

Five new species of *Ageratina* (Asteraceae: Eupatorieae) from Oaxaca, Mexico

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ABSTRACT

Five new taxa of *Ageratina* are described from Oaxaca, Mexico: *Ageratina cuicatlan* B.L. Turner, **sp. nov.**; *Ageratina etlana* B.L. Turner, **sp. nov.**; *Ageratina megaphylla* B.L. Turner, **sp. nov.**; *Ageratina pauciflora* B.L. Turner, **sp. nov.**; *Ageratina tejalpana* B.L. Turner, **sp. nov.** Photographs of the types are presented, along with appropriate maps showing their distribution (vis a vis closely related taxa). www.phytologia.org *Phytologia* 95(2): 141 - 150 (May 1, 2013).

KEY WORDS: Asteraceae, Eupatorieae, Mexico, Oaxaca, *Ageratina*.

Preoccupation with the study of a potpourri of Mexican Asteraceae from the state of Oaxaca, sent to the author by SERBO for identification, has occasioned the present paper.

AGERATINA CUICATLANA B.L. Turner **sp. nov.** Fig. 1

Stiffly erect perennial herbs to 40 cm high. **Stems** pubescent with minute coarse hairs, the vestiture ca 0.2 mm high. **Leaves** (upper) mostly alternate, 2-4 cm long, 1-2 cm wide; petioles 0.5-1.0 cm long; blades ovate, both surfaces somewhat glutinous and glandular-punctate, glabrous or nearly so, 3-nervate from the very base, the margins minutely serrate. **Capitulescence** a terminal cymose panicle ca 8 cm high, 3-8 cm wide, the ultimate peduncles 5-15 mm long. **Heads** cylindric, ca 7-8 mm high, 3-5 mm wide; involucre bracts ca 10, 2-seriate, linear-lanceolate, 3-nervate. **Receptacle**, plane, viscid, ca 1 mm across. **Florets** 8-10 per head; corollas white, glabrous, 4-5 mm long; tubes ca 2 mm long, the 5 lobes ca 1 mm long. **Achenes** viscid, apically pubescent, ca 2 mm long; pappus of ca 40 stiff, persistent, somewhat tawny bristles ca 5 mm long.

TYPE: MEXICO. OAXACA: Distrito Cuicatlan, Mpio. San Juan Bautista Cuicatlan, "12.9 km de la Cieneguilla, bajada a Santa Catarina Tlaxila." ca 2095 m, 17 29 43.5 N, 97 00 1.1 W, "Selva baja caducifolia secundario." 8 Nov 2001, *Silvia H. Salas M. 4353* [with Schibli & Chemnick] (Holotype: MEXU; isotype: TEX). **Map 1**

This species belongs to the subgenus *Neogreenella*, nesting among the alternate leafed complex, somewhere near *A. hyssopifolia* (Gray) King & Rob. and *A. thrysiflora* (Greene) King & Rob., to which it will key in my treatment of *Ageratina* for Mexico (Turner 1997); the latter two taxa are confined to northwestern Mexico, and bear little resemblance to the present novelty.

The name refers to the Distrito Cuicatlan, whence the type.

AGERATINA ETLANA B.L. Turner, **sp. nov.** Fig. 2

Perennial herbs to 1 m high. **Stems**, densely glandular-pubescent, the vestiture ca 0.3 mm high. **Leaves** (upper) 6-7 cm long, 2-3 cm wide; petioles 1.5-3.0 cm long; blades ovate-lanceolate, 3-nervate from the base, upper surfaces weakly pubescent, lower surfaces glandular pubescent, mainly along the veins, the margins serrulate. **Capitulescence** a terminal cymose panicle of 10-20 heads, 3-4 cm high, 4-5 cm across, the ultimate peduncles 5-10 mm long, beset with 3-6 linear bracts. **Heads**, 4-5 mm high, 5-6 mm wide; involucre bracts 2-seriate, 3-4 mm long, linear-lanceolate, markedly glandular-pubescent. **Florets** ca 40 per head; corollas glabrous, ca 4 mm long, pinkish white (dried); tubes much-narrowed, 1.5- 2.0

mm long; throat campanulate, ca 1.5 mm long; lobes 5, ca 0.5 mm long, glabrous, or nearly so. **Anthers** yellow, the appendages ovate. **Achenes**, black, glabrous, ca 1.5 mm long; pappus of ca 20 readily deciduous bristles ca 4 mm long.

