

Taxonomic Results of the BRYOTROP Expedition to Zaïre and Rwanda

28. Lejeuneaceae, a ramicolous collection.

Tamás Pócs

Eszterházy Teachers' College, Dept. of Botany, Eger, Pf. 43, H-3301, Hungary

The treatment of non epiphyllous *Lejeuneaceae* taxa was published in the first part of the Central African BRYOTROP results (Pócs 1993b). Anyhow, a nice material collected on tiny twigs (partly from fallen canopy branches) from the W edge of Nyungwe Forest Reserve, in a wet type of montane rainforest at 2000 m altitude, remained unidentified. As this collection contained a number of species, which did not occur in the previous *Lejeuneaceae* treat-

ment and are partly new to Rwanda or even to science, we think it is worthwhile to enumerate them in this chapter.

Lejeuneoideae

Cheilolejeunea (Spr.) Schiffn. (See also in Pócs 1993b)

Subg. *Strepsilejeunea* (Spr.) Schust.

Cheilolejeunea krakammae (Lindenb.) Schuster

East to South African montane species. **Ny:** 155, *Pócs 8044a*.

Cheilolejeunea omphalogastris Pócs sp. nov. (See Plate I)

Planta ramicola pendula sericea, pallide griseo-viridis. Caules paucipinnatis, ad 30 mm longis, 80-110 µm crassis, cum foliis 0.9-1.2 mm latis.

Abbreviations:

* New record for Rwanda viz. Zaïre

KB: Kahuzi-Biega (Zaïre)

Ka: Karisimbi (Rwanda)

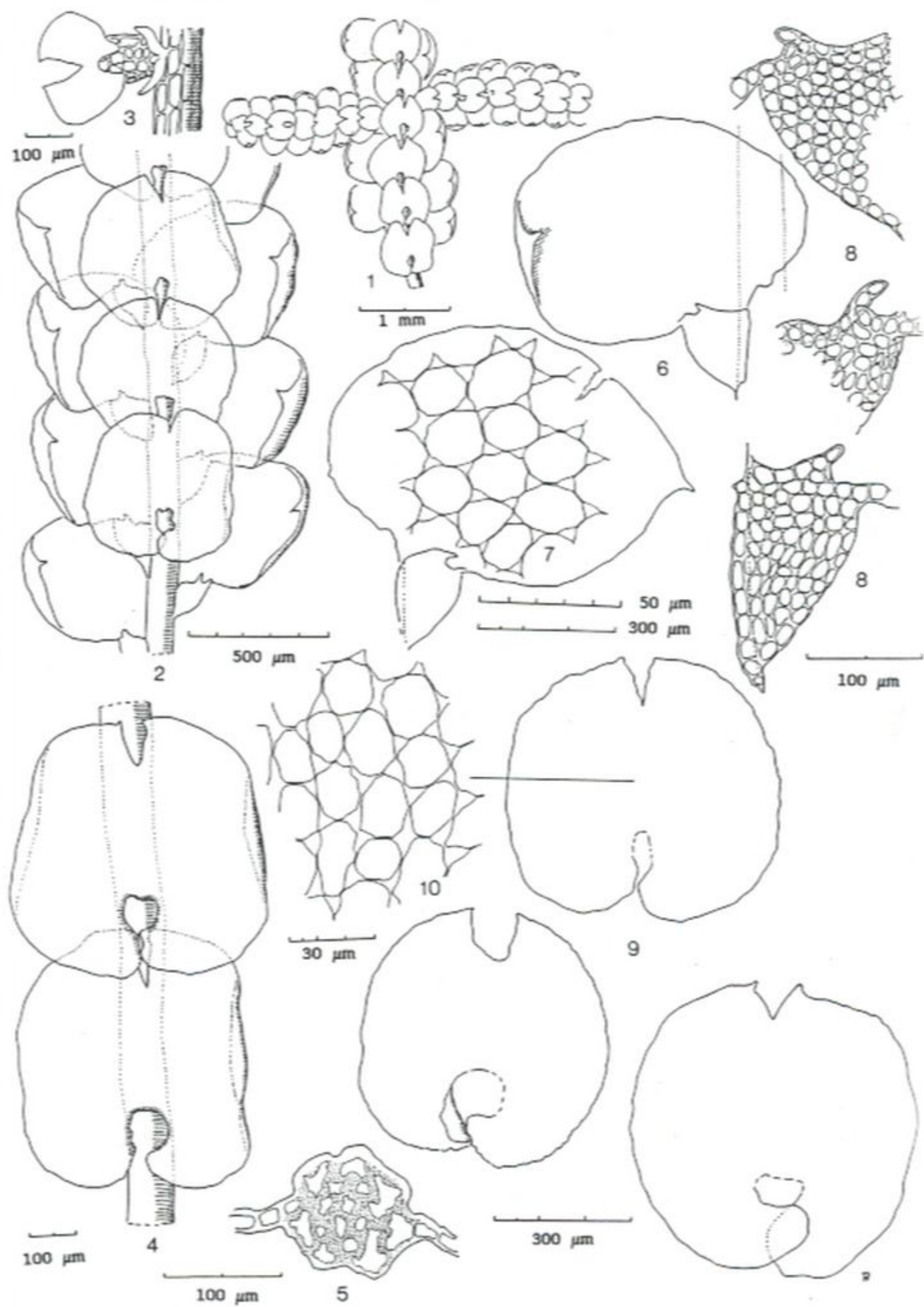
Ny: Nyungwe Forest (Rwanda)

