A new species of Microstachys (Euphorbiaceae, Hippomaneae) in Paraguay

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A new species of Microstachys (Euphorbiaceae, Hippomaneae) in Paraguay

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Abstract

PSCHEIDT, A.C., H.-J. ESSER & I. CORDEIRO (2017). A new species of Microstachys (Euphorbiaceae, Hippomaneae) in Paraguay. *Candollea* 72: 27-30. In English, English and Spanish abstracts. DOI: http://dx.doi.org/10.15553/c2017v721a3

A new species, *Microstachys dasycarpa* Pscheidt, Esser & Cordeiro *(Euphorbiaceae, Hippomaneae),* endemic to Paraguayan Chaco, is described and illustrated. The genus *Microstachys* A. Juss. is represented in this area by other three species: *Microstachys corniculata* (Vahl) Griseb., *Microstachys hispida* (Mart.) Govaerts and *Microstachys serrulata* (Mart.) Müll. Arg., with which this new species is compared.

Resumen

PSCHEIDT, A.C., H.-J. ESSER & I. CORDEIRO (2017). Una nueva especie de Microstachys (Euphorbiaceae, Hippomaneae) en Paraguay. *Candollea* 72: 27-30. En inglés, resúmenes en inglés y español. DOI: http://dx.doi.org/10.15553/c2017v721a3

Los autores describen e ilustran una nueva especie, *Microstachys dasycarpa* Pscheidt, Esser & Cordeiro *(Euphorbiaceae, Hippomaneae),* endémica del Chaco paraguayo. El género *Microstachys* A. Juss. está representado por tres otras especies en la región: *Microstachys corniculata* (Vahl) Griseb., *Microstachys hispida* (Mart.) Govaerts y *Microstachys serrulata* (Mart.) Müll. Arg., con las cuales la nueva especie se compara.

Keywords

EUPHORBIACEAE – *Hippomaneae* – *Microstachys* – Paraguay – Taxonomy

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Introduction

Microstachys A. Juss. is part of *Hippomaneae,* the second largest tribe of *Euphorbioideae* (Esser, 2012) with species in the Neotropics and in the Paleotropics and Australian Regions. The genus is widely distributed in grassland and characterized as savanna indicator, at least in the Neotropics.

The species of the genus are perennial herbs or subshrubs with alternate leaves, with entire or densely serrate margins with small glandular teeth, elongate simple monoecious inflorescences that are often leaf opposed but with the pistillate flowers often separated, with inclinate bracts bearing a pair of glands, subsessile flowers with free sepals and without petals; ovary and fruit with multiple appendages often in rows or pairs, or rarely smooth, undivided stigmas and dry, usually carunculate seeds.

Since its first description by Jussieu (1824), *Microstachys* was widely accepted until Mueller Argoviensis (1866) treated it as section of *Sebastiania* Spreng. Esser (1998) reestablished the genus with two other sections of *Sebastiania* as synonyms sect. *Elachocroton* (F. Muell.) Pax and sect. *Microstachyopsis* (Müll. Arg.) Pax. *Microstachys* is probably monophyletic (Esser & al., 1997), and shares with *Sebastiania* sessile staminate flowers with mostly free sepals and three free stamens (Esser, 2001, 2012).

A new species endemic to Paraguay is presented here with a full description, accompanied by a illustration and a discussion of the morphological affinities, along with an assessment of it conservation status based on the IUCN Red List Categories and Criteria (IUCN, 2012).

Microstachys dasycarpa Pscheidt, Esser & Cordeiro, **spec. nova** (Fig. 1).

Holotypus : Paraguay. Boquerón : "Ruta Transchaco, 25 km S de Nueva Asunción, 20°50'S y 61°55'W" [fl.], 12.XII.1987, *Schinini A. & R. Palacios 25685* (CTES!). **Isotypi :** (G [G00229753]!, SP!).

Microstachys dasycarpa Pscheidt, Esser & Cordeiro is similar to Microstachys bidentata (Mart. & Zucc.) Esser by linear-lanceolate leaves and short stigmas, but differs by discoid glands on leaves, cylindrical stigmas and pubescent ovaries whereas M. bidentata has crateriform and smaller glands on leaves, globose stigmas and glabrous ovaries.

