
Stenopadus andicola Sp. Nov. (Asteraceae: Mutisieae), a New Generic Record for Ecuador

John F. Pruski

United States National Herbarium, Department of Botany, MRC-166, Smithsonian Institution, Washington, D.C. 20560-0166, U.S.A.

ABSTRACT. A new species, *Stenopadus andicola* (Asteraceae: Mutisieae), is described from the Cordillera del Condor, Ecuador. It is the first member of the genus reported outside the Guayana Highland and is a new generic record for Ecuador. *Stenopadus andicola* is placed in section *Stenopadus*.

The genus *Stenopadus* S. F. Blake (Asteraceae: Mutisieae) contains 15 species, 14 of these occurring in the Guayana region of Brazil, Colombia, Guyana, and Venezuela (Pruski, 1991 [1993]; Pruski, 1997), principally on sandstone. No species of *Stenopadus* were listed as occurring in the Andes in treatments of the Mutisieae for Colombia (Díaz-Piedrahita & Vélez-Nauer, 1993), Ecuador (Harling, 1991), Peru (Ferreira, 1995), or Venezuela (Aristeguieta, 1964). The description of a fifteenth species, *S. andicola*, marks the first report of the genus from outside the Guayana region and the first report of the genus in Ecuador and the Andes. *Stenopadus* thus joins *Gongylolepis* R. H. Schomburgk as Guayana-centered Mutisieae genera with a sole species occurring in the Andes. In Pruski (1997: 365), the occasion was taken to mention *S. andicola* in passing. The new species is named prior to its use in the forthcoming *Catalogue of the Vascular Plants of Ecuador*, coordinated by P. M. Jørgensen and S. León.

The Mutisieae contain some of the most primitive species of Asteraceae, and the "ancestral asteraceous plant" illustrated in Bremer (1994) is *Stenopadus*-like. Important primitive features found in the Guayana-centered Mutisieae include arborescent habit, thick fleshy leaves (taken as a mechanical deterrent, in light of the weak protective chemistry of the group), large homogamous capitula with florets that are bird-pollinated, sometimes paleate receptacles, short rounded style branches with a single stigmatic surface and without collecting hairs, anthers without a distinct apical appendage, and smooth prolate pollen (Pruski, 1991 [1993]).

Stenopadus andicola Pruski, sp. nov. TYPE: Ecuador. Zamora-Chinchipec: Cantón Nangaritza, Valle del Río Nangaritza, Miazí, bosque sobre pendientes fuertes de roca caliza o de pizarra, bosque primario, muy denso, 4°18'S, 78°40'W, 1200 m, 10 Dec. 1990 (fr), W. Palacios 6712 (holotype, US; isotypes, MO, QCNE not seen). Figure 1.

Arbol usque 15 m alta; caules sericei vel glabrati; folia alterna, petiolata; petioli 1.5–4 cm longi tenui non-amplexicauli; foliorum lamina coriacea oblanceolata vel obovata 8–24 cm longa 2–7.5 cm lata integra pinnativenia sericea vel glabrata; capitula solitaria sessilia vel brevipedunculata epaleacea homogama, flosculis ca. 25 hermaphroditis; involucre cylindricum vel anguste campanulatum 3.9–4.5 cm longum ca. 2.2 cm latum 6–7-seriatum; phyllaria imbricata sericea vel apicalis glabrata; receptaculum planum epaleaceum ca. 1 cm diam.; corollae ignotae; achaenia cylindrica ca. 10 cm longa glabra; pappi setae numerosae multiseriatae usque 20 mm longae.

Trees to 15 m tall, to 20 cm diam.; stems subterete, grooved, sericeous when young to glabrate, leafy distally, leafless proximally, internodes to 3 cm long. Leaves simple, alternate, often apically clustered, petiolate; petiole 1.5–4 cm long, thin and non-clasping; blade rigid-coriaceous, oblanceolate to obovate, 8–24 cm long, 2–7.5 cm wide, apically broadly acute to rounded, narrowly cuneate basally, margins entire, thickened, somewhat revolute, venation pinnate, reticulate or third-order veins sometimes obscure, the upper blade surface dark green, midrib commonly sericeous to puberulent, upper surface otherwise puberulent when young to glabrous, the lower blade surface pale green, midrib sericeous to weakly so, lower surface otherwise sericeous when young to nearly glabrous. Capitula solitary, terminal, sessile to shortly pedunculate, homogamous, ca. 25-flowered, florets bisexual; peduncle 0–0.5 cm long and not much exerted above the bases of the subtending leaves, the subtending leaves deciduous and upper node or two with elongating axillary branch(es) when capitula in fruit, the peduncle then leafless with capitula 5 cm above axillary branch(es) and uppermost leaves; involucre cylindrical to narrowly campanulate, 3.9–4.5 cm

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(Walter Palacios 6712)
ASTERACEAE
Stenopadus colombianus Cuatrec. &
Steyerm.
Det. H. Robinson (US), 1991
MISSOURI BOTANICAL GARDEN HERBARIUM (MO)
ECUADOR

ASTERACEAE

ISOTYPE OF

Stenopadus andicola Pruski
det. John Pruski (US), 1996

ZAMORA-CHINCHIPE: Nangaritza Canton
Valle del Río Nangaritza. Miazí.
Bosque sobre pendientes fuertes de roca
caliza o de pizarra. Bosque primario,
muy denso. Árboles cubiertos de musgos.
78°40'W 04°18'S 1200 m

Árbol de 15 m de altura. Ramitas jóvenes
perdas.

