

**THREE NEW SPECIES OF *AGERATINA* (ASTERACEAE,
EUPATORIEAE) FROM MEXICO BELONGING TO THE *A.*
CAPILLIPES COMPLEX**

Billie L. Turner

Plant Resources Center
The University of Texas
Austin, TX 78712
billie@uts.cc.utexas.edu

ABSTRACT

Three new taxa are recognized within the *Ageratina capillipes* King & H. Rob. complex (sensu Turner 1997): ***Ageratina iltisii* B.L. Turner, sp. nov.**, from Sierra Manantlan, Jalisco; ***Ageratina microcephala*, sp. nov.**, from Oaxaca, and ***Ageratina reserva*, sp. nov.**, from Chiapas. Photographs of the types are provided, along with a map showing their distributions. *Phytologia* 94(2):228- 236 (August 1, 2012).

KEYWORDS: Asteraceae, Eupatorieae, *Ageratina*, *A. capillipes*, Mexico, Oaxaca

Routine identification of Mexican comps has occasioned the present paper.

In my seminal treatment of *Ageratina* for Mexico, I treated *A. capillipes* in a broad morphological sense, largely because of the rarity of collections available to me at the time. I refer to these taxa here as the *A. capillipes* complex, all of the taxa being herbaceous perennials having foliage with relatively long petioles, possessing relatively small heads and largely restricted to the Pacific slopes of Mexico and Guatemala. Recent collections from Oaxaca have prodded me to take a more critical look at the complex.

The following simplified key should help identify the taxa concerned:

- 1. Leaf blades 3-nervate from the very base.....(3)
- 1. Leaf blades 3-5 nervate from above the base.....(2)
- 2. Leaf blades 5-7 cm wide; Oaxaca.....**A. microcephala**
- 2. Leaf blades 2-4 cm wide; Chiapas and Guatemala.....**A. capillipes**
- 3. Petioles 1/2 as long as the blades, or more; El Triunfo, Chiapas.....
.....**A. reserva**
- 3. Petioles much shorter than indicated in the above; Jalisco...**A. iltisii**

AGERATINA CAPILLIPES King & H. Rob., Phytologia 69: 64. 1990.

TYPE: **GUATEMALA. Chimaltenango:** road to Iximche Ruins, Tecpan, 19-23 Jan 1966, *Molina et al. 16080* (Holotype US; photoholotype TEX).

In addition to the type itself, the authors of the above cited the following specimen from Mexico:

CHIAPAS. 14.1 mi NW of Motozintla, 11/2/79, *Croat 17287* (MO,US).

I have examined an additional collection from this same region: **CHIAPAS, Mpio. Motozintla**, “4.6 mi SW of cemetery in Motozintla, on dirt road to El Porvenir.” 4/1/92, *Soule 3099* (TEX).

As noted below, I mapped (Turner 1997) an additional collection from Chiapas as *A. capillipes*; this is treated below as an undescribed taxon, *A. reserva*.

AGERATINA ILTISII B.L. Turner, **sp. nov. Fig. 1**

TYPE: **MEXICO. JALISCO:** “Forested hills ca. 1.5 km N of **TERRERO** on rd. to La Laguna, ca. 27 km NW of Colima. Top of **CERRO GRANDE**, a massive limestone plateau, 18-15 km NW of Colima,” 19 27 30 N, 103 57 12 W, 2300 m, 18 Dec 1988, *H. Iltis, Cuevas G. & Gusman H. 30142* (Holotype; TEX; isotype TEX).

Perennial, seemingly tap-rooted herbs to 60 cm high, the roots or underground shoots, densely white-pubescent with spreading hairs. **Mid-stems** ca 2 mm thick, moderately pubescent with mostly upturned hairs. **Leaves** (mid-stem) opposite, 6-10 cm long, 3-4 cm wide; petioles 3.0-3.5 cm long; blades broadly ovate, glabrous below and above, or nearly so, 3-nervate from the very base, their margins irregularly serrate. **Capitulescence** terminal, cymose-paniculate, 3-10 cm high, 4-6 cm across, the ultimate peduncles mostly 8-10 mm long, pubescent like the stems. **Heads** ca 6 mm high, 4-6 mm wide; involucre bracts linear-lanceolate, mostly 3-4 mm long, ca 0.5 mm wide, glabrous or nearly so, their apices acute. Receptacles plane, ca 1 mm across. Florets ca 20 per head; corollas white, ca 3.5 mm long; tubes ca 1.5 mm long; throats ca 1.5 mm long, the 5 lobes pubescent. **Achenes** black, ca 1.5 mm long, moderately pubescent; pappus of ca 20 fragile bristles ca 3 mm long.

