

New combinations and range extension for Neotropical mosses

Guillermo M. Suárez^{1,3} and María M. Schiavone²

¹ *Fundación Miguel Lillo, CONICET, Miguel Lillo 251, San Miguel de Tucumán (4000), Tucumán, Argentina;* ² *Facultad de Ciencias Naturales e I. M. L., Miguel Lillo 205, San Miguel de Tucumán (4000), Tucumán, Argentina*

ABSTRACT. New combinations are proposed for three Neotropical moss species following the transfer of *Barbula uncinicoma* to *Gertrudiella* and of *Cyrto-hypnum sharpii* to *Pelekium*. Furthermore *Gertrudia validinervis* is considered a synonym of *G. uncinicoma* and its variety *serratopungens* (Herzog) is maintained within the latter as *Gertrudiella uncinicoma* var. *serratopungens* (Herzog) G. Suárez & M. Schiavone. *Pelekium sharpii*, a Central American species is recorded for the first time for South America from Bolivia and Argentina.

KEYWORDS. *Barbula uncinicoma*, *Cyrto-hypnum sharpii*, *Gertrudiella*, Neotropics, Pottiaceae, Thuidiaceae.



In the course of the study of the bryological diversity in Argentina we found some nomenclatural and taxonomic novelties, and a few new records for various Neotropical countries.

NEW COMBINATIONS

Gertrudiella uncinicoma (Müll. Hal.) G. Suárez & M. Schiavone, *comb. nov.* *Barbula uncinicoma* Müll. Hal., *Linnaea* 42: 345, 1879. TYPE.

“Argentina Cordobensis, in der Barrancas von Cordoba”, Novbr. 1870, P. G. Lorentz (Lectotype: NY, isotype: H!).

Gertrudia validinervis Herzog, *Biblioth. Bot.* 87: 44, 1916. ≡ *Gertrudiella validinervis* (Herzog) Broth., *Nat. Pfl.* ed. 2, 11: 528, 1925. *syn. nov.* TYPE. BOLIVIA. In der Donbuschsteppe de Palo, ca. 1600 m, T. Herzog 4344 (Lectotype: JE!, isotype: L!).

Brotherus (1925) established the genus *Gertrudiella* to accommodate the single species *G. validinervis*. This curious species was originally described by Herzog (1916) from Bolivia as a member of *Gertrudia*, an illegitimate later homonym of *Gertrudia* K. Schum. (1900). Herzog’s original name for this genus was a dedication to his wife (Zander 1993). *Gertrudiella* comprises plants with a thick-walled hyalodermis and a strong central strand in the stem, acute leaves with a sheathing base, costa with one stereid band and a multilayered band of thick-walled guide cells. The laminal cells are bulging ventrally and flat dorsally but marginally bulging on both sides in several rows (Schiavone & Suárez 2003).

During a visit to the Herbarium of the Finnish Museum of Natural History in Helsinki (H), we were able to locate the type material of *Barbula uncinicoma* Müll. Hal., a species described by C. Müller in 1879 from Argentina. Our observations confirm that *Gertrudiella validinervis* is indistinguishable from *Barbula uncinicoma*. The genus *Barbula* includes plants with hyalodermis occasionally present, but

³ Corresponding author e-mail:

suarezgm@csmat.unt.edu.ar

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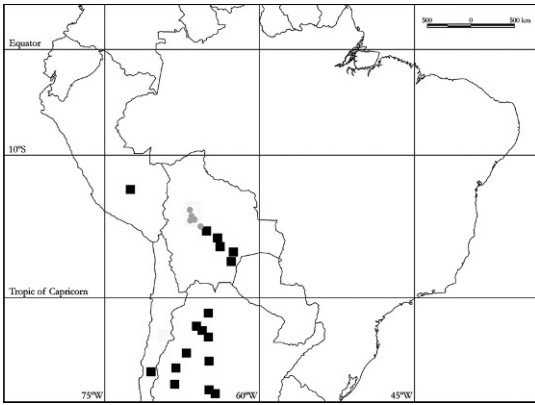


Figure 1. Known distribution of *Gertrudiella uncinicoma* (Herzog) G. Suárez & M. Schiavone (■) and *G. serratopungens* (Herzog) G. Suárez & M. Schiavone (●).

never with thick-walled, lanceolate to ligulate leaves, strongly recurved leaf margins, costa with two stereids bands. The laminal cells upper and basal are well differentiated with papillae usually multiplex. Consequently, we here propose the above new combination and new synonym.

