

The genus *Bartramia* Hedw. (Bartramiaceae, Bryophyta) in Uruguay

El género *Bartramia* Hedw. (Bartramiaceae, Bryophyta) en Uruguay

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ABSTRACT

El género *Bartramia* Hedw. se registra por primera vez para Uruguay. Sólo una especie habita la región de estudio (*B. laevisphaera*) la cual es caracterizada morfológicamente e ilustrada con fotomicrografías ópticas y electrónicas de barrido. Se presenta un mapa de la distribución de la especie en Latinoamérica.

Between 2011 and 2015 botanical surveys were undertaken in Uruguay where significant bryophyte collections were made. Geographically, The República Oriental del Uruguay is situated in southern South America, delimited northward by Brazil, by Argentina to the west and the Atlantic Ocean to the east.

The knowledge of the bryoflora of Uruguay is poor and restricted to a few studies, principally in Montevideo (Matter 2004). Additionally, new mosses and liverworts have been recently recorded in different areas of the country (Ellis *et al.* 2011, 2012a, 2012b, Flores & Suárez 2014, Suárez & Schiavone 2013, Suárez *et al.* 2014), which highlights the floristic importance and the singularity of its flora.

Bartramia laevisphaera (Taylor) Müll. Hal. has been recorded in South America from Colombia, Venezuela, Ecuador, Peru, Bolivia, and northwestern Argentina. The first record for the genus *Bartramia* (with *B. laevisphaera*) in Tacuarembó, Uruguay, is here presented, along with a distribution map for Latin America, and illustrations.

Bartramia laevisphaera (Taylor) Müll. Hal., Syn. Musc. Frond. 1: 506. 1849.

Glyphocarpa laevisphaera Taylor, London J. Bot. 5: 56. 1846. *Glyphocarpus laevisphaerus* (Taylor) A. Jaeger, Gen. Sp. Musc. 1: 526. 1875. *Anacolia laevisphaera* (Taylor) Flowers in Grout, Moss Fl. N. Amer. 2: 155. 1935. TYPE CITATION: Ecuador: on Pichincha; growing on shaded trunks of tree, and on the ground; September 23, 1826. Prof. W. Jameson, (Dr. Greville's herbarium). (Lectotype, selected by Suárez *et al.* 2012: Ecuador, Pichincha, Jameson 1827, FH!; isolectotype: LIL-Matter!). Figs. 1-3.

DESCRIPTION. Plants medium-sized, green, to 1.8 cm high. Stems moderate to strongly tomentose at base, hyalodermis absent, central strand present; axillary hairs two-celled, lower cell quadrate, brown, upper cell globose, hyaline. Leaves appressed when dry, erect-spreading when wet, ovate-lanceolate; apex narrowly acuminate; margins coarsely double-serrate, revolute above; upper cells bistratose, oblong to linear, pruriose at both ends, marginal cells usually shorter, thicker-walled and more highly colored; cells of the marginal teeth much larger; inner basal cells linear, only slightly wider than the upper cells, basal marginal cells becoming much wider and shorter, mostly oblong, extreme marginal ones often quadrate. Sporophytes not observed.

SPECIMENS EXAMINED. URUGUAY. Tacuarembó, Gruta de los Cuervos, 31°17'0.7"S; 56°02'30.3"W, 220 m, 28-II-2012, G. Suárez, M. Dematteis, E. Meza & A. Vega 1366 (CTES 0586238, LIL 56204). ARGENTINA. Tucumán, Tañi del Valle, Carapunco, 26°46'33.1"S; 65°43'45.3"W, 2798 m, 07-VI-2009, G. Suárez 618 (LIL 56205); La Ciénaga, 26°47'10"S; 65°39'04"W, 2636 m, 09-IV-2010, G. Suárez 799 (LIL 56208); G. Suárez 809 (LIL 56207). La Rioja, Chilecito, Guachín, en suelo, a orillas del sendero, formando césped, 08-X-2010, N. Canton 921 (LIL 56206). ECUADOR. Cotopaxi, Parque Nacional Cotopaxi, NW slope of volcán Cotopaxi, Laguna Limpia Pongo, dry páramo on slope next to the lake, 0°38'S; 78°32'W, 3900 m, 25-IX-1988, Frahm & Gradstein 22 (LIL 22).