Ak: Akagera region (Rwanda)

Ki: Kigali region (Rwanda)

100-171: number of collecting site.

For locality data and description, see the contribution by E. Fischer (*Tropical Bryology* 8: 13-37, 1993). The specimens are deposited in the herbarium of the Conservatoire et jardin botanique Genève (G). Duplicates are in the herbarium of the author (except for unicates).



Folia parum imbricata, falcata. Lobus 650 μm longus, 4-500 μm latus, asymmetrico ovatus, concavus, apiculato-mucronatus, apice valde incurvus, basi rotundatus, caulem excedens. Lobulus parvus, triangulatus. Dens apicalis 1-3 cellularis. Amphigastria orbiculata, diametro 500-600 μm , caule 5-6-tuplo latiora, apice breviter biloba, basi cordata, profunde sinuatum inserta, auriculis magnis conniventibus. Cellulae medianae lobi amphigastriique 8-22 μm longae et 8-19 μm latae, trigonis magnis incrassatae. Caulis brunneus, in sectione cellulis 7 corticalis et 8-9 medullaris, parietibus incrassatis, flavo-brunneis. Sterilis.

Type: Rwanda, Pref. Cyangugu, W edge of Nyungwe Forest near Gisakura, montane rainforest with large moss balls on branches, at 2000 m alt. (Loc. 155). Ramicolous. Coll. *Pócs 8044b*. (?), Holotype, **EGR**, Isotype G).

Hanging on twigs of shrubs and also on those fallen from the canopy of large trees. Stems pinnate, with few thecal branches often perpendicular to the stem. Leaves slightly imbricate, concave with 650 μm long and 4-500 μm wide asymmetric lobe. The lobe apex apiculato-mucronate, incurved. Lobe base rounded, crossing widely and regularly the stem. Lobule small, triangular, the keel never exceeds the 1/4 length of the lobe. The keel forms a very sharp, 60-90° sinus with the postical margin of the lobe. The apical tooth is formed by 1-3 cells in line, directed away 50-70° from the stem. Often a second, short, 1 celled tooth is observable at the distal base of apical tooth. The amphigastria are orbicular, either incubous or succubous, very large, 5-600 μm in diameter, 5-6 times wider than the stem, apex bilobed to the 1/4 - 1/5 length of amphigastria, lobi and sinus acute. Base cordate, attached to the stem in a deep,

navel like sinus with large, overlapping auricles. Median cells both in the lobi and amphigastria are 8-22 μm long and 8-19 μm broad, with large triangular, sometimes slightly nodulose thickenings. Stem brown, approximately 100 μm thick, in transversal section with 7 cortical and 8-9 medullar cells, with evenly thickened, yellowish brown walls. Gametangia unknown.

