

COMMENTS ON *MICROGYNELLA*, *SOMMERFELTIA*, AND
ASTEROPSIS (ASTERACEAE: ASTEREEAE)

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ABSTRACT

Microgynella, *Sommerfeltia*, and *Asteropsis* are accepted as distinct, monotypic genera, and a taxonomic summary is presented for each. All three are limited in distribution to southeastern Brazil, Uruguay, Paraguay, and northeastern Argentina. They are closely related among themselves and to several other South American genera: *Podocoma*, *Rhabdanthus*, *Inulopsis*, *Laennecia*, and *Blakiella*.

KEY WORDS: *Microgynella*, *Sommerfeltia*, *Asteropsis*, Astereae, Asteraceae

Three Astereae species of southeastern South America each represent a monotypic genus. Nomenclatural summaries and comments on their delimitation and relationships are presented here in clarification of their taxonomic status.

The status of *Microgynella* and *Sommerfeltia*

Grau (1975) provided the new generic name *Microgynella* Grau for a South American species originally treated as the monotypic genus *Microgyne* Less. (Lessing 1832) and later transferred by Grisebach (1879) to the genus *Vittadinia* A. Rich. Grau correctly observed that *Vittadinia* is an Australasian endemic; he noted that *Microgynella* should be placed nearest *Hysterionica* Willd. and *Sommerfeltia* Less., but he did not discuss the nature or implication of their relationship to *Microgynella*.

Hysterionica sensu lato comprises two distinct species groups (Nesom 1993) that are now divided into two separate genera, the "jasionoides group" (= *Hysterionica* sensu stricto) and the "pinifolia group" (= *Neja* D. Don) (Nesom

1994). Plants of *Neja*, which are perhaps those referred to by Grau (1975) as *Hysterionica*, are perennial with basally disposed, linear leaves and solitary heads on long scapes or bracteate stems. Both *Hysterionica* and *Neja*, however, differ from *Microgynella* in their uniseriate pistillate flowers, eglandular achenes that are fertile in both ray and disc flowers, prominent orange-resinous ducts accompanying the veins of phyllaries and achenes, and style branches (disc flowers) with deltate collecting appendages. *Microgynella* cannot be regarded as a particularly close relative of either *Hysterionica* or *Neja*.

The resemblance of *Microgynella* to *Sommerfeltia* was early recognized by Hooker & Arnott (1836), who placed the former (as *Microgyne*) as a synonym of the latter. They are similar in the following features: herbaceous-perennial habit, the roots and lower stems lignescent; leaves densely arranged along the stems, glandular, stiff, pinnately lobed or dissected with linear divisions; ray flowers with white, short ligules; style branches with linear-lanceolate collecting appendages (clearly in *Microgynella*, apparently in *Sommerfeltia*, where the stigmatic lines are absent); and erostrate achenes with glandular faces. Both genera are restricted to southeastern Brazil and adjacent areas of Uruguay and Argentina.

In the key to genera of Astereae in the province of Buenos Aires, *Sommerfeltia* was distinguished by Cabrera (1963, p. 10) from *Microgynella* (the latter identified as "*Vittadinia*") and other genera by the following: "Arbustitos enanos, con hojas pinatisectas espiniformes (*Sommerfeltia*).". The putative difference in habit between *Sommerfeltia* and *Microgynella* is slight (both have a suffrutescent tendency), and the leaves of both are rigid and narrowly divided. The differences between the two genera, however, are more numerous and more significant than in Cabrera's comparison, as outlined in the following summary:

Microgynella:

Stems, leaves, and phyllaries with sessile or slightly sunken, resinous glands, sparsely hispid and with arachnoid vestiture; stems monocephalous; leaves linear, apically trifurcate with a pair of linear lobes, but the uppermost and lower leaves commonly entire; disc flowers fertile; achenes densely sericeous on the faces and margins, also densely glandular, broadly oblanceolate-obconic and apically truncate, the margins more or less parallel at the apex, with a broad pappus insertion; and pappus bristles reddish-brown.

Sommerfeltia:

Stems, leaves, and phyllaries stipitate-glandular, without arachnoid vestiture; stems monocephalous or less commonly distally branched and bearing several heads in a loosely paniculate-corymboid capitulescence; leaves pinnately dissected with linear lobes;

disc flowers with sterile ovaries; achenes densely sericeous at the base or on the margins, the faces glandular but sparsely hairy, obovate and apically rounded, the margins apically confluent, with a narrow pappus insertion; and pappus bristles whitish.