10 dic 1990

Walter Palacios 6712
HERBARIO NACIONAL DEL ECUADOR (QCNE)
MISSOURI BOTANICAL GARDEN HERBARIUM (MO)

Figure 1. Isotype (Palacios 6712, MO) of *Stenopadus andicola* Pruski.

long, ca. 2.2 cm wide, 6–7-seriate; *phyllaries* ca. 40, imbricate, graduated, tightly appressed and rigidly erect, coriaceous, sericeous or apex sometimes glabrate, entire, the outer phyllaries keeled, triangular-ovate, 0.5–1 cm long, 0.4–0.6 cm broad, apex acute or obtuse, the inner phyllaries weakly keeled, elliptic-lanceolate to lanceolate, ca. 3 cm long, 3.5–5 mm wide, apex narrowly acute; *receptacle* flat, epaleaceous, ca. 1 cm diam. *Corollas* unknown. *Cypselas* (achenes) nearly cylindrical, mostly 5-angled, ca. 10 mm long, brown, glabrous; pappus setae numerous, several-seriate, linear, stramineous, to 20 mm long, about twice as long as the cypselas.

Distribution and ecology. *Stenopadus andicola* is known only from two collections in late fruit in October and December. The specimens in QCNE were not seen, but Walter Palacios (pers. comm.) says that they too are in late fruit. These collections were made in cloud forests from 1100 to 1200 m elevation on the Cordillera del Condor in the province of Zamora-Chinchipec, Ecuador. The Cordillera del Condor is largely sandstone, but *S. andicola* has been collected only in quartzite or slate areas. The Cordillera del Condor is considered among the oldest geologic formations in Ecuador (Peter Jørgensen, pers. comm.), and is important biogeographically; it is home to several other Guayana disjuncts [e.g., *Everardia montana* Ridley ex Thurn (Cyperaceae), *Paepalanthus dichotomus* Klotzsch ex Körnicke (Eriocaulaceae), *Perama* Aublet (Rubiaceae), *Pterozonium brevifrons* (A. C. Smith) Lellinger (Pteridaceae), and *Pterozonium reniforme* (Martius) Fée (Pteridaceae)] (John Wurdack, pers. comm.).

This new species is known only from fruiting material, but is referred to actinomorphic-flowered *Stenopadus* by its arborescent habit with unarmed stems, large coriaceous leaves with thin, non-clasping petioles, non-plumose pappus, large capitula, and keeled phyllaries. The corollas of species of *Stenopadus* are mostly red, and the corolla lobes are flexuous or coiled and about as long as the corolla tubes. By its keeled phyllaries, *S. andicola* resembles *S. chimantensis* Maguire, Steyermark & Wurdack, *S. connellii* N. E. Brown, and *S. sericeus* Maguire & Aristeguieta. The three latter species are placed in section *Connellia* Maguire & Wurdack and are confined to the tepuis of the eastern Guayana Highland. *Stenopadus sericeus* has reticulate, abaxially sericeous leaves, further resembling *S. andicola*. However, the leaves of *S. chimantensis*, *S. connellii*, and *S. sericeus* are stoutly petiolate, thus these three species are readily distinguished from *S. andicola*. The new species is not

considered to be a member of section *Connellia* sensu Maguire et al. (1957).

By thinly petiolate, large, occasionally abaxially sericeous leaves, *Stenopadus andicola* appears to be most closely related to *S. colombianus* Cuatrecasas & Steyermark (a Colombian endemic, and the nearest geographic relative of *S. andicola*) and the widespread *S. talaumifolius* S. F. Blake, both of section *Stenopadus* sensu Maguire et al. (1957). However, the leaves of the new species are weakly (vs. strongly) reticulate and commonly (vs. occasionally) abaxially sericeous, thus differing from both *S. colombianus* and *S. talaumifolius*. The phyllaries of *S. andicola* are sericeous (or the innermost sometimes apically glabrate) and keeled, which further distinguishes it from *S. colombianus* and *S. talaumifolius*, both of which have non-keeled, glabrous phyllaries, or rarely with the outermost phyllaries sericeous. The leaves of *S. cucullatus* Maguire (sect. *Stenopadus*) resemble those of *S. andicola*, but *S. cucullatus* differs from the new species by its weakly seriate, apically obtuse to rounded phyllaries. The new species is presumed to be a member of section *Stenopadus*.

Paratype. ECUADOR. **Zamora-Chinchipec:** Cantón Nangariza, Detrás del Campamento Militar de Miazzi (oeste), bosque nublado con árboles cubiertos completamente de hepáticas y musgos, estrato del bosque 15 m de altura, Dystropept. arenisca cuarzosa meteorizada, 4°16'S, 78°42'W, 1100 m, 21 Oct. 1991 (fr), W. Palacios et al. 8551 (MO, QCNE not seen).

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