TYPE: MEXICO. OAXACA: Distrito Etla, Mpio. San Felipe Tejalapa, "El Timbre," ca 1819 m, 17 03 06.4 N, 96 53 39.4 W, 14 Feb 2012, Mario Cruz Cruz [MAC] 878 (holotype: TEX). **Map 2**

According to the collector, the plant occurred in a "Bosque de pino-encino. orilla de rio."

In my treatment of *Ageratina* for Mexico, largely because of its densely glandular-pubescent stems and foliage, the novelty will key to *A. zunilana* (Standl. & Steyerl.) King & Rob., a species of Chiapas and Guatemala having much larger heads (7-8 mm high vs 4-5 mm), pubescent achenes (vs glabrous), among yet other characters.

The name refers to the Distrito Etla, whence the Type.

AGERATINA MEGAPHYLLA B.L. Turner, sp. nov. Fig. 3

Shrubs 2 m high. **Stems** (upper), ca 5 mm thick, densely pubescent with tawny, spreading hairs, the vestiture 1-2 mm high. **Leaves** (mid-stem), opposite, ca 17 cm long, 9 cm wide; petioles 2.5-3.0 cm long, pubescent like the stems; blades broadly ovate, pinnately nervate, sparsely pubescent above, more densely so below, especially along the venation; margins irregularly serrate. **Capitulescences** axillary, cymose-paniculate, the ultimate peduncles mostly 2-5 mm long. **Heads**, 4-5 mm high; involucre bracts lanceolate, 4-5 mm long, ca 0.5 mm wide, apically acute, sparsely pubescent. **Florets**, ca 20 per head; corollas, ca 3 mm long, glabrous, except for the pubescent lobes. **Achenes** (immature) ca 2 mm long, sparsely pubescent; pappus of ca 30, very fragile, ciliate, white bristles ca 3 mm long.

TYPE: MEXICO. OAXACA: Distrito Etla; Mpio. San Felipe Tejalapa. Captacion de agua El Negro. "Bosque de pino-encino. Orilla de arroyo, en cascado negro." 17.1 25.7 N, 96.55 0.7 W, ca 2210 m, 17/02/2012, Mario Cruz Cruz [MC] 993 (Holotype: TEX). **Map 1**

In my treatment of *Ageratina* (subgenus *Ageratina*) for Mexico (Turner 1997), the present novelty will key to or near *A. peracuminata* King & Rob., an herbaceous species of south-central Oaxaca having much thinner, smaller, somewhat deltoid, sparingly pubescent, leaf blades. *Ageratina megaphylla* is described by its collector, as a shrub "2 m" high; it is perhaps best recognized by its large leaves (hence the appellation), and densely pubescent stems and petioles.

AGERATINA PAUCIFLORA B.L. Turner, sp. nov. Fig. 4

"Arbol" to 3 m high. **Leaves** (upper) opposite, pinnatinervate, 12-18 cm long, 5-7 cm wide; petioles 2-3 cm long, narrowly winged and grading into the blades, glabrous and glandular-punctate above and below, their margins irregularly serrate. **Capitulescence**, a terminal, cymose-panicle ca 5 cm high, 7 cm wide, the ultimate peduncles minutely glandular pubescent, viscid, 2-5 mm long. **Heads** narrowly campanulate, 6-7 mm high, ca 3 mm wide; involucres ca 4 mm long, composed of 5-7, linear-lanceolate, bracts arranged in 2 series, their apices acute to obtuse. **Florets** 2-4(5) per head, glabrous; corollas white, glabrous, ca 3 mm long; throat ca 0.75 mm long, the lobes 5, ca 1 mm long. **Stamens** scarcely exerted, if at all, anthers yellow, their apices ovate, ca as wide as long. **Achenes** ca 2 mm long, glabrous; pappus of ca 20 persistent bristles, ca 4 mm long.

TYPE: **MEXICO. OAXACA: Distrito, Sola de Vega, Mpio. Santiago Textitlan.** “Paraje La Fragua.” ca 2335 m, 16 47 12.1 N, 97 18 57.4 W, 14 Mar 2007, *Arturo Sanchez Martinez* 2079 [with Ana Ruiz & Mayra Hernandez] (Holotype: TEX)

The species reportedly occurs in pine-oak forests. It is named for its relatively few-flowered heads.

