

A NEW COMBINATION IN *ELAPHANDRA* AND A NEW VARIETY OF *ELEUTHERANTHERA RUDERALIS* (COMPOSITAE: HELIANTHEAE: ECLIPTINAE) FROM ANDEAN SOUTH AMERICA

by

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Abstract

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The new combination *Elaphandra patentipilis* is made for an endemic Colombian species formerly placed in *Aspilia*. A key to the species in the *Elaphandra lehmannii* group is given, and *E. quinquenervis* is taken to be endemic to Colombia. *Aspilia wedelioides* is presumed to be a synonym of *Elaphandra verbosinoides*. *Elaphandra* is taken as currently containing 14 species. *Eleutheranthera ruderalis* var. *radiata* from Venezuela is described and its relationships are discussed. *Aspilia triplinervia* is presumed to be a synonym of *Eleutheranthera tenella*.

Key words: *Elaphandra*, *Eleutheranthera*, Compositae, Asteraceae, Heliantheae, Ecliptinae, Colombia, Venezuela, Taxonomy.

Resumen

Se presenta la nueva combinación *Elaphandra patentipilis* para una especie endémica de Colombia, anteriormente ubicada dentro de *Aspilia*. Se propone una clave para las especies del grupo de *E. lehmannii*, y *E. quinquenervis* se trata como una especie endémica de Colombia. *Aspilia wedelioides* se supone como un sinónimo de *E. verbosinoides*. *Elaphandra* se trata con 14 especies. Se describe *Eleutheranthera ruderalis* var. *radiata* de Venezuela y se discuten sus relaciones. *Aspilia triplinervia* se presume un sinónimo de *Eleutheranthera tenella*.

Palabras claves: *Elaphandra*, *Eleutheranthera*, Compositae, Asteraceae, Heliantheae, Ecliptinae, Colombia, Venezuela, Taxonomía.

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Ecliptinae Lessing, a subtribe of Compositae: Heliantheae has been delimited by **Robinson** (1981), although most of its genera were more recently treated under the name Verbesininae by **Karis & Ryding** (1994), who did not subtribally place *Eclipta* L. Generic additions and adjustments of **Robinson** (1984a, 1984b, 1992, and literature cited therein), **Strother** (1991 and literature cited therein), **Pruski** (1996, 1999, and literature cited therein), and **Panero et al.** (1999) are accepted as emendations to the group as defined by **Robinson** (1981). The subtribe Verbesininae, treated as a synonym of the *Ecliptinae* by Robinson, Strother, and Pruski, was recently resurrected by **Panero et al.** (1999) and includes only *Verbesina* L. and three small Mexican and Central American genera.

Here, a new combination is made in *Elaphandra* Strother for a sterile-rayed species formerly placed in *Aspilia* Thouars, and a key to species of the group centering about *E. lehmannii* (Hieron.) Pruski is provided. Also, a new variety with radiate capitula of pantropical *Eleutheranthera ruderalis* (Sw.) Sch. Bip. is described from Venezuela.

The following innovations in *Elaphandra* and *Eleutheranthera* Poit. ex Bosc are the result of both floristic work (e.g. **Pruski**, 1997) and routine identifications for species from South America.

Elaphandra Strother, Syst. Bot. Monogr. 33: 17. 1991.

Elaphandra was described by **Strother** (1991) as unispecific, and is typified by *E. bicornis* Strother, a discoid species from Panama. Strother (in sched.) annotated several northern Andean species as congeneric with *E. bicornis*, but he did not formally transfer these species to *Elaphandra*. More recently, several South American species have been transferred to (as earlier suggested by Strother) or newly described in *Elaphandra* (**Robinson**, 1992, 1994; **Badillo**, 1994; **Pruski**, 1996). **Pruski** (1996) reduced *E. lucidula* (S.F. Blake) H. Rob. to the synonymy of *E. ulei* (Hieron.) H. Rob. and also Pruski reduced *E. sucrensensis* (Aristeg.) V.M. Badillo to the synonymy of *E. verbesinoides* (DC.) H. Rob. *Elaphandra verbesinoides* also presumably includes as synonymous the once-collected *Aspilia wedelioides* (DC.) S. F. Blake from Tobago. Most of the newer additions to *Elaphandra* have radiate capitula and were formerly placed in *Aspilia*.