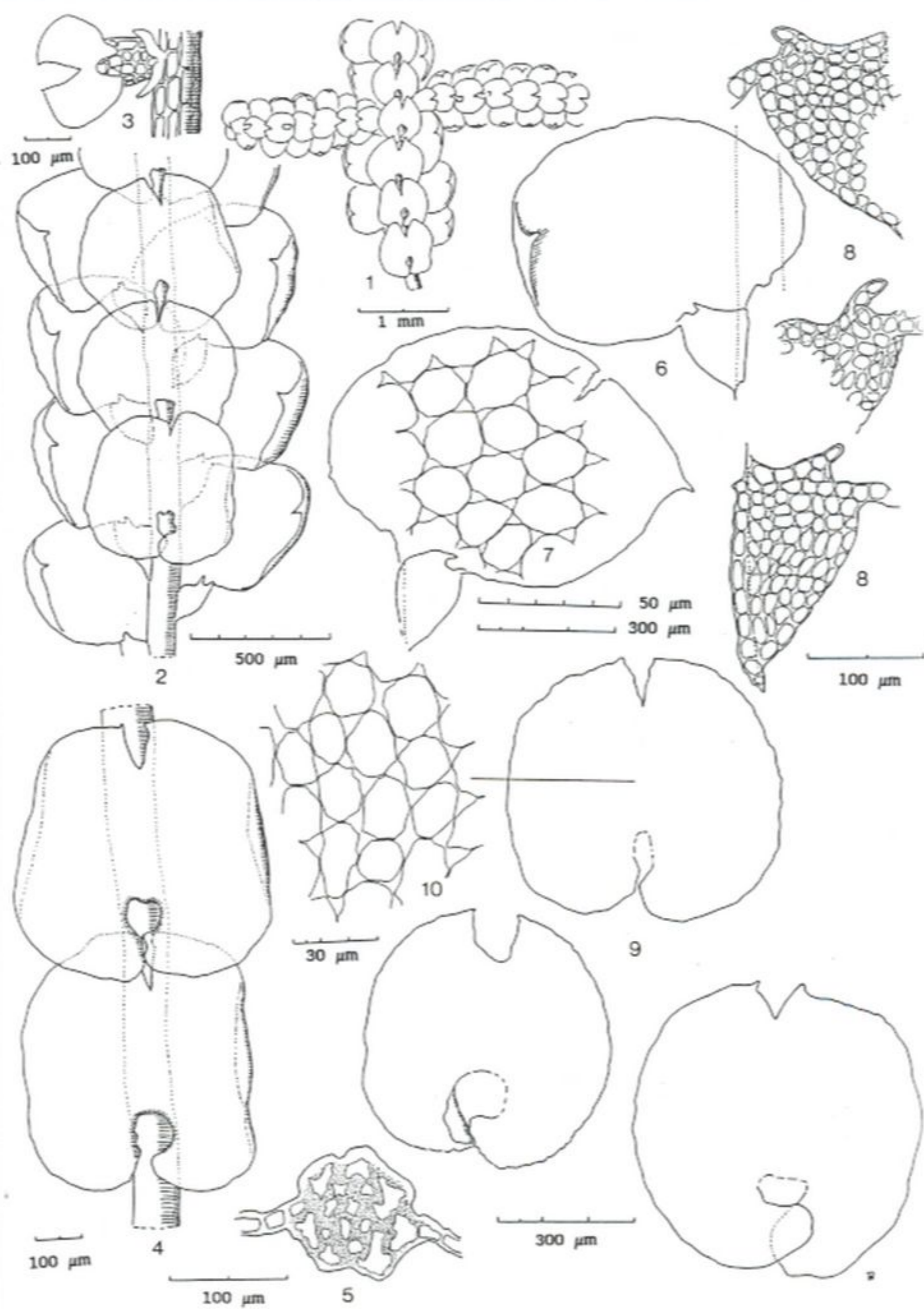
This striking new species by its huge, orbicular, auriculate amphigastria is not similar to any known *Cheilolejeunea* from continental Africa. It shows some slight resemblance to the Madagascan *Strepsilejeunea cordistipula* Steph., but the latter species has much longer (1/2 lobe length), fusiform lobuli and blunt, rounded amphigastrium lobi. The whole transitional appearance, with *Strepsilejeunea* like, acute lobus end and with *Eosmolejeunea* like, very large amphigastria with cordate base support Schuster's (1963: 112) view, that *Eosmolejeunea* and *Strepsilejeunea* can not be separated at generic level.

Cheilolejeunea pocsii E.W. Jones

East African montane species abundant in the Uluguru Mts. in Tanzania, but also known from Madagascar and from Nyungwe Forest area in Rwanda, where it occurs, together with other *Cheilolejeunea* species on twigs. Ny: 155, *Pócs 8044c*.