The species is named for Hugh Iltis, exceptional systematist and long-time, much admired, friend of the present author, whose collections from Mexico, especially Jalisco, are well known.

In McVaugh's (1984) treatment of *Eupatorium* (including *Ageratina*) for Novo-Galeciana, this novelty will key to or near *E. aschenborniana* (= *Ageratina pichinchensis*, sensu Turner 1997), a shrubby taxon with larger, more numerous-flowered heads, although he calls attention to the doubtful identification of specimens from the vicinity of Nevado de Colima, such plants having larger heads than typical for the species. In this connection, while Jalisco is given as the state of collection, it should be noted that on the label of the type itself, there is the notation "(Colima? Border disputed)."

In my treatment of *Ageratina* for the Comps of Mexico (Turner 1997), I included specimens of the present novelty under my broad fabric of *A. capillipes*, as noted in the above introduction.

AGERATINA MICROCEPHALA B.L. Turner, sp. nov. Fig. 1

TYPE: MEXICO. OAXACA: Distrito Pochutla, Mpio. San Miguel del Puerto, "El Aguacate, sitio de Muestreo," ca 1186 m, "Bosque templado de tilia mexicana, sobre cerro." 16 01 06.7 N, 95 07 06.6 W,

03/02/2011, *Arturo Sanchez Martinez 3086* [with J. Lucas, J. Pascual, Alex] (Holotype: TEX).

Perennial herbs, to 60 cm high. **Mid-stems**, ca 3 mm across, moderately puberulent. **Leaves**, opposite, 10-13 cm long, 5-7 cm wide; petioles ca 3 cm long, pubescent like the stems; blades broadly ovate, tapering upon the petioles, glabrous or nearly so; margins irregularly serrate. **Capitulescence** a terminal, cymose, congested panicle, 5-10 cm high, 7-12 cm across, the ultimate peduncles puberulent like the stems, having mostly upswept hairs, among these a smidgen of minute glandular hairs, and endowed with linear-lanceolate bracts 1-3 mm long. **Heads** ca 5 mm high and as wide; involcres campanulate, weakly imbricate, if at all, ca 4 mm high; bracts linear-lanceolate, 2-4 mm long, mostly 2-nervate, ca 0.5 mm wide, glabrous, or nearly so, their apices acute to obtuse. **Florets** ca 30 to a head; corollas white, ca 2.5 mm long; tubes ca 1 mm long; throat ca 1.5 mm long, the lobes 5, deltoid. **Achenes** (immature) ca 2 mm long, sparsely pubescent; pappus of ca 20, readily deciduous, ciliate, pink or white, bristles ca 3 mm long.

The species is named for its small heads, among the smallest of the genus *Ageratina* known to this author; it stands in marked contrast with the recently described *A. megacephala* B.L. Turner from Distrito Putla, Oaxaca (Turner 2010).

Ageratina microcephala might be confused with the taller, more stiffly erect, *A. peracuminata* King & H. Rob., the type collected in Oaxaca ca 50 miles north of Puerto Escondido. The two have similar capitulescences with relatively small heads, but the latter taxon is readily distinguished by its more robust, suffruticose, habit, somewhat larger heads, larger subdeltoid leaves, having more elongate petioles, the ultimate peduncles somewhat longer and not possessing minute glandular hairs along its puberulent axis.

ADDITIONAL SPECIMENS EXAMINED: **MEXICO. OAXACA: Distrito Pochutla, Mpio. San Miguel del Puerto**, “Cerro El Lobo,” ca 1814 m, 06/12/02, *Pascual 675* (TEX). **Distrito Santiago Juxtajuaca, Mpio Santiago Juxtajuaca**, “5 km del poblado El

Manzanal, carretera a Infiernillo," ca 1920 m, 15/12/95, *Calzada 20627* (TEX).