Elaphandra is characterized by the technical characters of opposite, eglandular leaves; by sterile ray florets (when present); by ovate, eglandular anther appendages, these commonly black though sometimes tan within or distally; by erect or laxly recurved (not strongly coiled), papillose

style branches; and by weakly pappose, rostrate (necked) cypselae, these without elaiosomes and without obvious carpodia. **Pruski** (1996) cited *Elaphandra* as containing 13 species. The transfer of *Aspilia patentipilis* S.F. Blake to *Elaphandra* proposed here increases to 14 the number of species I recognize in *Elaphandra*.

Pruski (1996) cited both *Aspilia patentipilis* and *Elaphandra quinquenervis* (S.F. Blake) H. Rob. as closely related to *E. lehmannii* and perhaps not distinct from it. However, further study of the types, type photographs, and other specimens available to me of the species of the *E. lehmannii* group (in Group I of **Robinson**, 1992) show that the two former species, although clearly closely related to *E. lehmannii*, are distinct from it. In floral features all specimens of this species group are similar, and the species can be distinguished most readily by differences in indumentum of vegetative structures.

Lectotypification of *A. lehmannii* Hieron. was deferred by **Pruski** (1996) and similarly is delayed here until type material is found and studied. Unfortunately, syntype material of *A. lehmannii* (*Lehmann 3282*) was not found at BM (fide R. Vickery), nor at K (fide D. J. Nicholas Hind and S. J. Owens), and to date I have been able to examine only a photograph (NY!, US!) of the destroyed Berlin syntype of *Lehmann 3282*. *Elaphandra lehmannii* occurs in Andean Colombia and Ecuador, and is the most widespread of the three species of this group. It was described by Hieronymus as having stems "hirto-pilosis," thus differing from the species in the group with either strigose stems or long-patent, pilose stems.

I have been fortunate to have recently examined the holotype of *Aspilia quinquenervis* (K!), which has short-strigose hairs on the stems, leaf blades, and phyllaries; petioles and peduncles strigose to hirsute; and elliptic-lanceolate outer phyllaries. By strigose stems, phyllaries, and leaf blades this species (*E. quinquenervis*), a Colombian endemic (known from Antioquia, Caldas, Cauca, Tolima, Valle, and from along the Choco-Valle border), proves to be distinct from the two other species of the *E. lehmannii* group. The third species in the *E. lehmannii* group (*Aspilia patentipilis*) is characterized by its vegetative structures with long-patent, pilose hairs, and has yet to be transferred to *Elaphandra*. The needed combination for this species in *Elaphandra* is thus provided below.

Elaphandra patentipilis (S.F. Blake) Pruski & G. Méndez, **comb. nov.** Basionym: *Aspilia patentipilis* S.F. Blake, Contr. U.S. Natl. Herb. 22: 617. 1924. *Wedelia patentipilis* (S.F. Blake) B.L. Turner, Phytologia 72: 393. 1992. Fig. 1



Figure 1. Photograph of isotype of *Aspilha patentipilis* S.F. Blake (Pennell 3229, US).

Type. Colombia, **TOLIMA:** La Trinidad, Líbano, 1100-1400 m, 21-25 Dec 1917, Pennell 3229 (holotype: NY!; isotype: US!).

Comments: The *E. lehmannii* group as circumscribed by Pruski (1996) includes two elements (*A. patentipilis* and *E. quinquenervis*), which are here removed from the provisional synonymy of *E. lehmannii*. This results in a better circumscription *E. lehmannii*, which is nevertheless still broadly defined and variable. One named element that I feel is best removed from *E. lehmannii* is the element including the type of *A. patentipilis*, namely the entity with long-patent, pilose hairs and long, elliptic-lanceolate outer phyllaries. This species is here formally transferred to *Elaphandra*. The type of *A. patentipilis* is the most extreme example of this form in that its hairs and outer phyllaries are the longest in the *E. lehmannii* group.

