



On the identity of *Schistidium malacophyllum* Herzog (Grimmiaceae, Bryophyta)

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Schistidium Bruch & Schimper (in Bruch *et al.* 1845: 93) is one of the most complex and difficult moss genera, and is still poorly known and understudied taxonomically in South America. In the Neotropics, there are around twenty names for this genus without a real status acknowledged (Churchill *et al.*, 2000) as no taxonomical or nomenclatural revision was ever conducted.

When revising herbarium material of *Schistidium* from Andes, we examined type material of *S. malacophyllum* Herzog (1916: 53), a species considered as synonym of *S. apocarpum* (Hedw.) Bruch & Schimp. (1845: 99) by Bremer (1980). *Schistidium malacophyllum* was originally described on the basis of Bolivian specimens characterized by their medium to large size and being grouped in lustrous rigid turfs. Bremer (1980) introduced a broad concept of *S. apocarpum*, lumping a great number of distinct species within it. According to Bremer proposal, however, many specimens hardly match the diagnostic characters of the species and only some can be grouped on the grounds of their small spores and sinuose cells.

We examined the type specimens of *S. malacophyllum* from B, JE and L, which consist of fertile, abundant and well-preserved plants. The species appears clearly distinct from *S. apocarpum* diagnosis (Bremer, 1980), and should therefore be resurrected as an independent entity. Based on the original descriptions and the study of the type materials (Fig. 1), we realized that morphologically *S. malacophyllum* agrees well with *S. rivulare* (Brid.) Podp. (1911: 207) instead, and thus it is proposed here as a new synonym of the latter.

Taxonomic and nomenclatural conclusions

Schistidium rivulare (Brid.) Podp. Beihefte zum Botanischen Centralblatt. Zweite Abteilung, Systematik, Pflanzengeographie, angewandte Botanik 28(2): 207. 1911. Type: “Ad Thuringici saltus rivulos frigidus, ex. gr. Prope Klein Schmalkalden, E. Germany” (Holotype: B-Br!)

=*Schistidium malacophyllum* Herzog Bibliotheca Botanica 87: 53. 1916. *Grimmia malacophylla* (Herzog) Brotherus Die natürlichen Pflanzenfamilien, Zweite Auflage 10: 311. 1924. Type: Bolivia Llavetal, Herzog 4925 (Holotype: JE!; Isotype: L!, B!). **Syn. nov.**

Bremer (1980) stated that *S. apocarpum* can be delimited by its leaves with acute, sometimes hyaline, apices and hardly distinct costa. In contrast with Bremer (1980) description, *S. malacophyllum* leaves are broadly ovate-triangular to ovate-lanceolate with subobtuse to blunt apex, no hyaline region is present and the costa is well defined and usually subpercurrent.

Additional features of this species involve stems rather stiff, erect to ascendant, in cross section consisting of 1–3 stratose cortex of small, brown cells, surrounding 4–5 rows of large, thin-walled cells; central strand small. Leaves plano-convex, semi-terete, 4–5 stratose, with 2 ventral and 6–8 dorsal epidermal cells in transverse section (Figure 1). Setae short; capsules deeply immersed in perichaetial leaves; peristome teeth lanceolate, revolute; calyptra conical, smooth, mitriform, lobed at the base, not extending to the urn.

Select Specimens examined: **ANTARTICA. South Shetland:** King George Islands, 03 Jan 1980, *R. Ochyra* 33043 (BA, LIL); crevices of wet rocks, near mouth of river draining into Undine Harbour, 21 Dec 1960, *N. Greene* 494 (LIL). **ARGENTINA. Tierra del Fuego:** Lapataia, Cascada rio Pipo, 11 Jan 1971, *C. Matteri* 1748 (BA, LIL). **COLOMBIA. Santander:** Eastern cordillera, on wet rock, near Vetas, 3100–3200 m, 26 Jan 1927, *Killip & Smith* C1021267F (F). **PORTUGAL. Vila Real:** tras-o-Montes e Alto Douro, embalse de Alto Tamega, bosque mixto de ribera con *Populus*, *Fraxinus*, etc. Sobre esquistos, 13 Jul 2011, *J. Muñoz, F. Gutiérrez & G. Suárez* (MA 39920). Manteigas: Serra da Estrela, 3 km al S de Caldas de Manteigas, *J. Muñoz* (MA 20936). **SPAIN. Cantabria:** Polaciones, vertiente NW del pico Tresmares, *J. Muñoz* (MA 20927).