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

Suffruticose perennial herb or "shrub" to 1 m high. **Mid-stems** ca 2 mm thick, pubescent with upturned, multiseptate, trichomes. **Leaves** opposite, 7-11 cm long, 3.5-4.0 cm wide; petioles 4-6 cm long, pubescent like the stems; blades broadly ovate to subdeltoid, 3-nervate from the very base, glabrous above and below, the margins irregularly serrate. **Capitulescences** cymose-paniculate, 2-4 cm high, 3-5 cm across, arranged both terminal and axillary, the ultimate peduncle mostly 3-5 mm long, pubescent like the stems. **Heads** narrowly campanulate, ca 5 mm high, and as wide. **Receptacle** plane, ca 0.5 mm across. **Florets** ca 20 to a head; corollas white, ca 2.5 mm long; tubes glabrous, ca 1.5 mm long; throat ca 1 mm long, the 5 lobes minutely and sparingly pubescent, if at all; achenes black, ca 1.5 mm long, sparingly ciliate, mostly along the ridges.

TYPE: MEXICO. CHIAPAS: Mpio Jaltenango/Mapastepec, "RESERVA EL TRIUMFO, POLIGONO 1." Canada Honda, 1400 m, 15 39 N, 92 48 W, "Nov-Dec 1989," *M. Heath & A. long 377* (Holotype: TEX).

The species name derives from the Reserva El Triunfo, from whence the type.

In my treatment of *Ageratina* subgenus *Ageratina* for the Comps of Mexico (Turner 1998), material of this novelty, because of its possession of both terminal and axillary capitulescences, will key to *A. lasia*, a taxon restricted to Michoacan. If the capitulescence character is ignored, the taxon will key to or near *A. capillipes*, as noted in the above. If keyed within the subgenus *Neogreenella* (because of its minute hairs on corolla lobes) it will key to, or near the widespread, *A. rubricaulis*. *Ageratina reserva* is readily distinguished from the latter by its leaves, having 3 nerves arising from the very base, and exceptionally long petioles, the latter mostly as long as the blades.

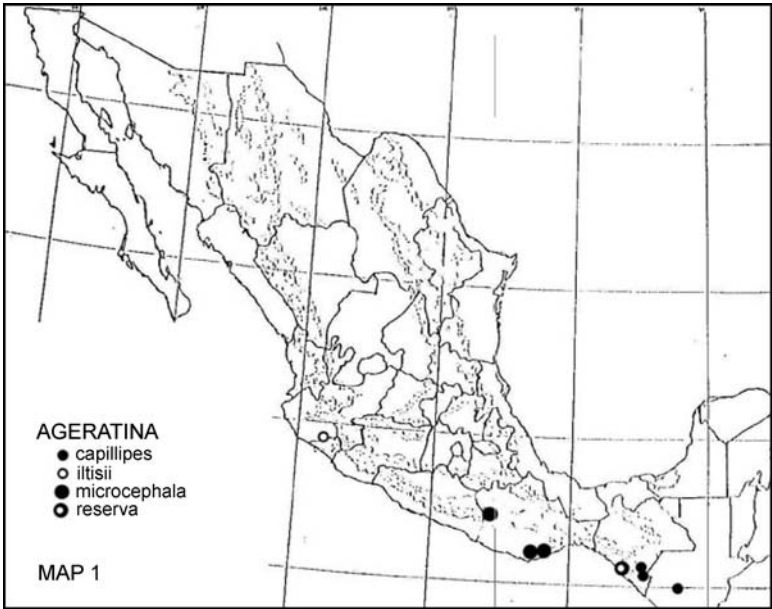
The distribution maps (Map 1) are based upon specimens on file at LL-TEX.

ACKNOWLEDGEMENTS

Thanks to my academic colleague, Jana Kos, for editing the paper and helpful suggestions.

LITERATURE CITED

- McVaugh, R. 1984. *Eupatorium*, in Flora Novo-Galiciana 12: 340-424.
- Turner, B.L. 1997. *Ageratina*, in Comps of Mexico, Phytologia Memoirs 11: 10-50.
- Turner, B.L. 2010. Four new species of *Ageratina* (Asteraceae: Eupatorieae) from Oaxaca, Mexico. Phytologia 92: 388-399.



Map 1. Distributions of *A. capillipes*, *A. iltisii*, *A. microcephala* and *A. reserva*.