Ageratina pauciflora clearly belongs to the ***A. ligustrina*** (DC.) King & Rob. complex, a wide-ranging, highly variable assemblage, as envisioned by Turner (1997). It can be readily separated from the former by its very large leaves, smaller, fewer-headed capitulescences, and smaller heads with fewer florets. The distribution of the two taxa in Oaxaca also differs, as indicated in **Map 4**.

AGERATINA TEJALAPANA B.L. Turner, *sp. nov.* **Fig. 5**

Perennial herbs to “1 m” high. **Mid-stems** minutely pubescent. **Leaves** opposite, 4-5 cm long, 3-4 cm wide; petioles 5-12 mm long, pubescent like the stems; blades subcordate, glabrous above and below, or nearly so; margins serrate, the teeth obtuse to rounded. **Capitulescence** a terminal, cymose panicle, ca 25 cm high and as wide, the ultimate peduncles 1-4 cm long. **Heads** campanulate, 5-6 mm high, ca 8 mm across; involucre bracts biseriate, the bracts linear-lanceolate, glabrous, 4-5 mm long, 1.0-1.5 mm wide, the apices acute to obtuse. **Florets** white, 50-60 per head; corollas ca 3.5 mm long, glabrous, except for the pubescent lobes. **Achenes** (immature) sparsely pubescent, ca 1.5 mm long; pappus of ca 20 readily deciduous white bristles ca 3 mm long.

TYPE: **MEXICO. OAXACA: Distrito Etla, Mpio. San Felipe Tejalapa,** “Loma de la Mina. Bosque de Encino-pino, sobre cerro, suelo amarillo.” 17 04 9.4 N, 96 53 23.9 W, ca 1833 m, 17 Oct 2011, *Cleotilde Cervantes Morales* [CLEO] 558 (Holotype: TEX).

This novelty will key to ***A. choricephala*** in my treatment of Mexican ***Ageratina*** (Turner 1997), a more northern species having a smaller capitulescence with smaller, fewer-flowered heads and fewer involucre bracts. Distribution of the two taxa is shown in **Map 4**.

The species name derives from the Mpio. San Felipe Tejalapa, whence the Type.

As noted by Turner (2010), “*Ageratina* is perhaps the most speciose genus of the Asteraceae in Mexico;” with description of the five taxa herein, the generic number currently stands at ca 190.

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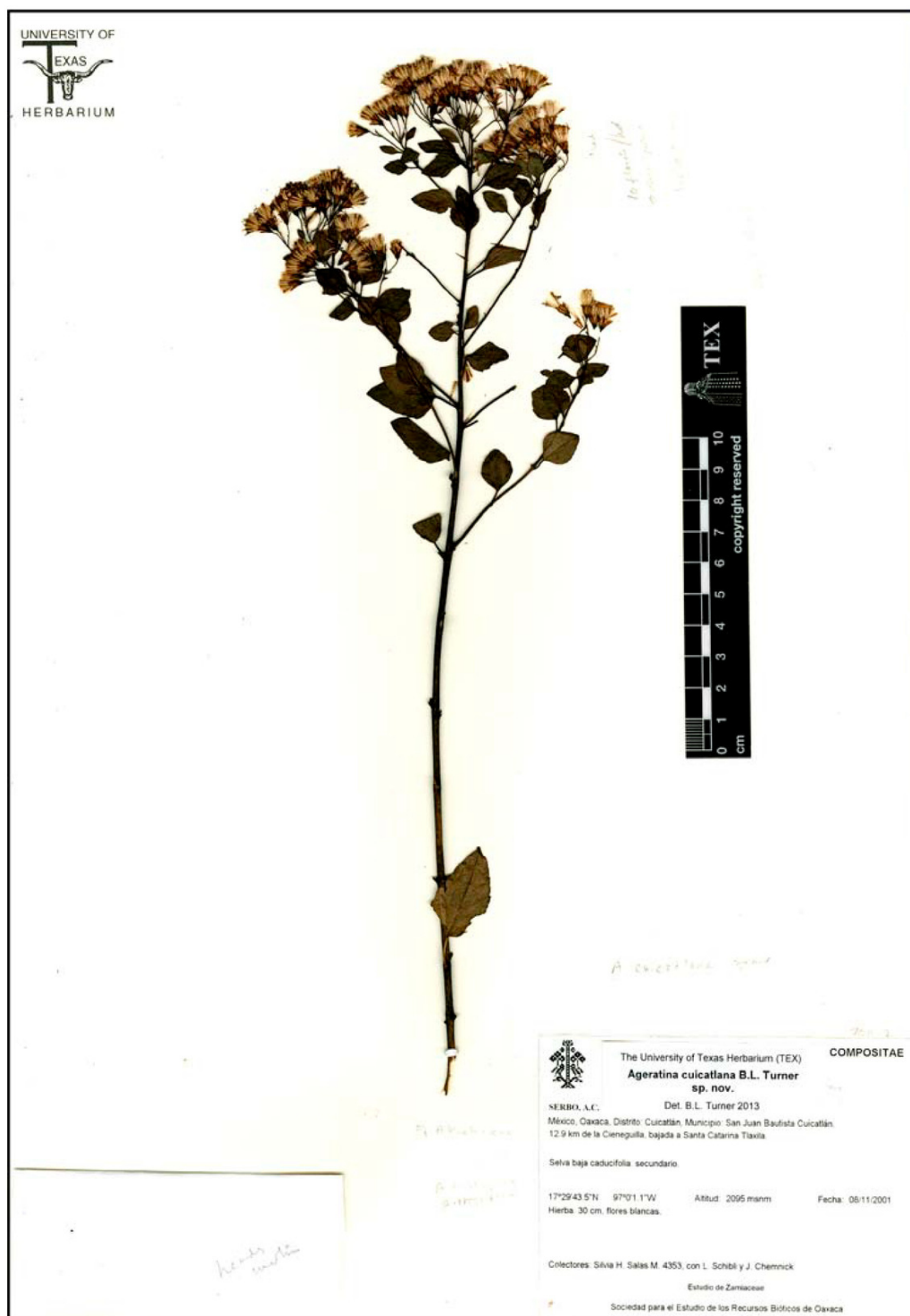