Monoecious *subshrub,* caespitose, 0.8-2 m tall, with xylopodium, latex not reported but probably present. Branches cylindrical, striated, glabrous or sparsely pubescente, indumentum of whitish, simple, appressed hairs. *Leaves* alternate, concolor; petiole 2-4 mm long, sparsely pubescent to glabrescent, hairs to 0.5 mm long; blade linear to lanceolate, 2.5-5.0 × 0.25-0.5 cm, chartaceous, base attenuate, margin plane to revolute, serrulate with adpressed teeth, apex obtuse to subacute; sparsely hispid abaxially and adaxially, hairs 0.2-0.5 mm long; midvein distinct, secondary veins inconspicuous; with 1 pair of basal, discoid, abaxial submarginal gland, 0.4-0.5 mm in diameter, additional glands usually absent, stipules persistent, ca. 0.5 × 0.5 mm, ovate, hispid. *Inflorescences* in spiciform, leaf-opposed thyrses, 1.5-5.0 cm long, with 1-2 pistillate flowers at base and numerous staminate cymules, glabrous except for the ovaries; bracts ovate, 0.4-0.6 × 0.5 mm, glabrous, apex acuminate, margin serrulate, with 1 pair of basal and globose glands with bilobed apex, 0.2-0.25 mm in diameter. *Staminate cymules* with (1-)3 flowers, glabrous, pedicel 0.2 mm long; sepals 3, free, orbicular to ovate, 0.5-0.6 × 0.5 mm, glabrous, eglandular, margin lacerate, apex rounded, petals 0; stamens 3, filaments cylindrical, 0.2-0.3 mm long, free, anthers globose, 0.3-0.5 mm long. *Pistillate flowers* subsessile to short-pedicellate, pedicel 0.1-0.2 mm long, glabrous; sepals 3, free, ovate, 0.5-0.75 × 0.3-0.4 mm, glabrous, margin entire, apex obtuse; petals 0; ovary oblong, 0.9 × 0.7 mm, tomentose, hairs 0.2 mm long, with pyramidal appendages in each mericarp; style absent, stigmas 3, cylindrical, glabrous, erect in bud and recuverd and spreading at anthesis, 0.5-0.75 × 0.2-0.25 mm, glabrous. *Fruit :* pedicel 1-1.5 mm long., capsular, dry, splitting septicidal-loculicidally, 6 × 5-6 mm, oblong, slightly sulcate, smooth or with inconspicuous apical appendages, sparsely hairy; stigmas persistent, ca. 0.75 × 0.25 mm; columella 5 mm long. Seeds oblong, 4 × 2.5 mm, brown, no caruncle seen.

Etymology. – The epithet is related to the indumentum of the ovary.

Phenology. – Flowering and fruiting between November and January.

Distribution and habitat. – *M. dasycarpa* is endemic to Paraguay, occurring around Nueva Asunción (dep. Boquerón) on sand dunes and sandy soil in grassland in the Chacoan phytogeographic province (Morrone, 2014), at 280-300 m altitude.

Conservation status. – Near Threatened (NT) : the data have been evaluated against the criteria but the species does not qualify for CE, EN or VU categories.

Notes. – In Paraguay, *Microstachys* is represented by three other species : *M. corniculata* (Vahl) Griseb., *M. hispida* (Mart.) Govaerts (a species from inundated and palm savannas and cerrado scrub) and *M. serrulata* (Mart.) Müll. Arg. (from cerrado scrub). *M. dasycarpa* differs from *M. corniculata* by leaves with attenuate base and obtuse to subacute apex (vs leaves with cordate to rounded base and acuminate apex in *M. corniculata*) ; from *M. hispida,* that also have pubescent ovaries, by linear to lanceolate leaves with discoid glands

Fig. 1. – *Microstachys dasycarpa* Pscheidt, Esser & Cordeiro. **A.** Habit; **B.** Leaf; **C.** Leaf indumentum; **D.** Glands; **E.** Inflorescence; **F.** Female flower in frontal view with bract; **G.** Female flower in lateral view with bract; **H.** Female flower; **I.** Male flower in lateral view. [*Schinini & Palacios 25685*, CTES]

(vs ovate leaves with crateriform glands in *M. hispida*) and from *M. serrulata* it differs by leaf margins serrulate by adpressed teeth and the fruits smooth or with inconspicuous apical appendages (vs leaf margins serrate by spreading teeth and fruits with distinct appendages in *M. serrulata*).

Paratypi. – **Paraguay. Boquerón :** "Nueva Asunción, between Parque Nacional Teniente Agripino Enciso and Nueva Asunción" [fl.], 27.I.1995, *Zardini, E. & A. Acosta 42235* (M!) ; "Nueva Asunción, between Parque Nacional Teniente Agripino Enciso and Nueva Asunción" [fl.], 27.I.1995, *Zardini, E. & A. Acosta 42388* (M!, MO) ; "Proposed National Park Medanos del Chaco" [fl.], 13.XII.1998, *Zardini, E. & N. Duarte 49716* (M!).

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