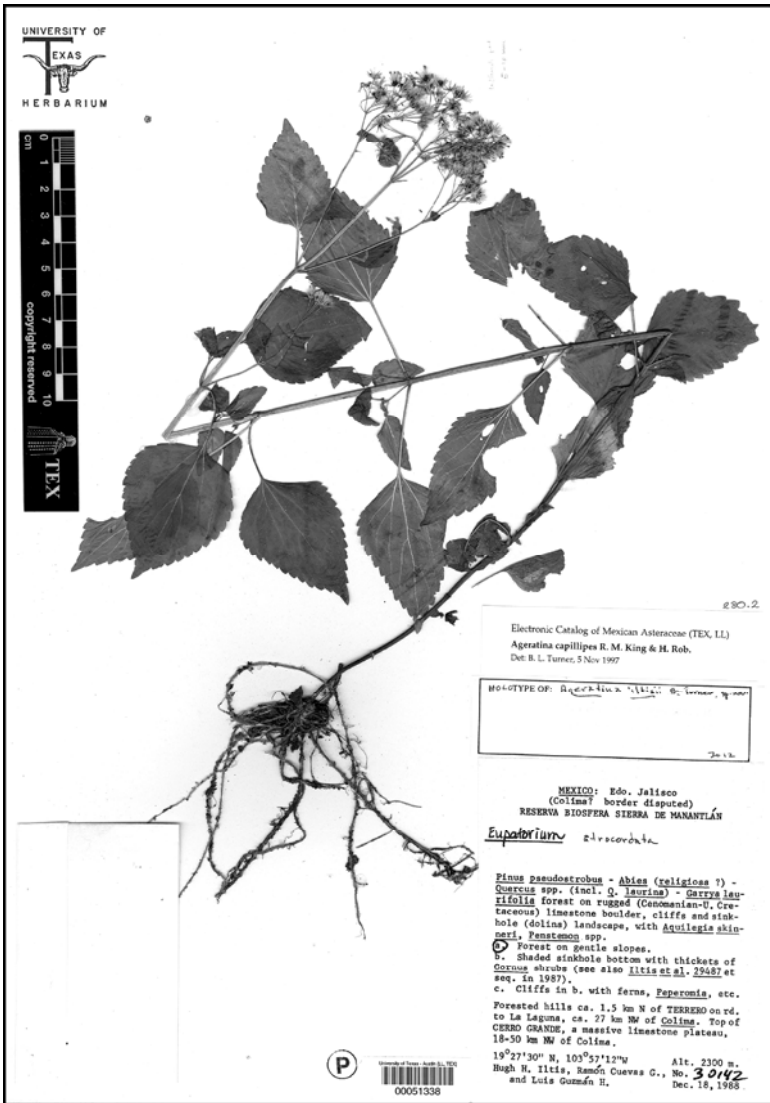


Fig. 1. *Ageratina iltisii* (Holotype).

