Cheilolejeunea ornata (Lejeuneaceae), a new species from Brazilian Atlantic Forest

Cid José Passos Bastos

Universidade Federal da Bahia, Instituto de Biologia, Departamento de Botânica, Laboratório de Taxonomia de Brierítas, Campus de Ondina, Salvador, Bahia, Brazil

The genus Cheilolejeunea (Spruce) Schiffn. is represented by 16 species in Brazil (Gradstein & Costa, 2003; Bastos & Gradstein, 2006; Bastos, 2009). The most important generic character is the reduction of the first lobule tooth, making the hyaline papillae distal in position to the second tooth.

In recent years, some new neotropical species of the genus Cheilolejeunea were described, increasing the number of species for this biogeographic region: Cheilolejeunea norisi Bals. (2002), Cheilolejeunea lazerata C. Bastos & Gradst. from Brazil (Bastos & Gradstein, 2006) and Cheilolejeunea neblinensis Ilkiu-Borges & Gradstein from Venezuela (Ilkiu-Borges & Gradstein, 2008). Furthermore, a new record for Brazil was published by Bastos (2009): Cheilolejeunea compacta (Steph.) E. Reiner.

While studying the genus in Brazil, an apparently undescribed species was detected from Atlantic Forest in Bahia State, Northeastern Brazil.

Cheilolejeunea ornata C. Bastos sp. nov. (Figure 1).

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The specific epithet refers to the large papillae on leaf cells and the dioicous conditions in the species. Leaves wide spreading, imbricate to distal in position to the second tooth. The first lobule tooth, making the hyaline papillae distal in position to the second tooth.

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Universidade Federal da Bahia, Instituto de Biologia, Departamento de Botânica, Laboratório de Taxonomia de Brierítas, Campus de Ondina, Salvador, Bahia, Brazil. Email: cid-bastos@uol.com.br

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Correspondence to: Cid José Passos Bastos, Universidade Federal da Bahia, Brazil, Instituto de Biologia, Departamento de Botânica, Laboratório de Taxonomia de Brierítas. Campus de Ondina, 40170-280 Salvador, Bahia, Brazil. Email: cid-bastos@uol.com.br

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are important characteristics separating the two. *C. oncophylla* is a common species in Bahia state, growing in lowland and montane forest, even in the same site where the *C. ornata* was collected. No significant morphological variation was observed in the populations of *C. oncophylla*.

The new species also resembles *C. celata* M. Renner & Glenny (Renner & Glenny, 2003) recently described from New Zealand, both showing large papillae, small size and remote underleaves, but differs by the absence of papilla in the underleaves and the apiculate apex of the leaf lobe (rounded in *C. celata*). By the strongly papillose lobe cells the new species also resembles the neotropical *C. inflexa* (Hampe ex Lehm.) Grolle, which was described and illustrated by Ye & Zhu (2009) and Gradstein & Ilkiu-Borges (2009). *C. inflexa* is a larger plant (0.7–1.5 mm wide) with larger (0.14–0.28 mm long, 0.21–0.55 mm wide), suborbicular underleaves with a deeply arched insertion line (Grolle & Reiner-Drehwald, 1997; Ye & Zhu, 2009; Gradstein & Ilkiu-Borges, 2009).

*C. novaezelandiae* R.M. Schust. from New Zealand and *C. subopaca* from India also have larger underleaves; *C. novaezelandiae* furthermore differs by the U-shaped sinus (V-shaped in *C. ornata*), and smooth lobule keel (Renner & Glenny, 2003), and *C. subopaca* by the different lobule shape, and the

Figure 1 *Cheilolejeunea ornata* C. Bastos sp. nov. (C. Bastos 4681 – holotype): (A, B) gametophytes, ventral view; (C) underleaf and lobule; (D) apical tooth and hyaline papilla; (E) laminal cells; (F) leaf margin; (G) transverse section of the stem.
presence of male bracteoles throughout the androecial spike (Ye & Zhu, 2009).

The populations of *C. ornata* came from preserved fragments of an Atlantic Forest in the south of Bahia (Michelin Reserve), northeastern Brazil, growing on tree trunks. Three other new species described in recent years are from the same region: *Pyecnolejeunea porrectilobula* C. Bastos & O. Yano, from Estação Veracruz (Bastos & Yano, 2002), *C. lacerata* C. Bastos & Gradstein, from Estação Veracruz (Bastos & Gradstein, 2006), and *Hypnella symphyodontoides* S. Vilas Boas-Bastos, from Michelin Reserve (Vilas Boas-Bastos, 2009). These occurrences may indicate that the Atlantic Forests of southern Bahia are relics of a previously wider ranging forest. Furthermore, some important new species records were reported from this region (Bastos & Vilas Boas-Bastos, 2000; Vilas Boas-Bastos & Bastos, 2004; Bastos & Yano, 2003; Bastos, 2009). Preservation of these forest fragments is very important for the conservation and study of biodiversity, especially of Lejeuneaceae which are the most characteristic hepatics of tropical rain forest. Further analysis will be necessary to clarify the relationships and biogeography of these small, papillose species of the genus *Cheilolejeunea*.

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Taxonomic Additions and Changes: *Cheilolejeunea ornata* C. Bastos sp. nov.

**References**