Distribution and habitat. This species was known from Bolivia and Argentina (Suárez & Schiavone 2005, Churchill & Fuentes 2005) and now is hereby recorded as new to Peru and Chile. It occurs in dry forest (Bosque Chaqueño Serrano, Bosque Chaqueño and Monte) of Argentina and Bolivia; in the valley in the middle of the southern Peruvian Andes and in central Chile (Fig. 1).

Specimens examined. ARGENTINA. Córdoba, Yacanto, Baño del Obispo (a orillas de un arroyo), 12 Apr 1976, M. Schiavone s/n (LIL); Huerta Grande, talud rocoso al costado del camino, 07 Sep 2009, G. Suárez 742, 744 (LIL). BOLIVIA. Santa Cruz, Cordillera, 15 km sur de Camiri de ida a Villamontes, Primera entrada al este, camino al Palmarito, Bosque Chaqueño intervenido con pequeños cerritos, sobre suelo arcilloso, sobre bordes del camino, 20°12'36"S 63°25'48"W, 400–600 m, 10 Jun 2006, I. Linneo et. al. 504-A (MO); Manuel M. Caballero, Canton Comarapa, 7 km este de Comarapa, Bosque Chaqueño Serrano, sobre suelo rocoso, 17°57'S 64°29'W, 1800 m, 24 Jun 2001, S. Churchill et. al. 20537 (MO); Cochabamba, Quillacollo, municipio de Sipe Sipe, localidad de Incarragay (próximo al volcán), vegetación de valle seco andino, suelo básico, con *Schinus molle*, 17°27'43"S 66°23'01"W,

2900–3000 m, 28 Oct 2006, I. Linneo & D. Enriquez 856 (MO); Chuquisaca, Oropeza, cerca Tuero Chico, al lado de Río Pilcomayo, 48 km sur de Sucre, valle interandino seco, 19°20'49"S 65°12'02"W, 2300 m, 17 Sep 2006, S. Churchill et. al. 24646 (MO); 14 km al oeste de Sucre (a Tarabuco), Chaparral alto, 19°08'S 65°1' W, 2840 m, 7 Aug 2001, S. Churchill & E. Churchill 20839(MO). CHILE. Región Metropolitana, Chacabuco, bifurcación Caleu-Tilttil, hacia Tilttil, 680 m, 2 Aug 1980, M. Mahu 13150 (MO). PERU. Cusco, Quispichanichis, Laguna Urcos, suelo rocoso, con *Didymodon pruinosus*, 13°41'S 71°37'W, 3150 m, 5 May 1973, P & E. Hegewald 5566a (MO).

Gertrudiella uncinicoma var. **serratopungens**

(Herzog) G. Suárez & M. Schiavone, *comb. nov.*
Gertrudia validinervis Herzog var. *serratopungens* Herzog, Biblioth. Bot. 87: 45, 1916. ≡
Gertrudiella validinervis (Herzog) Broth. var. *serratopungens* (Herzog) R. H. Zander, Bull. Buffalo Soc. Nat. Sci. 32: 76, 1993. TYPE. BOLIVIA: In der Felsheide von Teneria (Aracatal), ca. 3200 m, T. Herzog 2584 (Lectotype (here designated): JE!, isotype: !!).

Gertrudiella uncinicoma var. *serratopungens* is closely related with *G. uncinicoma* but it is relatively more robust and has an excurrent costa and weakly dentate leaves. Both species are found in Bolivia in same habitat but never grow mixed.

Distribution and habitat. This species is apparently restricted to Bolivia, where it grows on soil, exposed or slightly shaded by low shrubs, in elevated dry Andean valleys (Fig. 1).