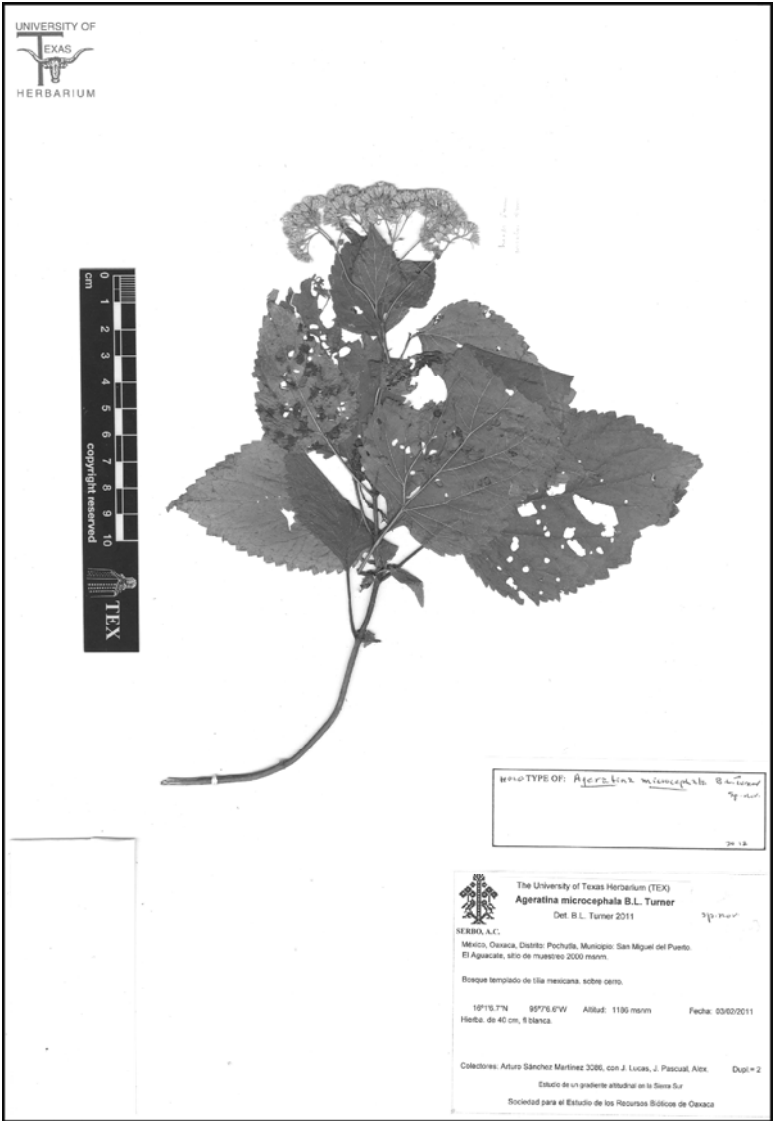


Fig. 2. *Ageratina microcephala* (Holotype).

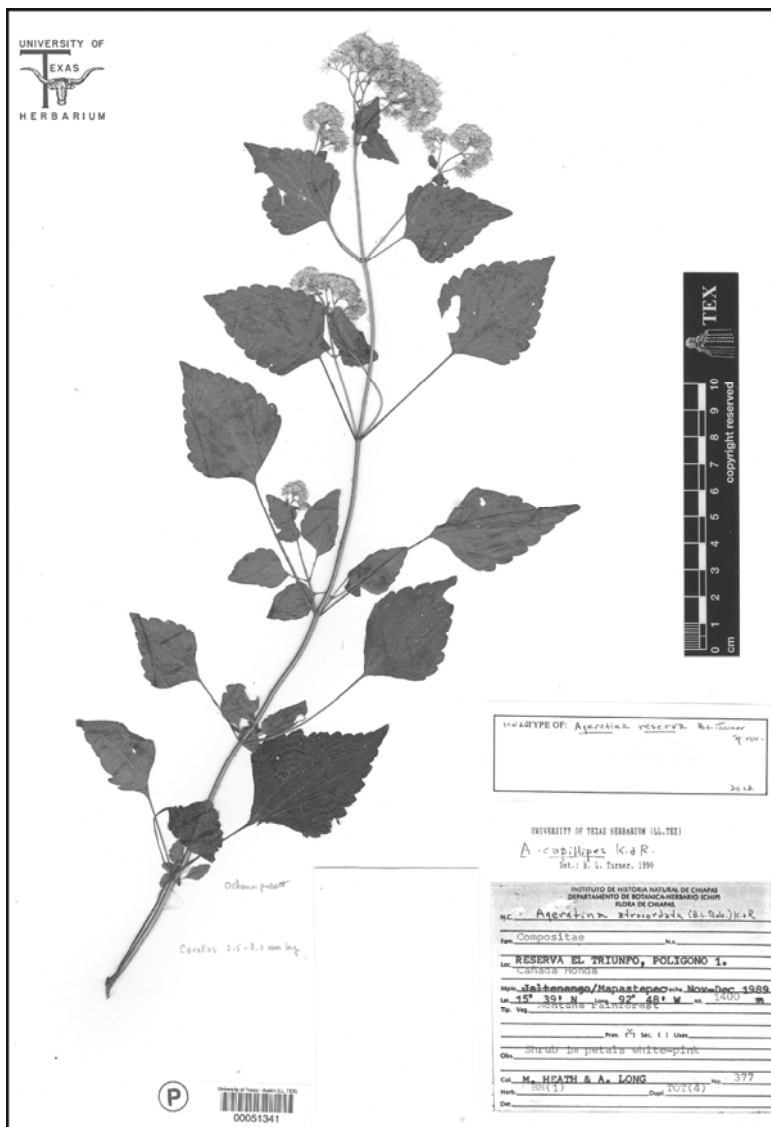


Fig. 3. *Ageratina reserva* (Holotype).