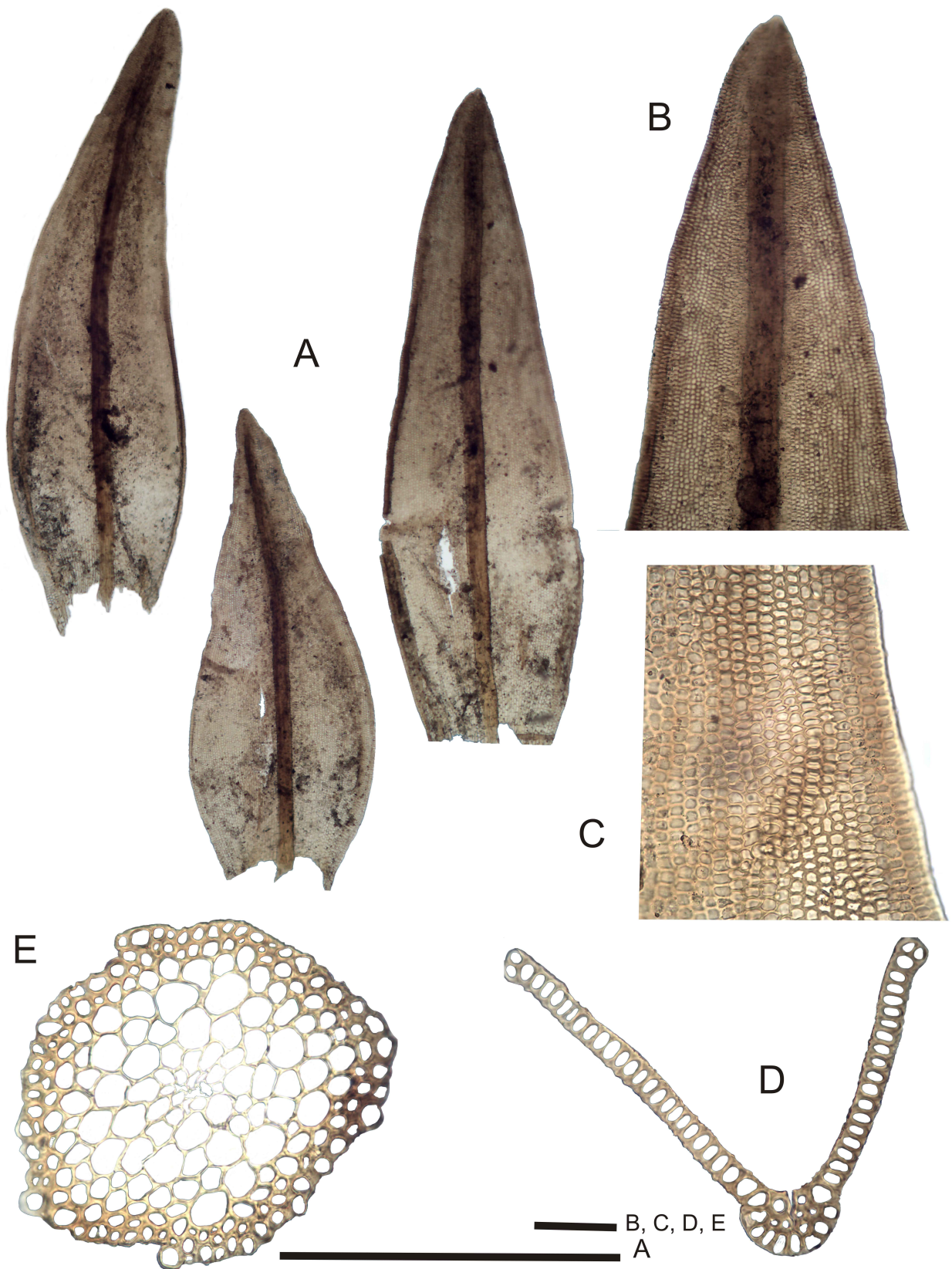


FIGURE 1. A. leaves; B. Tips leaves; C. median cells; D. cross section leaves; E. Cross section stem. A= 1mm. B, C, D, E= 50 μ m (from: Holotype).

Acknowledgments

We thank the curators at JE, L and B for making the specimens available for examination. This research was sponsored by the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), the Program PICT 0810 and PIUNT G631 from Argentina.

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