

Besides *Hyophila javanica*, it includes *Hyophila spathulata*, *Hyophila cylindrica*, and *Hyophila tortula*; and, if the nearest allied mosses be sought for, they must be found in such *Tortulæ* as the *Barbula javanica*, Dozy et Molk., Musc. Archip. Ind., t. xviii., which, if it had no peristome, would have exactly agreed with the species named, so that *Hyophila* as a genus is, in fact, but an incomplete *Tortula*; yet it may serve perhaps as a name for a number of species which do not exactly correspond to any described section of that numerous family.

From the *Hyophilæ* above mentioned, *Hyophila barbula* = *Tortula melanocarpa*, differs in the areolation of its leaves and its very near affinity to *Trichostomum brevicaule*, Hampe, found on the cement of buildings in Java, and also to Schimper's *Gyroweisia tenuis*, formerly *Gymnostomum tenue*, and his *Gyroweisia reflexa*, the *Weisia reflexa*, Brid., t. 355, placed in the second edition of his Synopsis immediately before his genus *Gymnostomum*. All these species present but little difference from *Hymenostylium* as outlined here, and are mosses to which lime is so essential that they are only found upon it or in its close proximity.

The rearrangement of the family of Tortuloid mosses is as yet a matter of great difficulty: it is easy to see that they fall into natural groups very difficult to define in words, and that many of the older genera are but of negative value. Thus *Pottia* runs into *Anacalypta*, and this into *Desmatodon*, and on to *Syntrichia*; and *Systegium*, through *Hymenostomum*, is connected with *Weisia*, and through some *Trichostoma* with such complete *Tortulæ* as *Tortula tortuosa*. It is these considerations that have led to the continuance here of the name *Tortula melanocarpa* instead of that of *Tortula barbula*, for by many authors *Tortula* and *Barbula* are considered synonyms of the same idea; and much more may yet be known respecting the limits of *Hymenostylium*, which, if capable of definition, might well include this species as *Hymenostylium barbula*.

Bryum dichotomum, Hedw.

Bryum dichotomum, Hedw., Sp. Musc., p. 183, t. 42; C. Müller, Synop. Musc. Frond., i. p. 304.

Bryum atropurpureum, Web. et Mohr.; Bryol. Europ., t. 37.

BERMUDAS.—With *Tortula bermudana*, barren.

This species is probably cosmopolitan.

Rhacopilum tomentosum, Brid.

Rhacopilum tomentosum, Brid., Musc. Univ., ii. p. 719.

Hypnum tomentosum, Hedw., Musc. Frond., iv. p. 48, t. 19.

Hypopterygium tomentosum, C. Müller, Synop. Musc. Frond., ii. p. 12.

BERMUDAS.—In small quantity, but fertile.

Common probably in all the West Indian Islands, and extending to Southern Brazil.