Melampodium elottianum (Asteraceae: Heliantheae) A new species from along the Rio Cuixmala, Jalisco

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ABSTRACT

A novel taxon, **Melampodium elottianum** B.L. Turner, **sp. nov.,** is described from along the Rio Cuixmala of western Jalisco. It presumably belongs to the Sect. Serratura. A photograph of the Type is provided, along with a key to the Mexican species of the Sect. Serratura, including distribution maps. Published on-line www.phytologia.org *Phytologia 98(1): 26-29 (Jan 5, 2016).* ISSN 030319430.

KEY WORDS: Asteraceae, Heliantheae, *Melampodium*, Mexico, Jalisco

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Routine identification of Mexican Asteraceae has revealed the following novelty, a low elevation riparian species from along the Rio Cuixmala of the Chamela Bay Region, Jalisco.

MELAMPODIUM ELOTTIANUM B.L Turner, **sp. nov. Fig. 1**

Annual herbs to 30 cm high. **Mid-stems** glabrous or nearly so. **Leaves** opposite, 3-4 cm long, 1.0-1.5 cm wide; petioles 1-4 mm long, passing into the blades; blades lanceolate, pinnately veined, sparsely pubescent above and below, the margins entire. **Heads** single, terminal or axillary, 5-6 mm wide, 4-5 mm high, the ultimate peduncles sparsely pubescent, 2-4 cm long. **Involucres** of 5 broadly ovate bracts, 2-3 mm long, 1-2 mm wide, pubescent below with stiff hairs, their margins not membranous. **Receptacles** ca 2 mm wide, 3 mm high; pales linear-oblanceolate their apices rounded, pubescent. **Ray florets** 11, fertile; ligules "yellow," ca 3 mm long, 2 mm wide, under surfaces with 3-6 prominent green ribs. **Achenes** somewhat arcuate, epappose, glabrous, ca 2 mm long, having 3 prominent lateral ribs and a prominent dorsal rib. **Disk florets** ca 30, sterile, the corollas yellow, glabrous.

TYPE: **MEXICO. JALISCO: Mpio. La Huerta,** "Rancho Cuixmala, W of the Puerto Vallarta--Barra de Navidad (Mex 200) hwy., along the Rio Cuixmala." 19 23 N, 104 58 45 W, "Riparian zone. Uncommon straggling perennial," 12 Jan 1991, *Emily J. Lott 3188* [with B.L. Phillips] (Holotype: TEX).

As noted above, the collectors described the plant as a straggling perennial, but it appears to be a tap-rooted annual, to judge from its root system. Lott (1993), in her checklist of the region concerned, listed the type as **M. microcephalum**, this presumably my misidentification at the time.

In McVaugh's treatment of **Melampodium** for Flora Novo-Galiciana, the novelty will key, reluctantly, to, or near, **M. glabrum**, a poorly known species of aquatic habitats that Stuessy (1972, 1979) positioned in the Sect. Alcina, (along with **M. nutans** and **M. perfoliatum)**. Stuessy et al. (2011), using DNA data, treated **M. nutans** and **M. glabrum** as belonging to 2 newly established, monotypic sections. Their studies also suggested that Sect. Serratura was a natural grouping.

Melampodium elottianum appears to belong to the Sect. Serratura of **Melampodium** (Stuessy 1972; Stuessy et al. 2011); in Mexico, the complex contains six species, including the widespread, very common, **M. divaricatum** (Map 1) and the relatively rare taxa, **M. dicoelocarpum**, **M. tepecense** and the very rare **M. sinaloense** from NW Mexico, **M. northingtonii** from Oaxaca (Turner 1988) and the

presently described **M. elottianum** (Map 2), the latter presumably a riparian species of low elevations in western Jalisco, as noted on the type itself.

The novelty is named for Emily Lott, long time student of The Mexican flora and author of the checklist of the Chamela Bay Region of Jalisco (Lott 1993).

Artificial key to the Mexican taxa of Sect. Serratura

1. Ligules of ray florets 3.5-7.0 mm long; widespread.....**M. divaricatum**
1. Ligules of ray florets 1-3 mm long; western Mexico...(**2**)

2. Ultimate peduncles mostly 15-75 mm long...(**4**)
2. Ultimate peduncles mostly 0-15 mm long...(**3**)

3. Ligules of ray florets 0.8-1.0 mm long; Nay, Jal, Col, Mic..... **M. tepicense**
3. Ligules of ray florets 1.5-2.0 mm long; n Sin..... **M. sinaloense**

