

## Bryophytes from the Republic of Equatorial Guinea (West Central Africa). V. *Diplasiolejeunea cogoensis* sp. nov.

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**Abstract.** *Diplasiolejeunea cogoensis* is described as new from Equatorial Guinea (West Central Africa). It is included in Sectio *Villaumeae*, it is recognisable by its big size, the auriculated dorsal base of lobe, its long and always double first tooth and the shape and location of propaguliferous leaves.

**Resumen.** Se describe *Diplasiolejeunea cogoensis* como especie nueva de Guinea Ecuatorial (Africa Centro-occidental). Se incluye dentro de la sección *Villaumeae*, siendo reconocible por su mayor tamaño, la base dorsal del lóbulo dorsal auriculada, su primer diente largo y siempre doble, y en la forma y localización de los filidios propagulíferos.

### Introduction

While working on the determination of Patxi Heras' collections from Muni (Equatorial Guinea), an apparently undescribed species of *Diplasiolejeunea* was found living together with other Lejeuneaceae like *Diplasiolejeunea cavifolia* Steph. and *Microlejeunea africana* Steph.

It is included in Sectio *Villaumeae*, defined by large leaves, small ocelli scattered on the lobe, large lobule and bifid underleaves with obtuse lobes (Tixier 1978). Except for *Diplasiolejeunea aulae* E. W. Jones, the species in this section are preferentially distributed in eastern Africa and Madagascar (Wigginton & Grolle 1996, Tixier 1984).

*Diplasiolejeunea cogoensis* is the biggest species in Sectio *Villaumeae*. The presence of a basal auricle, the dentition of the lobule and the unmodified propaguliferous leaves separate it from the rest of species in this section.

### *Diplasiolejeunea cogoensis* sp. nov.

*Planta corticola, magna, oleo-viridis, 1-1.2 cm longa, 2.5-2.6 (2.7) mm lata, ramosa. Folia imbricata, lobus rotundus, 1 - 1.2 mm longus, 1 mm latus, basi auriculata. Ocelli pauci. Cellulae foliorum hexagonales, trigonis incrassationibusque intermediis visibilibus ad basin folii; cellulae marginales (15) 17 (20) x 17 (20)  $\mu$ m; cellulae mediales 22-25 (27) x 20-25  $\mu$ m; cellulae basales 37 - 40 x 20 (22)  $\mu$ m.*

*Lobulus* (0.4) 0.45 mm longus, basim inflatus, ad apicem planus, bidentatus. Dens primus cum 4-5 ordinibus monocellularibus, pars duplex saepe brevior; (2) 3 (4) ordinibus monocellularibus; dens secundus bene notatus. Papilla hyalina piriformis, 40 µm longa. Amphigastria bifida, lobis (14) 16 - 19 cellulis latis, apice obtusato, basi auriculata. Folia propagulifera ad apicem frondi, paulo majora quam folia sterilia, concava. Propaguli ad superficie postica lobi proferuntur, discoidei, 75-85 µm diametro, 34-40 cellulis. Cetera desunt.

Olive-green corticolous plant, large, main shoots 1-1.2 cm long and 2.5- 2.6 (2.7) mm wide, bearing numerous short branches (1-1.5 mm long).

Leaves closely imbricate, almost orbicular, 1 – 1.2 x 1 mm, auriculated in its dorsal base (Fig. 1 a). Ocelli scattered. Cells of lobe hexagonal (15) 17 (20) x 17 (20) µm near the margin, 22-25 (27) x 20 - 25 µm in the center of the leaf and 37 - 40 x 20 (22) µm near at the base; trigones absent or very small, except at the very base. Marginal cells near the dorsal base elongate and perpendicular to the margin.

Lobule (0.4) 0.45 µm long, carinal and proximal region inflated, the apical region flat and appressed to the lobe, with two teeth (Fig. 1 c). First tooth long, with two cells at its base and a row of 4 (5) cells, double on the inner side for (2) 3 (4) cells; second tooth well defined (Fig. 1 d). Hyaline papilla pyriform, 40 µm long (Fig. 1 d). Cells with small trigones and intermediate thickenings; in the middle of the lobule the cells elongate (25 x 10 µm), and regularly arranged in several rows.

Underleaves large, with obtuse lobes (0.35) 0.45 – 0.6 µm long, (14) 16 - 19 cells broad at base, with small auricles (Fig. 1 b); cells with trigones and intermediate thickenings especially conspicuous at the base of lobes.

Gemmiferous leaves at the end of main shoots, slightly larger than normal leaves, concave, margins neither inrolled nor reflexed, usually three pairs facing one another and forming a splash cup. Discoid gemmae borne inside this cup, 75-85 µm in diameter, with 34-40 cells (Fig. 1 e). Fructification unknown.