Drepanolejeunea (Spr.) Schiffn. (See also in *Pócs 1993b*)

- Drepanolejeunea cultrella* (Mitt.) Steph. *Lejeunea ramosissima* Steph. (See also in Pócs 1993b)
 Afromontane species widespread from Sao Tomé to Tanzania and maybe to Mauritius, usually above 900 m altitude. Epiphyllous and ramicolous. **Ny:** 155, *Pócs* 8044d. **Ny:** 155, *Pócs* 8044j.
- Drepanolejeunea physaefolia* (Gott.) Steph. (See also in Pócs 1993b) *Lejeunea tabularis* (Spreng.) Spreng. (See also in Pócs 1993b)
Ny: 155, *Pócs* 8044e. **Ny:** 155, *Pócs* 8044k.
- Drepanolejeunea symoensii* Vanden Berghen & Grolle *Leucolejeunea xanthocarpa* (Lehm. & Lindenb.) Evans
 Species endemic to the Nyungwe Forest area, foliicolous and ramicolous at 1900-2000 m altitude. **Ny:** 155, *Pócs* 8044f. **Ny:** 155, *Pócs* 8044l.
- Lejeunea* Libert *Microlejeunea* (Spruce) Steph. (See also Pócs 1993b)
 Subg. *Lejeunea* Libert *Microlejeunea africana* Steph.
Lejeunea acuta Mitt. (See also in Pócs 1993b) **Ny:** 155, *Pócs* 8044m.
- Lejeunea amaniensis* E.W.Jones *Prionolejeunea* (Spruce) Schiffner (See also Pócs 1993b)
 A rare canopy species occurring time to time also on the twigs of shrub layer in the Afromontane belt from Cameroon to Madagascar, in our area at 1820-2000 m altitude. **Ny:** 155, *Pócs* 8044g. *Prionolejeunea grata* (Gott.) Schiffn. **Ny:** 155, *Pócs* 8044n.
- Taxilejeunea* (Spr.) Schiffn. em. Schust. (See also in Pócs 1993b) *Taxilejeunea conformis* (Mont.) Steph. **Ny:** 155, *Pócs* 8044o.
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Cololejeuneoideae

Colura Dum.

The genus is fully revised by Jovet-Ast (1953, 1954, supplements 1956, 1976, 1980). Further African species are described by Jones & Pócs (1987) and by Pócs (1993a).

Colura calyptrifolia (Hook.) Dum.

Rare amphiatlantic species in tropical Africa, mostly substituted by the pantropical *C. tenuicornis* (Evs.) Steph. (map: Gradstein et al. 1984, Pócs 1991).
Ny: 155, Pócs 8044p.

**Colura saroltae* Pócs

This recently described species of the Sect. *Lingua* (Jones & Pócs 1987) was previously known only from the montane forests of Tanzania at 2400-3300 m altitude (map: Pócs 1991). It is always ramicolous, in our area at 2000 m alt.
Ny: 155, Pócs 8044q.

Diplasiolejeunea (Spruce) Schiffn. (See also in Pócs 1993b)

**Diplasiolejeunea aulae* E.W.Jones, 1973, J.Bryol. 7:552, Fig.4.

Syn. nov.: *Diplasiolejeunea tridentata* P.Tix. 1984, Rev. Bryol. Lichénol. 45: 223, Fig. 8-9. (See Plate II).

This peculiar species was described from West Africa, from the lowland rain forests of Ghana, Atewa Hills Forest Reserve. Specific characters are the concave lobe with scattered ocelli, the lobule with three teeth of which the median one is double or broad, formed by two cell rows, the very wide V shaped amphigastria with 8-12 cells broad, obtuse lobes, finally the presence of scattered gemmiferous leaves much larger than sterile ones. First I thought, that the abundant material from Rwanda belongs to an undescribed, new species within the Section *Villaumeae*

Tixier (1977b), but when have found the very rare gemmiferous leaves and observed the very wide variation of lobule teeth, matching both West African *D. aulae* and Madagascan *D. tridentata* within the same population, it became clear, that a widely distributed, although rare, tropical African species is at hand. (See Plate III). Already Tixier (1979) discovered the affinity between *D. aulae* and *D. tridenticulata*. He based the distinction of the latter species on the lobule teeth, which are extremely variable in our material and on the absence of gemmiferous leaves. Our material contains about 20 specimens with more than 100 shoots. Only one shoot bears one pair of gemmiferous leaves. So their absence on Madagascar material maybe, has no significance.

Ny: 155, Pócs 8044r.

Diplasiolejeunea cornuta Steph. (See also in Pócs 1993b)

Ny: 155, Pócs 8044s.

Diplasiolejeunea symoensii Vand.Bergh. (See also in Pócs 1993b)

Ny: 155, Pócs 8044t.

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