

THREE NEW SPECIES OF KOANOPHYLLON (ASTERACEAE-EUPATORIEAE)  
FROM WESTERN MEXICO

B. L. Turner

Department of Botany, University of Texas, Austin TX 78713

A forthcoming treatment of the Asteraceae of Mexico (Turner & Nesom, in prep.) necessitates description of the following novelties. While described within Koanophyllon this need not mean I favor acceptance of the generic name, as already noted (Turner, 1983).

KOANOPHYLLON SINALOENSIS B. Turner, sp. nov.

K. richardsono affinis sed foliis pubescentibus, capitulis parvioribus, et acheniis hispidis differt.

Shrub to ca 2 m high. Stems brown, puberulent, the internodes mostly 3-7 cm long; leaves opposite throughout, 11-17 cm long, 3-7 cm wide; petioles 2.5-5.0 cm long, puberulent; blades thin, broadly ovate to somewhat deltoid, the flanges rounded, 3-nerved from the base, moderately pubescent above and below, especially along the veins, atomiferous-glandular, the apices long attenuate, the margins crenulo-serrulate; heads 4-5 mm high, numerous in terminal or axillary cymose-panicles, the ultimate peduncles mostly 3-6 mm long; involucre 2-seriate, 2.2-2.7 mm long; bracts 12-13, linear-lanceolate; receptacle glabrous; florets 13-19 per head; corollas reportedly white or pale lavender, glabrous or a few atomiferous glands present, ca 2.5 mm long, the tube ca 1 mm long gradually flaring into the throat; achenes ca 1.5 mm long, brown, markedly hispid; pappus of 20-30 white bristles, 2.0-2.5 mm long.

TYPE: MEXICO. SINALOA: Mpio. Badiraguato, 3 mi N of Los Ornos along road to Ocurahui, Sierra Surutato, 6500 ft, 3 Nov 1969, D. E. Breedlove & F. S. Kawahara 16906 (holotype MICH).

Additional Specimens Examined: CHIHUAHUA: Mpio. Ocampo, area of Cascada de Basaseachic at the confluence of Rio Basaseachic and Rio Durazo, ca 2 mi S of Basaseachic (28°02'N x 107°55'W), 2100-2200 m, 17-20 Oct 1986, G. Nesom & L. Vorobik 5566 (TEX, MEXU). SINALOA: Mpio. Sinaloa y Vela, 5 mi NW of Los Ornos along road to Mocorito, 5800 ft, 6 Nov 1969, Breedlove & Kawahara 17091 (MICH).

The species is superficially similar to Koanophyllon richardsonii B. Turner (1983), a species of northeastern Mexico with nearly glabrous leaves, larger heads and eciliate, glandular, achenes.



KOANOPHYLLON RZEDOWSKII B. Turner, sp. nov.

K. richardsono affinis sed foliis parvioribus tenuioribus valde pubescentibus petiolis longioribus et acheniis hispidis differt.

Shrub to 1.5 m high; stems densely tan-hirsutulous; leaves opposite, 5-8 cm long, 2.0-3.5 cm wide; petioles 0.5-1.0 cm long; blades broadly ovate, obtuse or rounded at base, 3-nervate, moderately pubescent above, both hirsute and atomiferous-glandular beneath, the margins denticulate to nearly entire; heads numerous, terminal and axillary in corymbose panicles; involucre 4-5 mm high, 3-4 seriate, graduate, the bracts 2-5 mm long, puberulent, narrowly lanceolate, the apices sharply acute; receptacle plane, glabrous; florets 30-34 per head; corollas whitish, glabrous, 3.0-3.5 mm long, the lobes ca 0.5 mm long; anther appendages thin, somewhat flattened, ca 0.25 mm long, 0.20 mm wide, rounded at the apices; achenes ca 2.5 mm long, brown, the ribs 5, yellow, hispidulous, carpoid well-marked, annular; pappus of 20-25 ciliate, tawny, bristles ca 3 mm long.

TYPE: MEXICO. SAN LUIS POTOSI: Sierra de San Miguelito, cañon arriba de Terrero, 2250 m, 8 Sep 1954, G. C. Rzedowski 4324 (holotype MICH).

The holotype was determined by its collector to be Eupatorium mendezii, which is a synonym of E. collinum, as noted by McVaugh (1984). King and Robinson treat this latter taxon within their concept of the genus Chromolaena. Indeed, K. rzedowskii much resembles E. collinum but differs in numerous details (nonurceolate, persistent, involucre bracts, etc.). Nevertheless, it is likely that E. collinum is better positioned within the Koanophyllon grouping than within Chromolaena itself, as indicated by Whittemore (1987).