Monographic studies are needed to precisely define the taxonomic limits of *E. patentipilis*, which is an herb or vine and is a moderately common Colombian endemic. Plants provisionally referred here to *E. patentipilis* occur on all three Andean Cordilleras of Colombia in Antioquia, Boyacá, Cauca, Nariño, Norte de Santander, Tolima, and Valle. Several specimens seem intermediate between *E. lehmannii* and *E. patentipilis*, but I nevertheless believe it is useful to recognize the two as distinct species. *Elaphandra patentipilis* is characterized by having long-patent, pilose stems, leaves, and phyllaries; and longer, elliptic-lanceolate outer phyllaries. It is thus distinguished from *E. lehmannii*, which commonly has substrigose, hispid, or sericeous leaves and phyllaries; stems shortly pilose or hispid; and shorter, elliptic-ovate outer phyllaries.

I am happy to validate this transfer with Gina Paola Méndez R. (of the COL herbarium), who is working on Colombian members of the taxonomically difficult subtribe Ecliptinae.

Key to the species centering about *Elaphandra lehmannii*

1. Stems with short, strigose hairs; Colombia
..... *E. quinquenervis* (S.F. Blake) H. Rob.
1. Stem hairs not short-strigose.
 2. Stems, leaves and phyllaries without long-patent, pilose hairs, indumentum type various, occasionally shortly pilose or sericeous; outer phyllaries often elliptic-ovate and about as longer as or shorter than the inner phyllaries; Colombia and Ecuador
..... *E. lehmannii* (Hieron.) Pruski
 2. Stems, leaves, and phyllaries commonly with long-patent, pilose hairs, phyllaries less commonly sericeous; outer phyllaries often elliptic-lanceolate and longer than the inner phyllaries; Colombia
..... *E. patentipilis* (S.F. Blake) Pruski & G. Méndez

Eleutheranthera

Pantropical *Eleutheranthera ruderalis* is uniformly discoid throughout most of its range. However, in the Venezuelan coastal ranges plants with radiate capitula otherwise matching the typical form with discoid capitula of this species are occasionally found. The collections with radiate capitula are described here as a new variety of *E. ruderalis* as follows.

***Eleutheranthera ruderalis* (Sw.) Sch.-Bip. var. *radiata* Pruski, var. nov.**

Type. Venezuela, **DISTRITO FEDERAL:** Hacienda Chichiriviche, ca. 300 m, Jul 1958, *L. Aristeguieta 3233* (holotype: NY!; isotype: VEN n.v.).

A var. *typica* affinis, sed capitulis radiatis diversa.

Herbae annuae vel subperennes; folia opposita petiolata; lamina elliptica vel ovata 2.7-8.4 X 0.9-4.2 cm chartacea strigosa et glandulosa; capitulescentia paucicapitulata; capitula radiata, flosculus 9-12; involucrem campanulatum; receptaculum paleaceum; flosculi radiati steriles ca. 4, limbo ca. 5 X 3 mm glandulifero; flosculi disci hermaphroditi 5-8, corolla ca. 2.8 mm longa, lobis ca. 0.3-0.4 mm longis; antherae nigrae; stylus breviexsertus, ramis lineari-lanceolatis, ca. 0.5 mm longis; achaenia nigra, obovoidea, 3-3.5 mm longa, tuberculata, epapposa.

