaves little doubt as to its distinctness.

Hofmeisteria gayleana is closely related to the widespread *H. urenifolia* from which it is readily distinguished by its much larger, rosy heads, with the involucre possessing 80 or more graduate bracts, the latter mostly 9-11 mm long (vs. 5-6 mm long), and the heads containing 400 or more florets (vs. 100-200). Since *Hofmeisteria urenifolia* and closely related species are difficult to distinguish, I have prepared the following key to help in identification:

Key to *H. urenifolia* and related taxa

1. Ultimate divisions of the leaves lanceolate in outline, mostly 2-5 mm wide, the apices mostly sharply acute. *H. schaffneri*
1. Ultimate divisions of the leaves oblanceolate, ovate elliptic, deltoid to cordate in outline, mostly 6-20 mm wide, if narrower the apices mostly broadly acute to obtuse, scarcely rigidly acute. (2)
 2. Heads (pressed) 10-15 mm high, ca. 20 mm wide; stylar appendages rose colored; Sinaloa-Durango border areas along highway 40. ...
..... *H. gayleana*
 2. Heads (pressed) 8-10 mm high, ca. 20 mm wide; stylar appendages white; widespread. (3)
3. Leaves dissected, the ultimate divisions narrowly oblanceolate to narrowly elliptic in outline; Sinaloa, Sierra Tacuichamona. *H. sinaloensis*
3. Leaves simple, broadly ovate to broadly elliptic in outline; Nayarit to Chiapas. (4)

4. Leaves ovate to ovate elliptic in outline; outermost bracts ovate; pappus bristles red; Sonora and Sinaloa. *H. standleyi*
4. Leaves deltoid to cordate in outline; outermost bracts linear-lanceolate; pappus bristles white; Nayarit and Jalisco. *H. mexiae*

Hofmeisteria mexiae (B.L. Robins.) B. Turner, *comb. & stat. nov.* **BA-SIONYM:** *Fleischmannia urenifolia* (Hook. & Arn.) Benth. & Hook. var. *mexiae* B.L. Robins., *Contr. Gray Herb.* II. 96:18. 1931. *Hofmeisteria urenifolia* (Hook. & Arn.) Walp. var. *mexiae* (B.L. Robins.) McVaugh, *Contr. Univ. Michigan Herb.* 9:402. 1972. **TYPE:** MEXICO. Jalisco: E of San Sebastian, 15 Feb 1927, Y. *Mexia* 16842 (**HOLOTYPE:** GH!; **Isotype:** F!).

King (1967) placed this taxon in synonymy under *Hofmeisteria standleyi* (S.F. Blake) King & H. Robins. without comment. McVaugh (1984) treated it as a variety of *H. urenifolia*, at the same time retaining *H. standleyi*. McVaugh notes that *H. mexiae* "is a distinctive plant, at once recognizable by the foliage alone, or by the dense matted pubescence of the stems...." Indeed, relatively invariant recent collections, all from the general area of the type locality, strongly suggest that the taxon is deserving of specific rank.

Hofmeisteria schaffneri (A. Gray) King & H. Robins.

The type of this taxon is from the state of San Luis Potosí, near Cd. San Luis Potosí. It was recognized by both King (1967) and McVaugh (1984), the latter noting that it occurs in mostly more interior, more montane, sites than *Hofmeisteria urenifolia* (1500-2500 m vs. 600-1200 m). King (1967) maps, but does not cite, a collection of *H. schaffneri* from the state of Guanajuato. Other than the latter, and the type itself, the species is known to me only by the sites shown in Fig. 2.

Hofmeisteria sinaloensis Gentry

This taxon is known only by two collections, both obtained from Sierra Tacnichamona, an isolated range about 1300 m high, located about 50 km SSE of Culiacán, Sinaloa (Gentry 1946). King (1967) retained the species but inexplicably mapped one of the syntypes as occurring in southernmost Sinaloa.