4. Involucres 3-6 mm high; lateral surfaces of achene having 2 deep oval pits; peduncles mostly 30-70 mm long.....**M. dicoelcarpum**
4. Involucres 2-3 mm high; lateral surfaces of achene otherwise; peduncles mostly 8-40 mm long; Jal, Oax... (**5**)

5. Petioles 5-8 mm long; ray florets 5; Oax.....**M. northingtonii**
5. Petioles 1-4 mm long; ray florets 11; Jal .....**M. elottianum**

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Thanks to Emily Lott for bibliographic information and to Jana Kos for editorial assistance. My Academic son, Prof. Tod Stuessy (Turner 2015), attempted DNA analysis from leaf material of the holotype for phyletic purposes, but was unable to obtain meaningful data. I much appreciated his attempt to do so. My reexamination of the type concerned still strongly suggests (to me at least) that it relates to **M. northingtonii**, which Stuessy et al. (2011) position in the Sec. Serratura.

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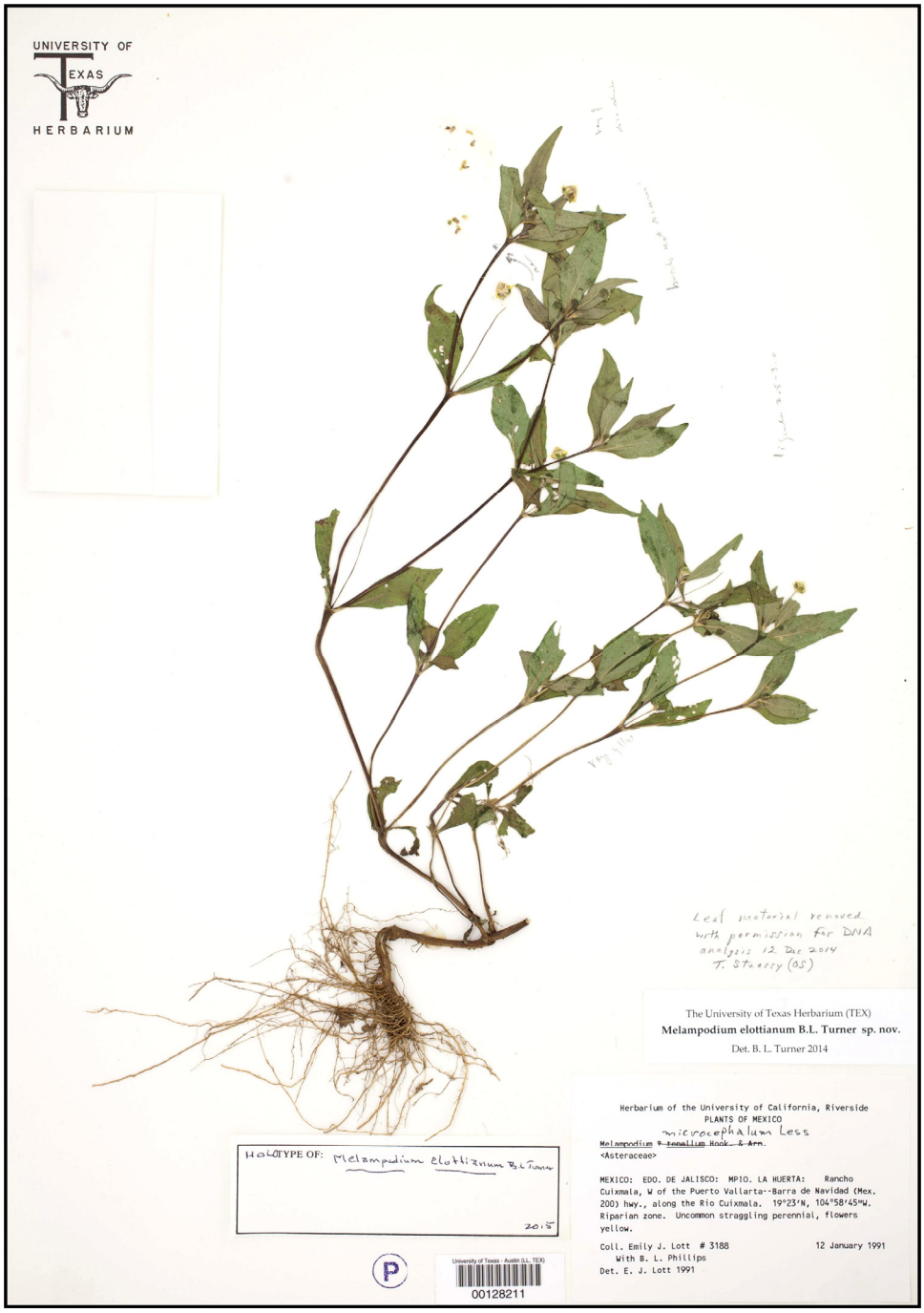
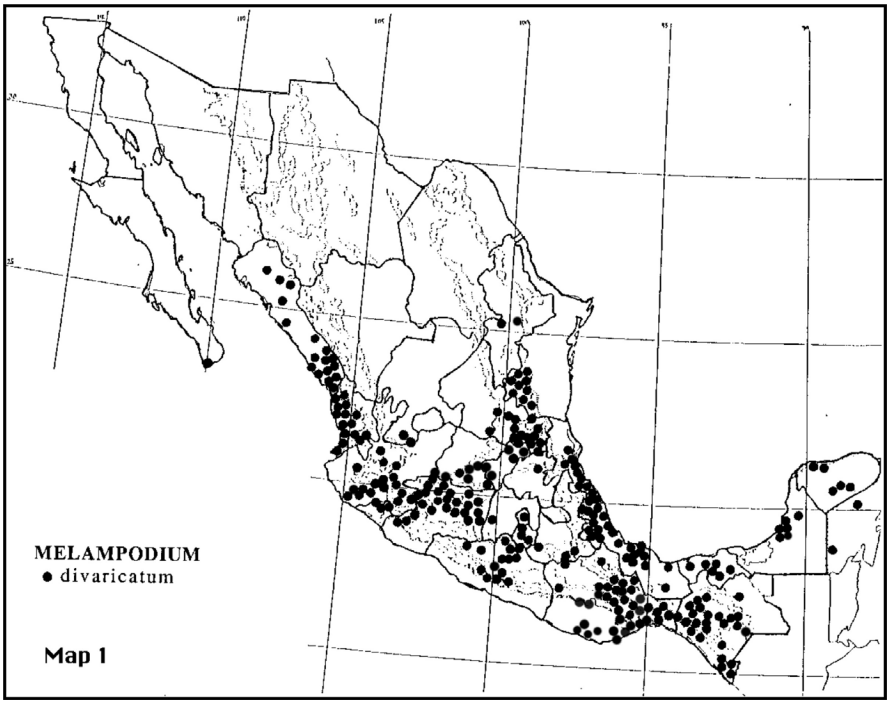
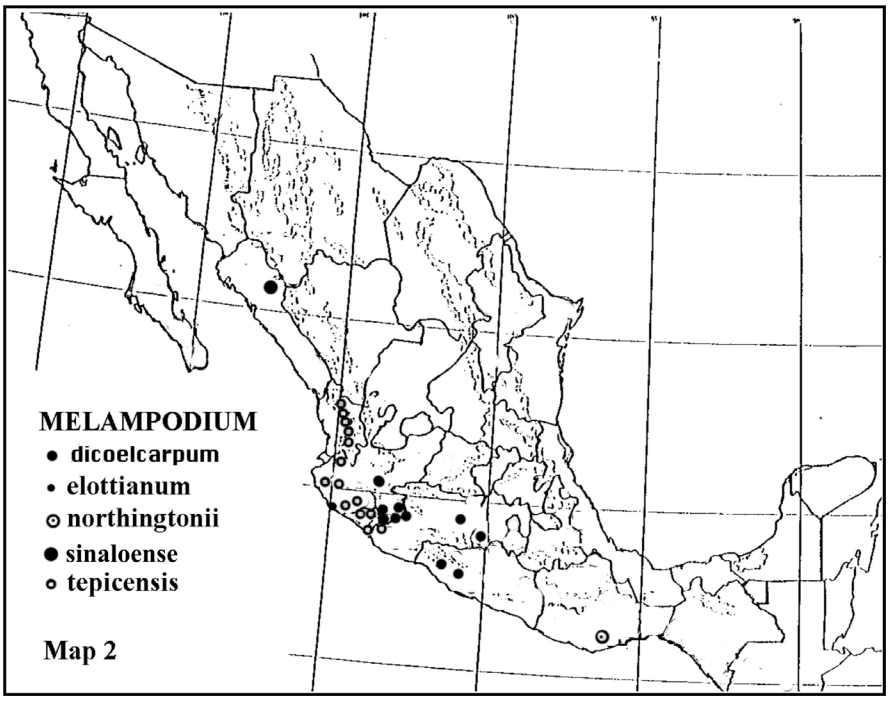


Figure 1. *Melampodium elottianum*


MELAMPODIUM
● divaricatum
Map 1


MELAMPODIUM
● dicoelcarpum
• elottianum
⊙ northingtonii
● sinaloense
○ tepicensis
Map 2