Specimens examined. BOLIVIA. La Paz, Inquisivi, 0.5 km above Río Khatu where Inquisiví-Licoma Pampa Road crosses river at bridge, 2 km north of Inquisivi, deciduous legume forest in rain shadow valley, eroding mud bank of quebrada, 16°53'S 67°09'W, 2200 m, 12 Mar 1988, M. Lewis 88-043 (MO); Murillo, 4 km al sur de Valencia, Bosque de valles secos, con *Prosopis*, *Baccharis*, *Puya*, *Opuntia*, *Trichocereus*, musgo sobre suelo, entre arbustos, muy seco, 16°40'02"S 68°00'34"W, 2950 m, 21 Sep 2003, S. Churchill et. al. 22820, 22817, 22814 (MO).

Pelekium sharpii (H. A. Crum) G. Suárez & M. Schiavone, *comb. nov.* *Thuidium sharpii* H. A. Crum, The Bryologist 87: 211, 1984. ≡

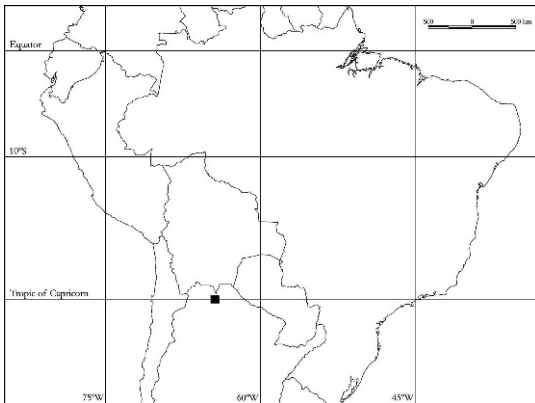


Figure 2. Known distribution of *Pelekium sharpii* (H. A. Crum) G. Suárez & M. Schiavone (■).

Cyrtohypnum sharpii (H. A. Crum) W. R. Buck & H. A. Crum, *Contr. Univ. Mich. Herb.* 17: 67, 1990. TYPE. MEXICO: Sierra Juárez, 25 mi. above Valle Nacional on Highway 175, on moist branch on streamside slope in full shade, cloud forest, Dec. 25, 1972, A. Sharp, F. Bowers, D. Smith, R. Hattaway, P. Somers 4732a (MICH).

Crum (1984) assigned this species to *Thuidium* but it was afterwards transferred to *Cyrtohypnum* by Buck & Crum (1990). According to taxonomical observation (*Pelekium* is lumped with *Cyrtohypnum*, but *Pelekium* is the older name) of Touw (2001) and Schiavone & Suárez (2007), its correct name is *Pelekium sharpii*. *Pelekium* is differentiated by its small size, breeding system (1–3 pinnate), axillary hairs having a single (–2) distal cells and simple or weakly branched paraphyllia.

Pelekium sharpii is mainly recognized by unipapillose leaf cells and paraphyllia abundant on stems, 2–3 cells long, ending in a truncate, pluripapillose cell. The setae is papillose above and capsule suberect to inclined. *Pelekium mexicanum* (Mitt) Schiavone & Suárez has leaf laminal cells similarly unipapillose but the paraphyllia end in a sharply conic cell. Furthermore, it has smooth setae, and capsule erect and narrowly cylindrical.

Distribution. *Pelekium sharpii* is a frequent species in Central America (Mexico, Guatemala, Dominican Republic and Puerto Rico), and is here recorded for the first time from South America based on collections from Bolivia and Argentina (**Fig. 2**).

Specimens examined. ARGENTINA. Salta, Depto. Iruya, ruta 19, costado del Río Bermejo, Selva Pedemontana, 22°43'S 64°23'W, 428 m, 03 Aug 2003, G. Suárez 206 (LIL). BOLIVIA. La Paz, Sud Yungas, 15°32'00"S 67°21'00", 650 m, 12 Jul 1999, A. Acebey & T. Krömer 814 (LPB, LIL).

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