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Octoblepharum pocsii (Calymperaceae), a recently described African moss species new to Laos and Asia

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The genus *Octoblepharum* Hedwig (1801: 50), consisting of 18 accepted species, is mainly distributed in the tropical and subtropical regions of the world, with four species in Africa, one in Asia, and the majority of the species in the Neotropics; it is seldom found in temperate latitudes (Eddy 1990, Salazar-Allen 1991, Magill & Allen 2013).

Octoblepharum albidum Hedwig (1801: 50) is the most commonly encountered species of the genus, occurring in southern China, India, Myanmar, Thailand, Laos, Vietnam, Malaysia, Indonesia, the Philippines (Eddy 1990, Tan & Iwatsuki 1993) and larger parts of tropical Africa. The species is characterized by a considerable variation in plant and leaf size as well as a habitat preference for trees. As noted by Magill and Allen (2013) there has been an inclination to name all collections of *Octoblepharum* with eight peristome teeth *O. albidum*, but this is clearly an oversimplification.

During the course of routine identification of moss specimens collected in Laos, I encountered two large-sized plant specimens of *Octoblepharum* that had eight peristome teeth and unusually long, fragile leaves. The leaves were considerably longer than normal sized *O. albidum* leaves: 10–13 vs. 4–6(–8) mm long. This and their presence on rocks make it difficult to assign the Laos specimens to *O. albidum*. Superficially, the long, fragile leaves and the multiple leucocysts layers found in the Laos plants are very similar to those of the American *O. pulvinatum* (Dozy & Molkenboer 1854: 2) Mitten (1869: 109). However, the lack of any pinkish color at the base of the leaves and the presence of 8 rather than 16 peristome teeth clearly distinguish the Laos plants from *O. pulvinatum*. On the other hand, the Laos specimens match very well a recently published species from Guinea, Africa, *O. pocsii* Magill & Allen (2013: 47).

Octoblepharum pocsii is here reported for the first time from Laos as the second species of the genus in Asia. Like the other Asian species, *O. albidum*, it has an African-Asian disjunct distribution. If additional specimens from Asia are more closely examined, the distribution of *O. pocsii* may prove to be much wider than the currently known two localities in Laos. Although the description and line drawings of *O. pocsii* provided by Magill & Allen (2013) serve well for species identification, this paper provides photo images of both Asian species in direct comparison, showing: peristome structure; apical, median, and basal laminal cells; leaf cross-section; and superficial stoma (Fig. 1). Both species can be easily distinguished by the characters mentioned in the key. Although the peristome teeth of *O. albidum* have been described as ranging from smooth (as in *O. pocsii*) to vertically striate or reticulate (Salazar-Allen 1991, Allen 1994), it appears there is always at least some striolation on the outer (dorsal) surface of its teeth (Bartram 1949, Eddy 1990). Other features such as the habitat preference, the length of capsules and setae, and leaf apical shape were found to be intergrading between both species.

The paleotropic disjunct distribution pattern of *Octoblepharum pocsii* is similar to that of *Leucophanes angustifolium* Renauld & Cardot in Renauld (1891: 395) (e.g. Pócs 1992) and *Levierella neckeroides* (Griffith 1842: 64) O'Shea & Matcham (2005: 98) (e.g. O'Shea & Matcham 2005). There are ca. 108 bryophyte taxa that exhibited the same type of distribution pattern (Pócs 1992). It would not be surprising to discover *O. pocsii* in tropical America because a similar disjunctive distribution pattern occurs in *Diphyscium pocsii* (Bizot 1980: 425) R.H. Zander (1993: 275), i.e., tropical Africa (Tanzania) and Neotropics (Honduras) (Allen 1996). There are also numerous examples of mosses, e.g. in *Fissidens* Hedwig (1801: 152) (e.g. Pursell *et al*. 1992) or in *Leucomium* Mitten (1868: 181) (e. g. Allen 1987) that exhibited pantropical disjunctive distribution with species occurring in tropical Asia, Africa, and the Neotropics. The floristic affinity between tropical African and tropical Asian bryofloras is shown not only by the presence of the same species, but also by pairs of closely related, vicariant species occurring on the African-Asian continents (Zanten & Pócs 1981). The geographic separation of a species may be the result of the breakup of Gondwana, but oceanic long-distance air dispersal followed by short land or continental air dispersal is also possible (Zanten 1983).

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