OBSERVATIONS. Found during extensive botanical explorations in Uruguay, the new records of *Bartramia laevisphaera* are the first report for this genus and species from the country (Fig. 4). The species was found growing in stony grasslands at 200 m above sea level. In a sterile condition, *B. laevisphaera* can be confused with *B. stricta* (Damayanti *et al.* 2012, Matteri 1983). However, the latter can be

distinguished from *B. laevisphaera* by its wide central strand in the stems (occupying 87.5-93.75(-175) μm ; 22-31% vs. 50-56.25 μm ; 20-25%), thinner walls of the stem cortical cells (less than 2 μm vs. 2.5-3.7 μm). Another interesting character observed was the axillary hairs with 1 basal brown and 1 globose distal hyaline cell in *B. laevisphaera* and 1-2 basal brown and 1 globose to sub-globose hyaline cells in *B. stricta*.

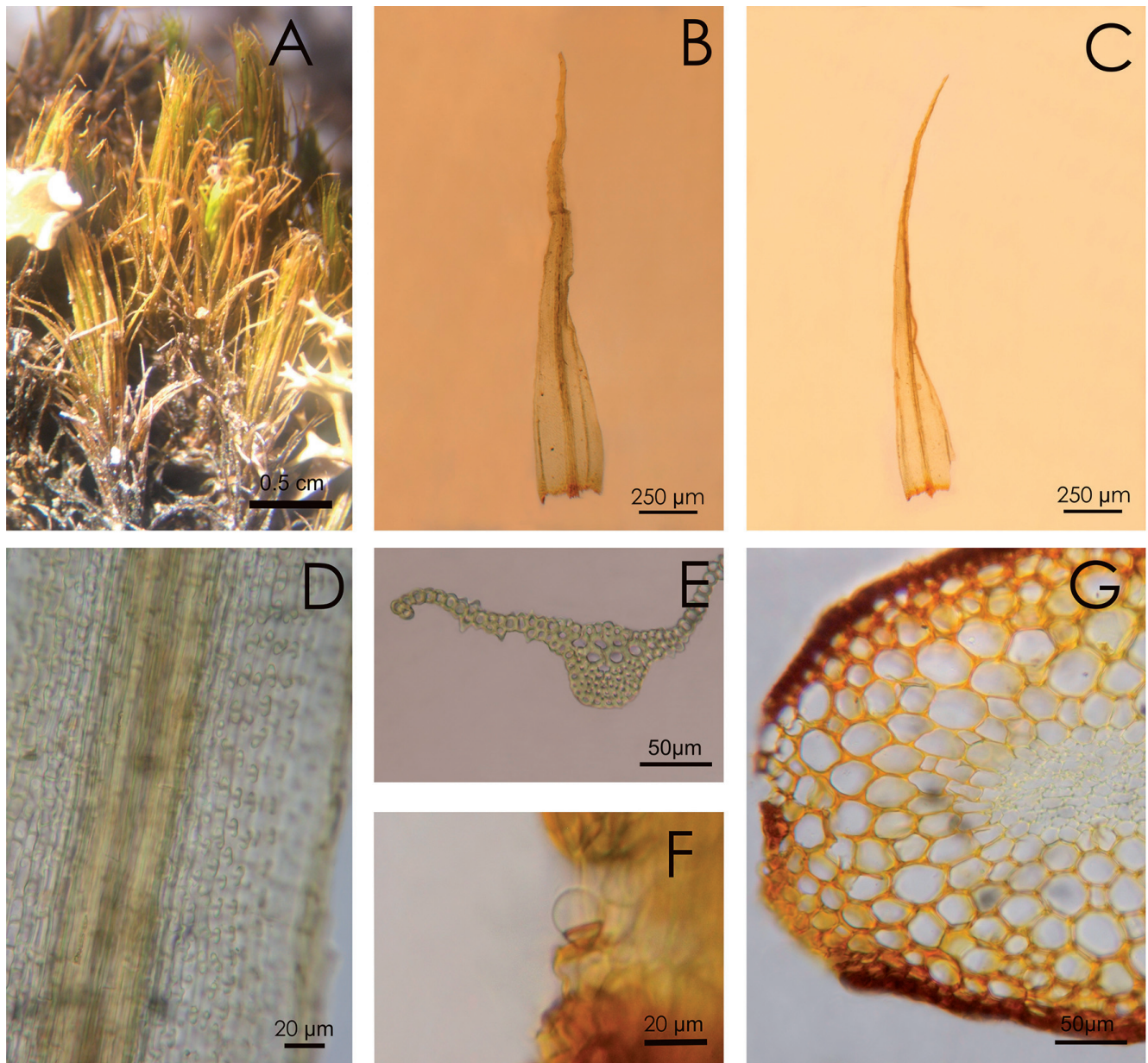


FIGURE 1. *Bartramia laevisphaera* A. Habito. B. C. Leaves. D. Median leaf cells. E. Leaf cross section [from G. Suárez *et al.* 1366 (CTES, LIL)]. / *Bartramia laevisphaera* A. Habito. B. C. Hojas. D. Células de la lámina media. E. Sección transversal de la hoja. F. Pelos axilares. G. Sección transversal del tallo [de G. Suárez *et al.* 1366 (CTES, LIL)].