Koanophyllon rzedowskii is closely related to K. richardsonii B. Turner, which differs in having larger, thinner, nearly glabrous leaves, with much longer petioles, glandular instead of hispid achenes, etc. It is also close to K. revrobinsonii of Nuevo Leon. All of these are in turn related to K. longifolia (B. L. Rob.) King & H. Rob. and K. gracicaulis (Sch-Bip. ex B. L. Rob.) King & H. Rob. which appear to make up a fairly close-knit species group in Koanophyllon.

KOANOPHYLLON GUERREROANA B. Turner, sp. nov., Fig. 1

K. albicauli affinis sed foliis grandibus ellipticis coriaceis et corymbis axillaribus differt.

Said to be a "vine"; stems white; leaves opposite, thick and leathery, 15-20 cm long, 4.5-6.0 cm wide, minutely pubescent below



to glabrate; petioles 5 mm long; blades elliptical, prominently 3-nerved from 10-15 mm above the base; heads ca 9 mm high, 10-15, in short axillary clusters, the ultimate peduncles 1-6 mm long; involucre 2-3 seriate, ca 6 mm long; bracts linear-lanceolate, dark, without well-defined nerves, puberulent throughout, the apices acute; florets 18-20 per head; corollas 4-5 mm long, glabrous, the lobes atomiferous-glandular; achenes (immature) ca 2.5 mm long, pubescent; pappus of ca 50 bristles, 4-6 mm long.

TYPE: MEXICO. GUERRERO: District Coyuca, Santa Barbara, 6 Apr 1935, G. B. Hinton et al. 7592 (holotype GH).

The type and only known collection is depicted in Fig. 1. It is very closely related to K. albicaulis (Klatt) King & H. Rob. but is so strikingly different as to leaf shape, size, and texture, capitulescence and habit (described as a "vine" on the collectors' label) that I dare describe it as new. At least the collection stands out from among the hundreds of specimens of this plant which I have examined at GH, LL, TEX, UC and US. Nevertheless, it is possible that the collection is from an aberrant, late-flowering individual taken from older parts of the plant, thus perhaps the peculiar capitulescence and thicker, larger leaves.

While Koanophyllon albicaulis occurs along the Pacific Coast of Mexico from Chiapas to Sinaloa, I have not previously seen specimens from the states of Guerrero or Oaxaca. Nor had McVaugh (1984), to judge from his account of the taxon for Flora-Novogaleciana. B. L. Robinson recognized the material from northwestern Mexico as Eupatorium albicaule var. laxius B. L. Rob., which was distinguished from the var. albicaule by its loose capitulescence and linear-attenuate involucre bracts. He subsequently elevated the variety to specific rank as Eupatorium ymalense B. L. Rob. Neither McVaugh (1984) nor King and Robinson (1971) recognize the varietal taxon, although its treatment as a regional variant of E. albicaule would seem to have merit. In any case the present species has involucre characters of var. laxius.

The type locality (Santa Barbara) is on the flood plain of the Rio Balsas ("habitat: IRF Balsas" is typed on the label), which is located by Hinton and Rzedowski (1975) at ca 18°16'N x 100°31'W at an elevation of ca 800 m, well above the 300 m limit which McVaugh notes for E. albicaule.

#### ACKNOWLEDGEMENTS

I am grateful to GH and MICH for the loan of material and to Dr. Guy Nesom for the Latin diagnoses. Ms. Katy Bear produced the Figure.



## LITERATURE CITED

- Hinton, J. and J. Rzedowski. 1975. George B. Hinton, explorado or Botanico en el Sudoeste de Mexico. Ann. Escuela Nac. Cien. Biol. 21: 1-114.
- King, R. and H. Robinson. 1971. Studies in the Eupatorieae (Asteraceae) LXIV. The genus Koanophyllon. Phytologia 22: 147-152.
- McVaugh, R. 1984. Eupatorium, in Flora Novo-Galiciana 12: 340-424.
- Turner, B. L. 1983. Two new species of Koanophyllon (Asteraceae-Eupatorieae) from northeastern Mexico. Phytologia 52: 495-498.
- Whittemore, A. 1987. Systematic study of Critonia (Asteraceae-Eupatorieae). Doctoral Thesis, University of Texas, Austin.