This species is named after the town of Cogo, located near the forest where it was collected.

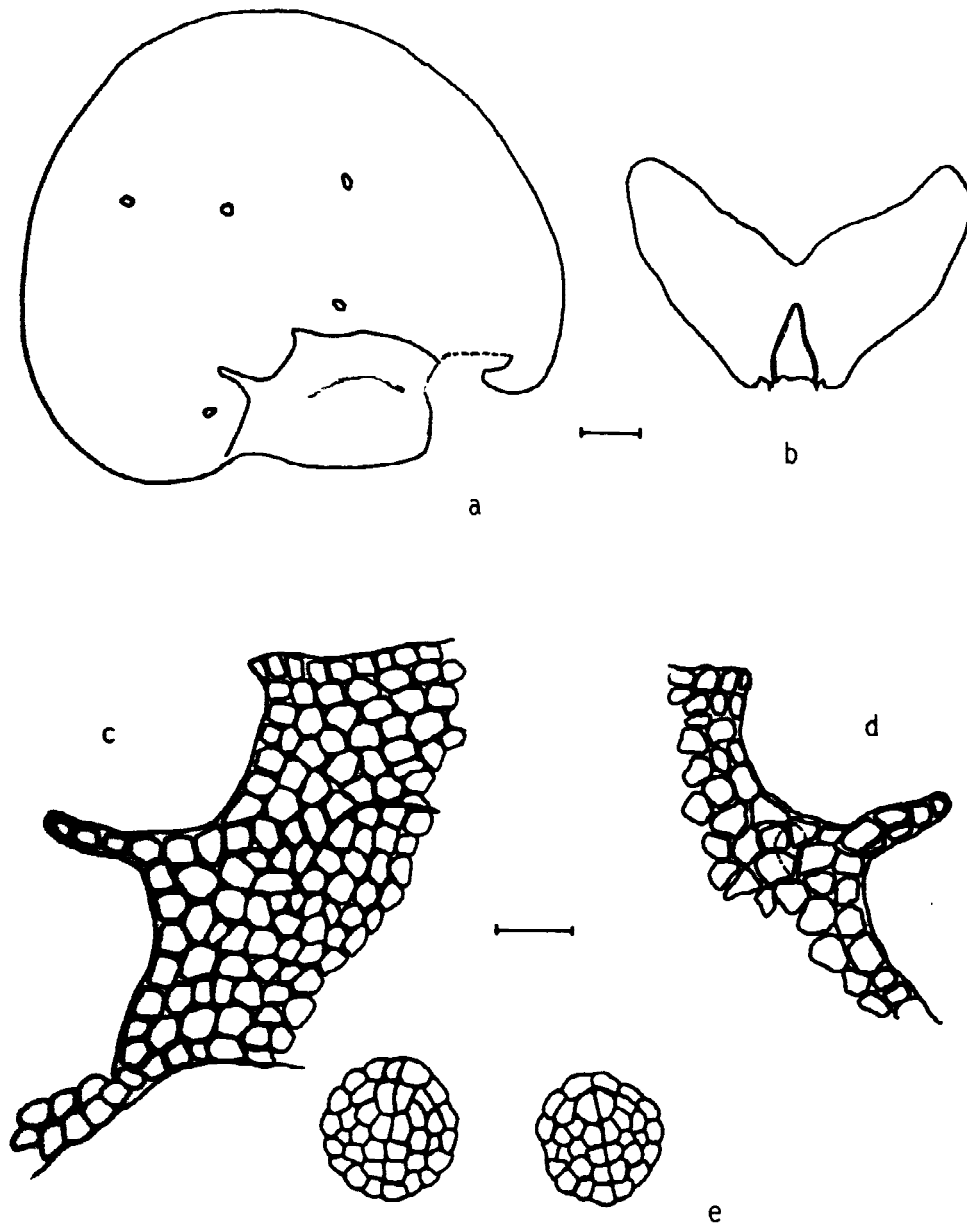
Type: Equatorial Guinea, Muni, Litoral province, Cogo district, 1° 15' N, 9° 58' W, 100 m. Primary lowland forest by Motorá river (Mitong). Corticolous on small branches of the crown of an ocume tree (*Aucoumea klaineana*), living together with *Diplasiolejeunea cavifolia* Steph. and *Microlejeunea africana* Steph.. 23.08.1996 leg. P. Heras. Holotype: VIT 334/96.

#### Acknowledgements.

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#### References

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**Figure 1:** a) Leaf from main shoot, b) underleaf from main shoot, c) lobule apex, outer side, d) lobule apex, inner side, e) gemmae. Scale bars: a and b, 125  $\mu\text{m}$ ; c, d and e, 40  $\mu\text{m}$ .