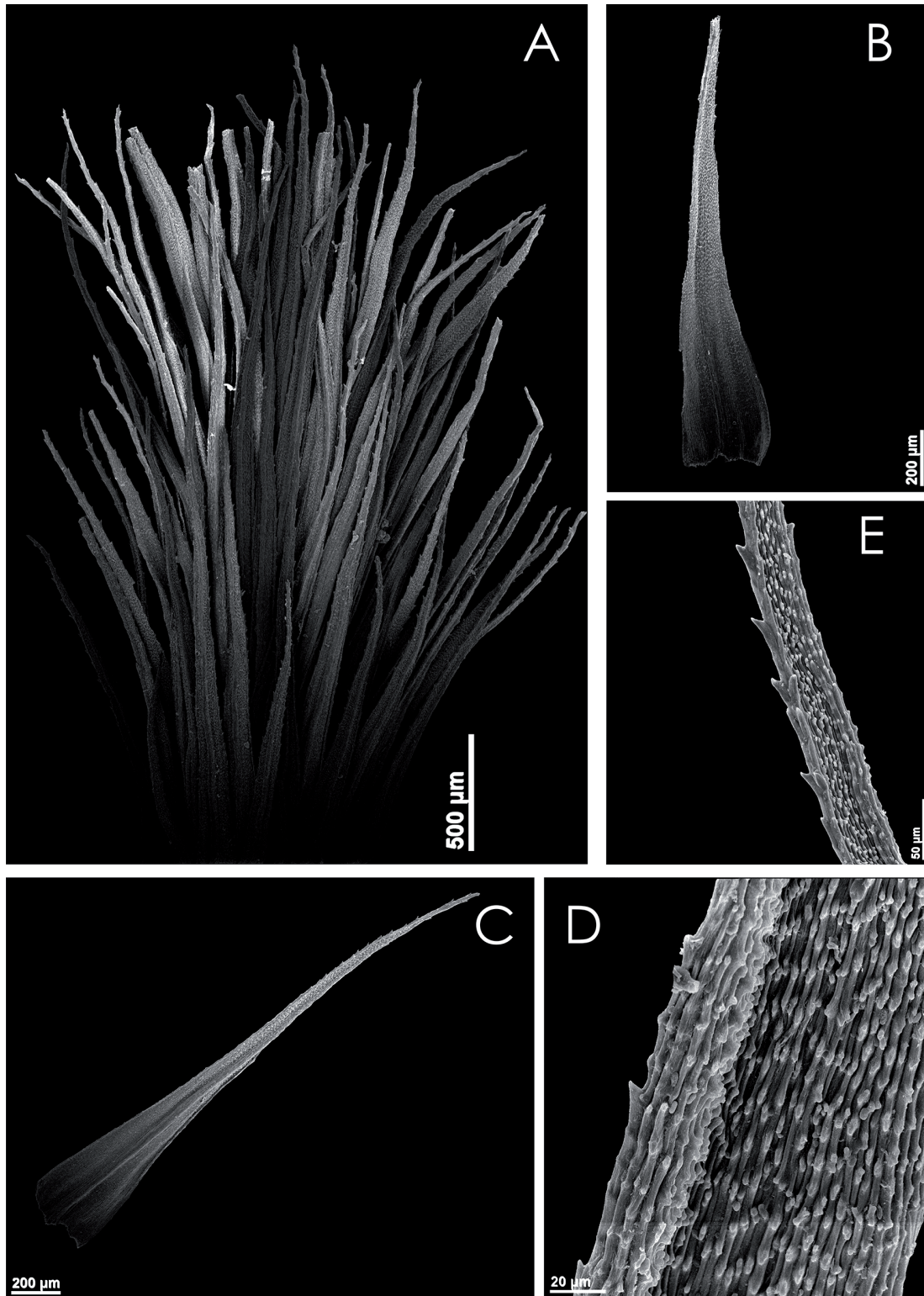


FIGURE 2. A. Detail of *Bartramia laevisphaera* on SEM. B-C. Leaves on SEM. D. Median leaf cells. E. Apical cells [from G. Suárez *et al.* 1366 (CTES, LIL)]. / Detalle de *Bartramia laevisphaera* en SEM. B-C. Hojas en SEM. D. Células de la lámina media. E. Células apicales [de G. Suárez *et al.* 1366 (CTES, LIL)].

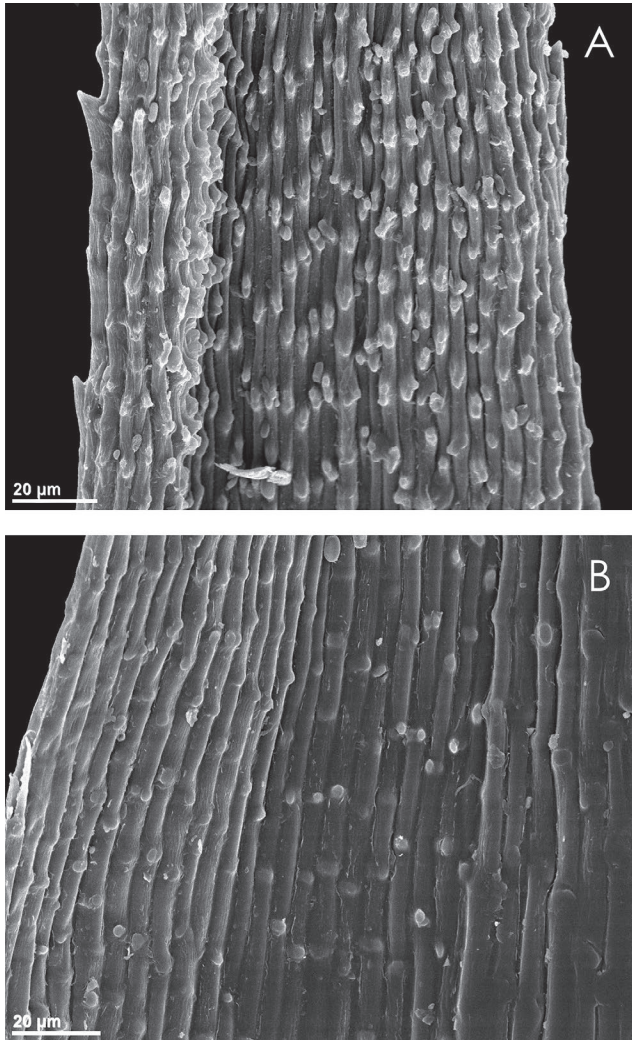


FIGURE 3. A. B. Adaxial surface of vegetative leaf on SEM [from G. Suárez *et al.* 1366 (CTES, LIL)]. / A. B. Superficie adaxial de la hoja en SEM [de G. Suárez *et al.* 1366 (CTES, LIL)].



FIGURE 4. Distribution map of *Bartramia laevisphaera* in Latin America. Previous records are marked with dots, and the new record with a star. / Mapa de distribución de *Bartramia laevisphaera* en América Latina. Registros previos con círculos y nuevo el registro con una estrella.

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