Fig. 1 *AGERATINA CUICATLANA* B.L. Turner sp. nov.



Fig. 2 *AGERATINA ETLANA* B.L. Turner, **sp. nov.**

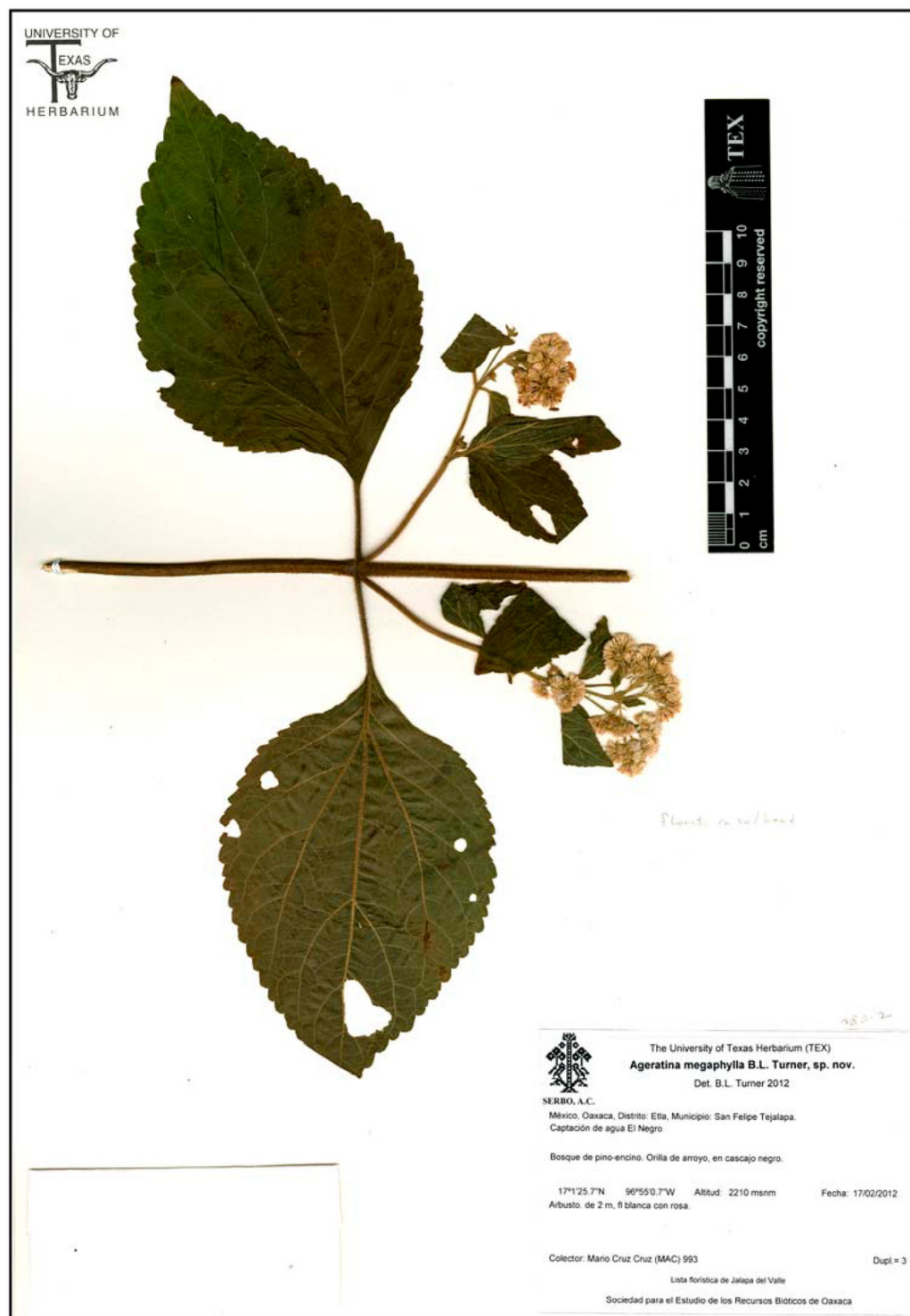


Fig. 3 *AGERATINA MEGAPHYLLA* B.L. Turner, sp. nov.



Fig. 4 *AGERATINA PAUCIFLORA* B.L. Turner, sp. nov.