Sommerfeltia cabreræ Chebat., a recently described species from northern Uruguay (Chebataroff 1981), cannot be accepted within *Sommerfeltia*. It differs from typical *Sommerfeltia* particularly in its entire leaves, completely fertile disc flowers, and differently shaped achenes with glandular, evenly strigose-sericeous faces. As observed by Chebataroff, it closely resembles *Hysterionica filiformis* (Spreng.) Cabrera (= *Neja filiformis* [Spreng.] Nees), but he rejected the species from *Hysterionica* sensu lato because of its lack of a short, outer series of pappus scales. Pappus variability among other species of *Neja* (Nesom 1994), however, includes such as found in *S. cabreræ*, but the correct generic placement of the latter is still under consideration (Nesom in prep.).

The status of *Asteropsis*

Asteropsis Less. comprises the single species *A. macrocephala* Less., which is restricted to southern Brazil and adjacent Uruguay. The species was regarded as a member of *Podocoma* Cass. by Bentham (1873), apparently because of its rostrate achenes, but it was accepted as an independent genus by Baker (1882) and Hoffmann (1890). Grau (1977) also regarded it as a synonym of *Podocoma*, a position apparently followed in the recent phylogenetic analysis and classification by Zhang & Bremer (1993). If treated within *Podocoma*, this species would have to be set apart from all of the others, differing in its combination of stems simple or 1-2 branched near the apex, densely arachnoid vestiture, entire, linear, non-clasping, densely arranged leaves, and large (20-35 mm in diameter), mostly solitary heads, linear-lanceolate phyllaries in 4-5 slightly graduated series, multiseriate ray flowers with long ligules (apparently white), disc flowers with sterile ovaries, and large (4-5 mm long), broadly obovate achenes with strongly thickened marginal ribs, a distinctively short-beaked apex, and sericeous, eglandular faces and margins. The features of *Asteropsis* place it among a group of South American genera that includes *Podocoma* (Nesom & Zanowiak 1994) as well as *Microgynella*, *Sommerfeltia*, *Inulopsis* Hoffm., *Rhabdanthus* Nesom, *Laennecia* Cass., and *Blakiella* Cuatr. Among these, however, *Asteropsis* is justifiably treated as an independent genus resembling *Microgynella* and *Sommerfeltia* in its densely crowded, linear leaves.

Taxonomic summaries

- I. *Microgynella* Grau (*nom. nov.*), Mitt. Bot. Staats. München 12:185. 1975. *Microgyne* Less. [*nom. illeg.*], *Syn. Gen. Comp.* 190. 1832. (not Cass. 1827). TYPE: *Microgyne trifurcata* Less.

Microgynella trifurcata (Less.) Grau, Mitt. Bot. Staats. München 12:185. 1975. BASIONYM: *Microgyne trifurcata* Less., *Syn. Gen. Comp.* 190. 1832. *Erigeron trifurcatus* (Less.) Gill. & Don ex Hook. & Arn., *Comp. Bot. Mag.* 2:49. 1836. *Vittadinia trifurcata* (Less.) Benth. & Hook. ex Griseb., *Symb. Fl. Argent.* 24:178. 1879.

Erigeron tridactylus DC., *Prodr.* 5:290. 1836.

- II. *Sommerfeltia* Less., *Syn. Gen. Comp.* 189. 1832. TYPE: *Sommerfeltia spinulosa* (Spreng.) Less.

Sommerfeltia spinulosa (Spreng.) Less., *Syn. Gen. Comp.* 190. 1832. BASIONYM: *Conyza spinulosa* Spreng., *Syst. Veget.* 3:510. 1826.

- III. *Asteropsis* Less., *Syn. Gen. Comp.* 188. 1832. TYPE: *Asteropsis macrocephala* Less.

Asteropsis macrocephala Less., *Syn. Gen. Comp.* 188. 1832. *Podocoma macrocephala* (Less.) Herter, *Fl. Uruguay Pl. Vasc.* [Estud. Bot. Reg. Urug.] 123. 1931.

Podopappus tomentosus Hook. & Arn., *Comp. Bot. Mag.* 2:51. 1836.

Neja macrocephala DC., *Prodr.* 5:325. 1836. This name is heterotypic with that of *Asteropsis macrocephala* Less.

Neja sect. *Phylloneja* DC., *Prodr.* 5:325. 1836. Type (and only species): *Neja macrocephala* DC. (= *Asteropsis macrocephala* Less.).

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