Erect herbaceous annuals to short-lived perennials, more than 30 cm tall. *Stems* moderately branched, striate, pubescent. *Leaves* simple, opposite, petiolate; petiole (0.3) 0.7-1.8 cm long; blade elliptic to ovate, 2.7-8.4 X 0.9-4.2 cm, chartaceous, weakly serrulate, 3-veined from near base, acute at apex, decurrent at base, strigose to weakly so, the lower surface also glandular, sometimes obscurely so. *Capitulescence* axillary, in few-headed cymes in the uppermost nodes or capitula solitary; peduncles short, commonly 2-2.5 cm long. *Capitula* radiate, 9-12-flowered; involucre campanulate; phyllaries weakly imbricate, 2-3-seriate, subequal or outer series commonly longer, the outer series foliar, elliptic to pyriform, 6.5-8 X 2.6-4 mm, thinly chartaceous, hirsute, the inner ones foliar, elliptic-lanceolate, hirsutulous, usually slightly smaller than the outer series; receptacle minute, paleate, the pales lanceolate, conduplicate, ca. 5.5 mm long, apically attenuate to apiculate, pilose to glabrate. *Ray florets* sterile, ca. 4; corolla yellowish, the tube ca. 0.7 mm long, glabrous, the limb ca. 5 X 3 mm, 5-nerved, abaxially glandular. *Disk florets* bisexual, 5-8; corolla tubular-funnelform, ca. 2.8 mm long, pale yellow, shortly 5-lobed, glabrous except for lobes hispid within, the tube ca. 0.4 mm long, the throat slightly broader, ca. 2 mm long, the lobes deltoid, 0.3-0.4 mm long, strongly hispid within and marginally; anthers very weakly apically exserted, black, 1.2-1.5 mm long, the appendages broad, often weakly glandular; style weakly exserted, the style branches erect or nearly so, linear-lanceolate, ca. 0.5 mm long, attenuate at apex, strongly pilose, with weakly paired marginal stigmatic lines. *Ray ovaries* sterile, narrowly cylindrical, apically setose. *Disk cypselae* black, obovoid,

often angled, 3-3.5 mm long, tuberculate, puberulent at apex, otherwise glabrous, carpodia indistinct, elaiosomes absent; pappus absent or less commonly a ciliate ring on top of the short neck of the cypselae.

Paratype: VENEZUELA, YARACUY: Distr. San Felipe: Municipio Veroes: Fila montañosa 5 kms S de Bella Vista, 10°23'N, 68°24'W, 200-450 m, 11 Jul 1973, *G. Agostini, G. Morillo & B. Morillo 1737* (US!, VEN n.v.).

Comments: *Eleutheranthera* had been treated traditionally as a unispecific discoid genus until Robinson (1992) transferred to it a second species with tuberculate cypselae, the radiate-headed *Gymnolomia tenella* H.B.K. With the present description of *E. ruderalis* var. *radiata*, the genus now contains three taxa, two of these with radiate capitula. The discoid and widespread pantropical *E. ruderalis* var. *ruderalis* remains the most common taxon of the genus, however. The sterile-rayed entities are each much less widespread, one is endemic to Colombia, and the other is endemic to Venezuela. *Eleutheranthera tenella* (H.B.K.) H. Rob. is regionally common in the Colombian Andes, especially near Cali, at elevations of about 950-1900 m, but occasionally this species may be found at sea level on the Pacific coast. *Eleutheranthera tenella* presumably includes *Aspilia triplinervia* (H.B.K.) S.F. Blake as synonymous, although not cited as such by Robinson (1992). The second variety of *E. ruderalis*, described here, is endemic to the northeastern-most Andes, the Venezuela coastal range near Caracas, where it flowers in July and has been collected from 200-450 m elevation.

The new variety is treated as an variety of the otherwise similar *E. ruderalis*, from which it differs most noticeably by radiate (vs. discoid) capitula. By radiate capitula, the new variety, however, resembles *E. tenella*. However, *E. tenella* is a reduced herb with small leaves, thus differing from *E. ruderalis* var. *radiata*. Moreover, *E. tenella* differs from *E. ruderalis* var. *radiata* by terminal (vs. axillary) capitula that are about 35- (vs. 9-12-) flowered, these long- (vs. short-) pedunculate and with outer phyllaries lanceolate (vs. elliptic to pyriform).

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