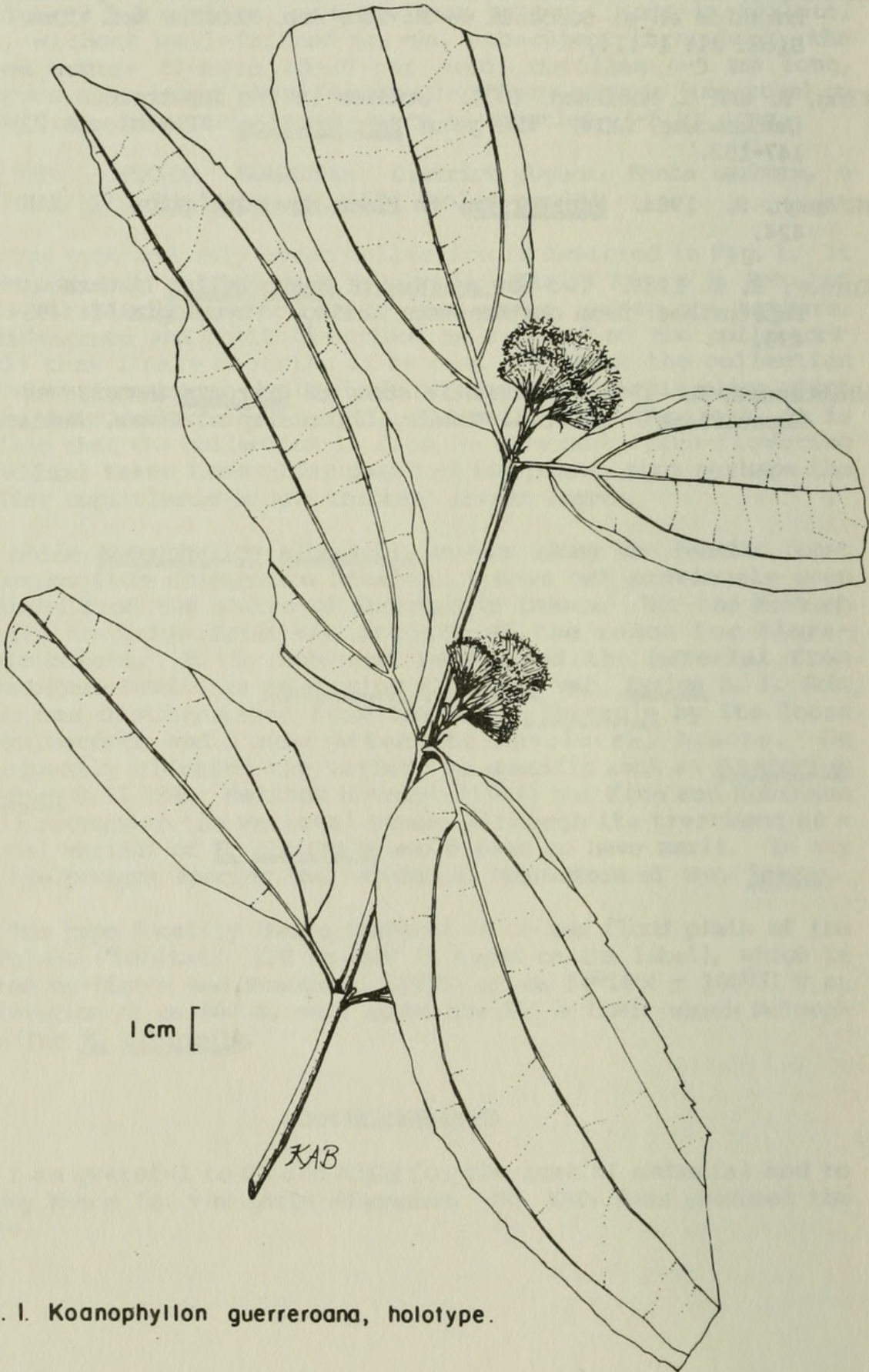


Fig. 1. *Koanophyllon guerreroana*, holotype.



Turner, B. L. 1987. "Three new species of Koanophyllon (Asteraceae-Eupatorieae) from western Mexico." *Phytologia* 63, 202–206.  
<https://doi.org/10.5962/bhl.part.20625>.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/48959>

**DOI:** <https://doi.org/10.5962/bhl.part.20625>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/20625>

**Holding Institution**

New York Botanical Garden, LuEsther T. Mertz Library

**Sponsored by**

The LuEsther T Mertz Library, the New York Botanical Garden

**Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

Rights Holder: Phytologia

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.