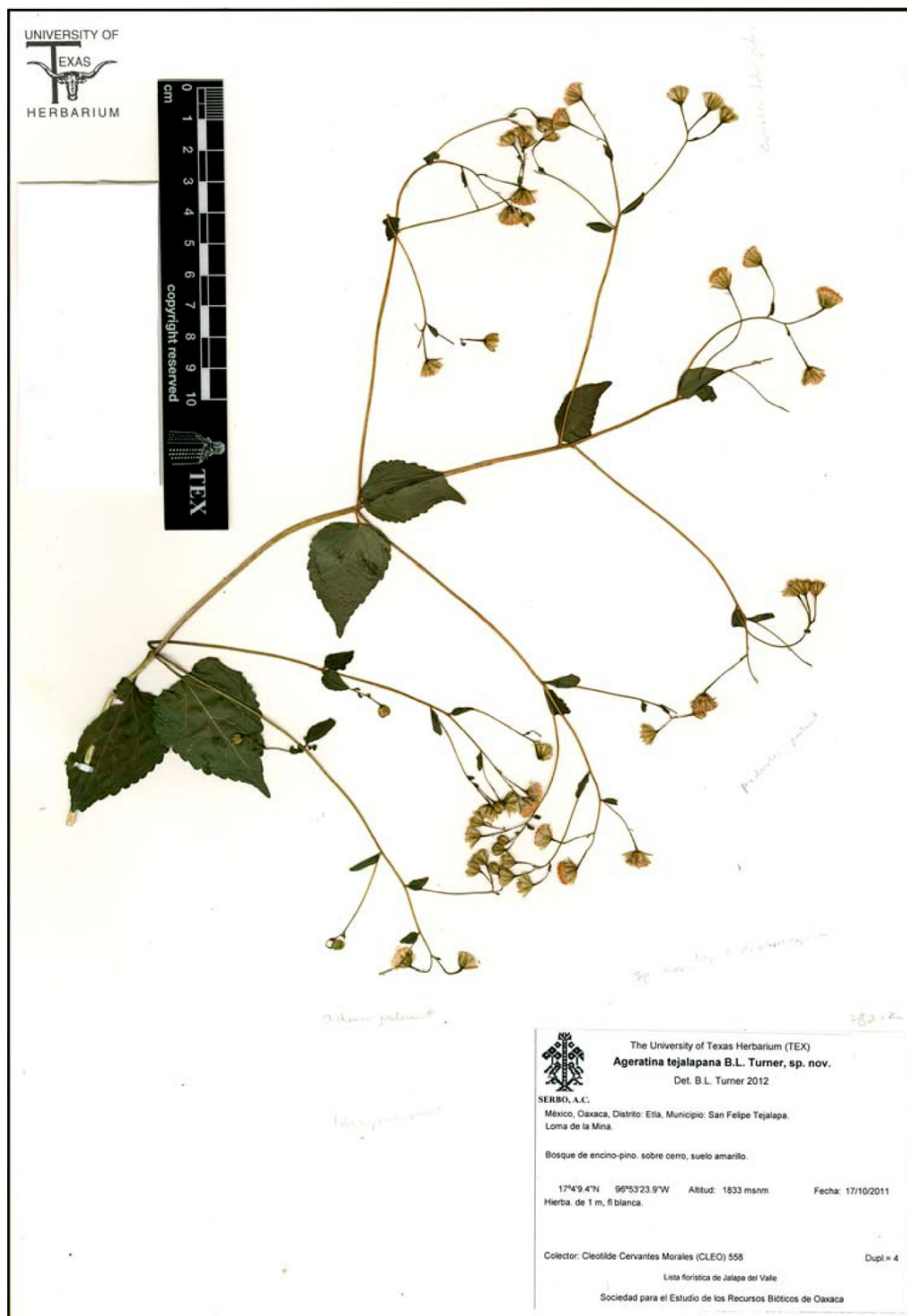
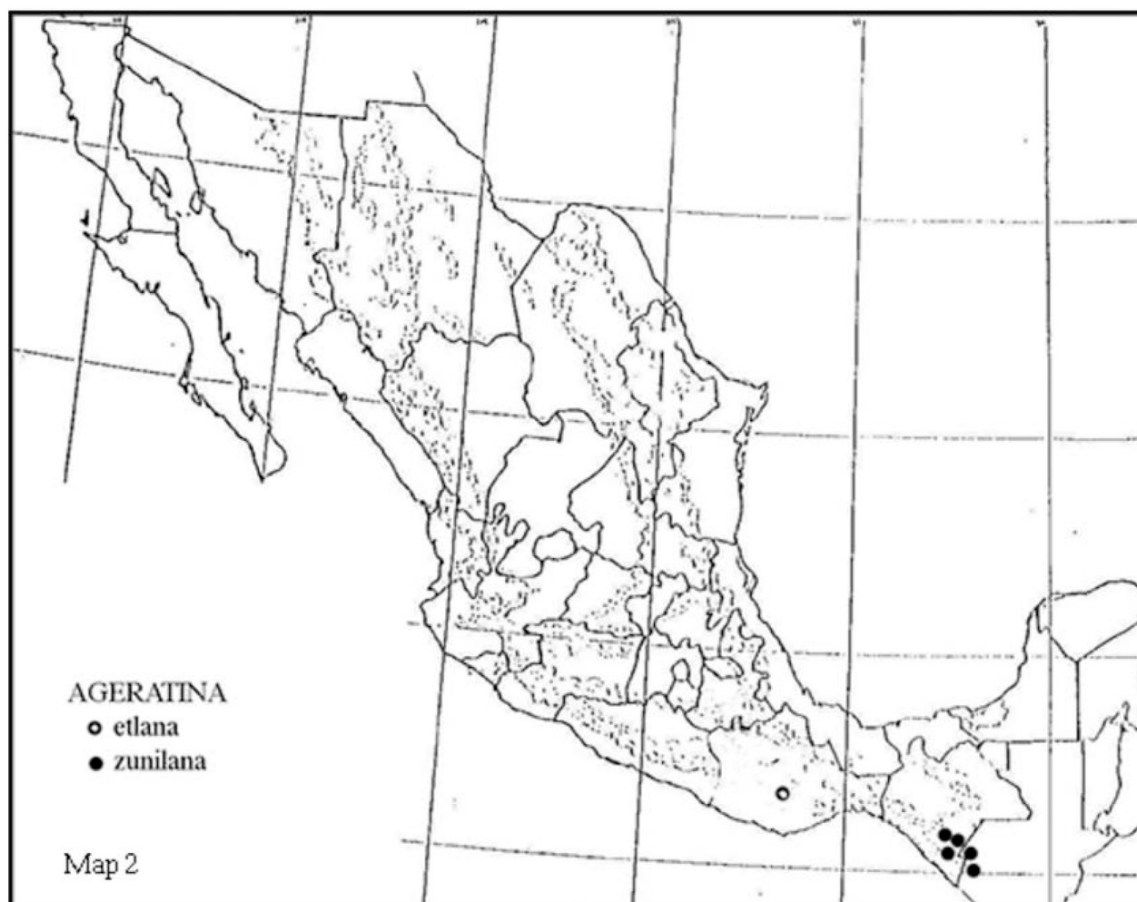
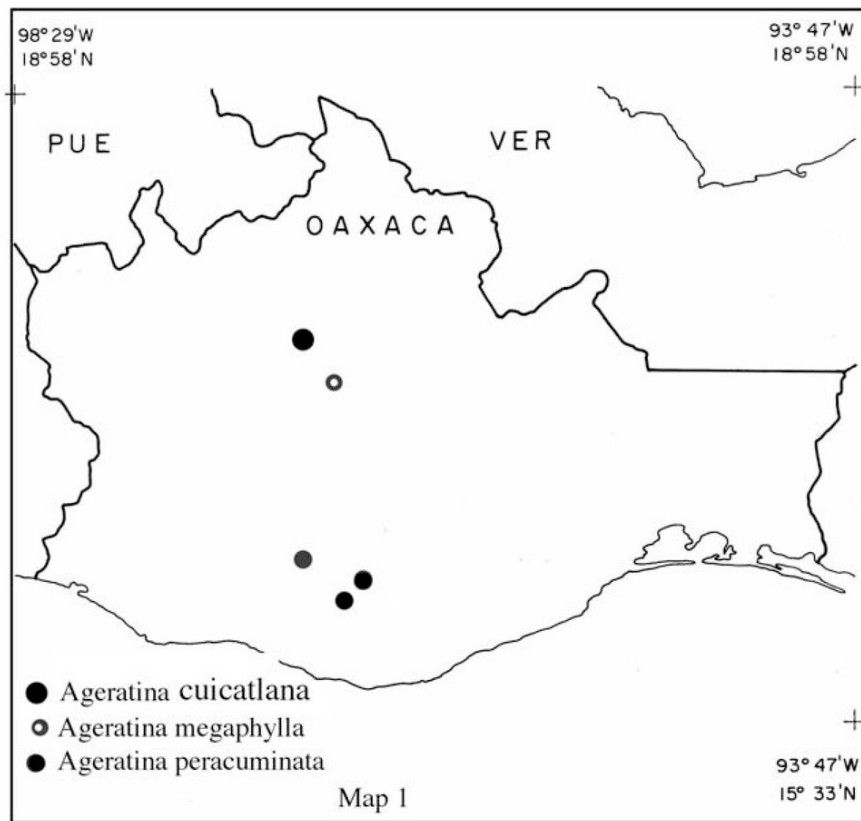