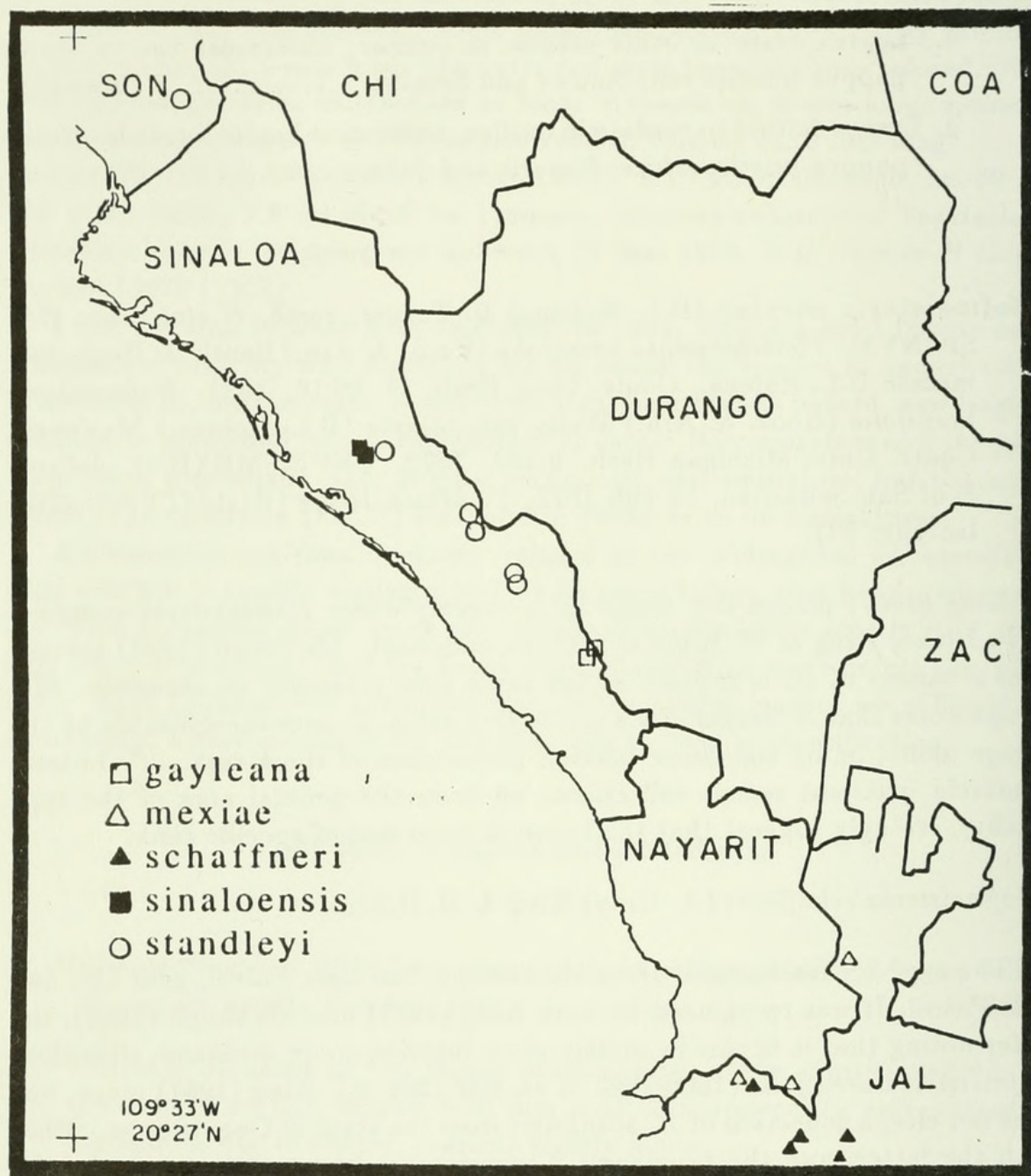


Fig. 2 Distribution of *Hofmeisteria* spp. in Sinaloa and adjacent states.

Hofmeisteria standleyi (S.F. Blake) King & H. Robins.

King (1967) recognized this species, but McVaugh (1984) placed it in synonymy under *Hofmeisteria urenifolia* without comment. I intend to recognize the species. It is known to me only by collections from southernmost Sonora along the Pacific slopes to about latitude 24° N in Sinaloa (Fig. 2). King (1967) maps two collections as occurring in southern Nayarit and closely adjacent Jalisco, but these are apparently collections of what I take to be *H. merxiae*, which King treated as synonymous with *H. standleyi*.

ACKNOWLEDGMENTS

I am grateful to Guy Nesom for the Latin diagnosis and to him and Jackie Soule for reviewing the manuscript. Nancy Webber provided the illustration.

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