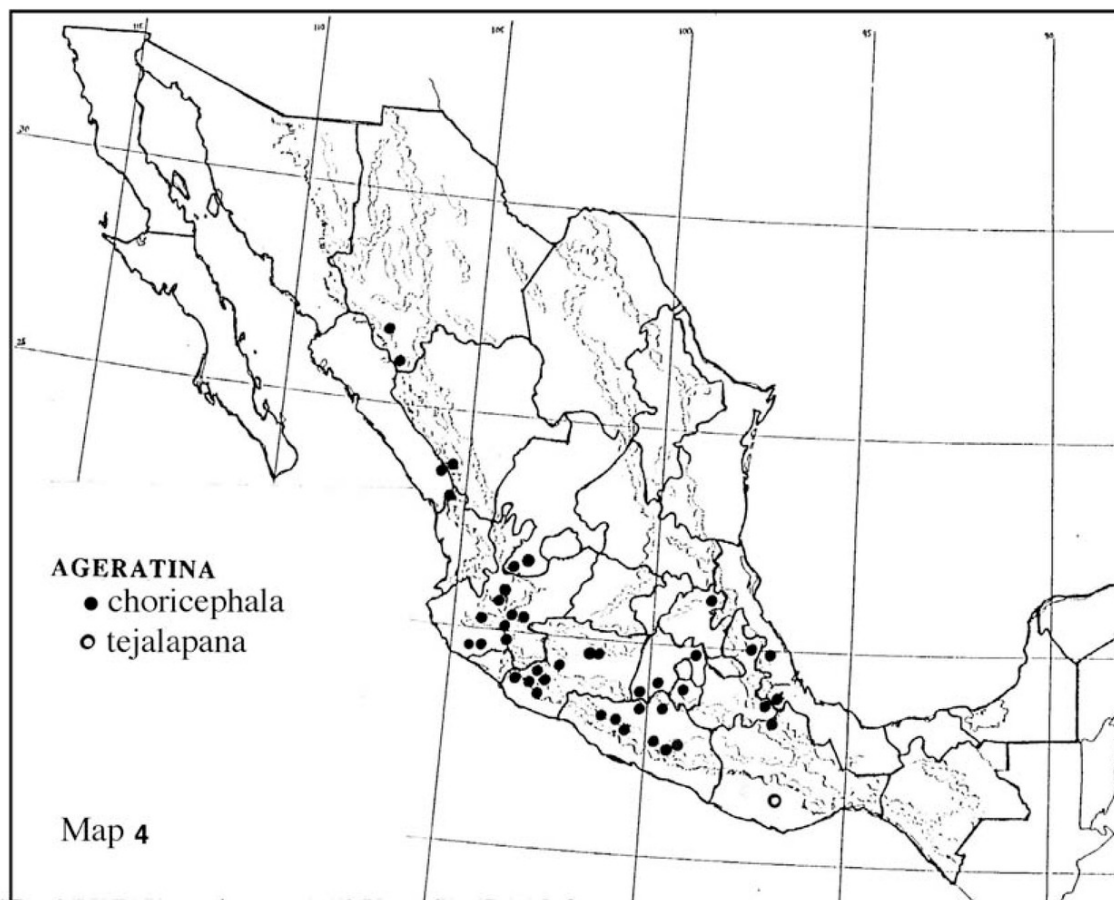
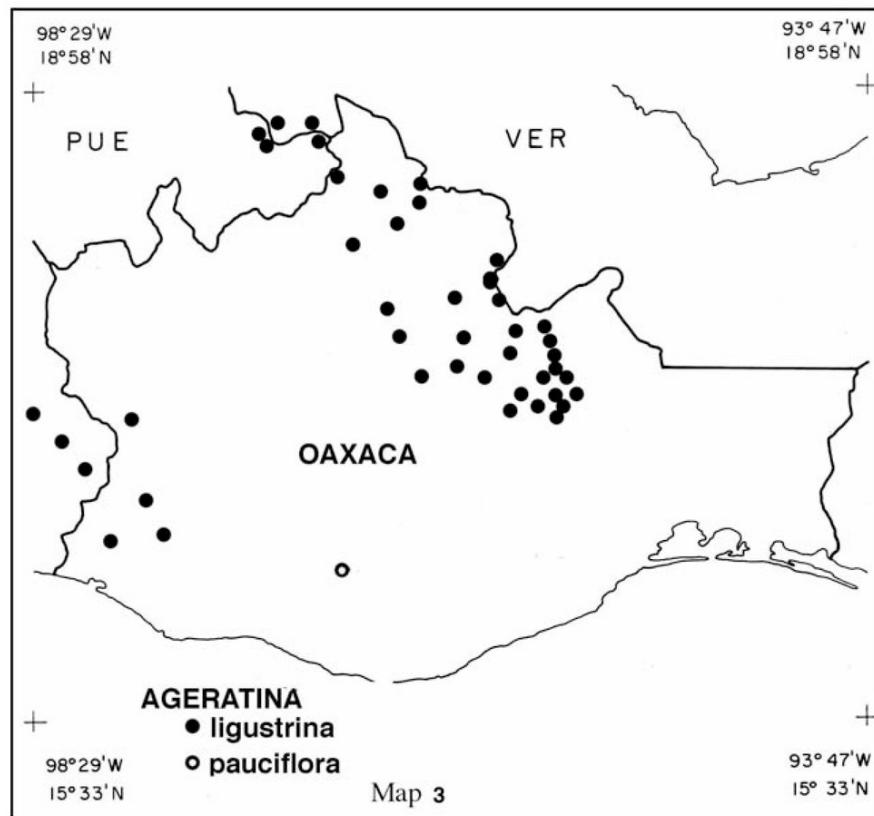


Fig. 5 *AGERATINA TEJALAPANA* B.L. Turner, sp. nov.







Turner, B. L. 2013. "Five new species of Ageratina (Asteraceae: Eupatorieae) from Oaxaca, Mexico." *Phytologia* 95, 141–150.

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