

## An unusual form of *Calymperes serratum* A. Braun ex Müll. Hal. (Calymperaceae, Musci).

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**Abstract:** A persistent, atypical short-leaved form of *Calymperes serratum* A. Braun ex Müll. Hal. is described.

Recent collections from lowland tropical rainforest in the Malay Peninsula, Sabah and South Kalimantan have included widely distributed atypical forms of various commonly occurring species in the family Calymperaceae. These unusual forms have been found in both pristine and disturbed forest and are sometimes the sole representatives of their species in a given habitat or locality. They often differ in key features from the usual form of their species and are seldom represented in herbaria. Consequently, collections of these forms can be very difficult to identify. Examples of species in which persistent and somewhat depauperate forms have been recorded include *Syrrhopodon aristifolius* Mitt. (Ellis & Tan, 1999), *S. croceus* Mitt. (Ellis, 2001), and *S. loreus* (Sande Lac.) W.D. Reese (Wolseley, et al. 1998).

*Calymperes serratum* A. Braun ex Müll. Hal. may now be added to these examples. Shoots of

this species are normally acaulescent with very long leaves (10-20 mm). The costa is smooth and in the lower half of the chlorophyllose limb, where it is thickest, incorporates two layers of guide cells (Fig. 1e). The chlorophyllose lamina is smooth (Fig. 1 f).

Two similarly aberrant collections of *C. serratum* have been collected from relatively remote, lowland localities within Borneo, one from Tabalong, Kalimantan, and the other from Danum Valley, Sabah. Some shoots of this aberrant form (especially in the Tabalong specimen) possess an apparently well-developed stem, and in habit might be confused with *Calymperes fasciculatum* Dozy & Molk. In both collections the leaves are relatively short (>7 mm); there appears to be a single layer of guide cells throughout the length of the costa (Fig. 1 a), and some superficial costal cells are acutely protuberant from their distal ends. Many cells in the chlorophyllose lamina

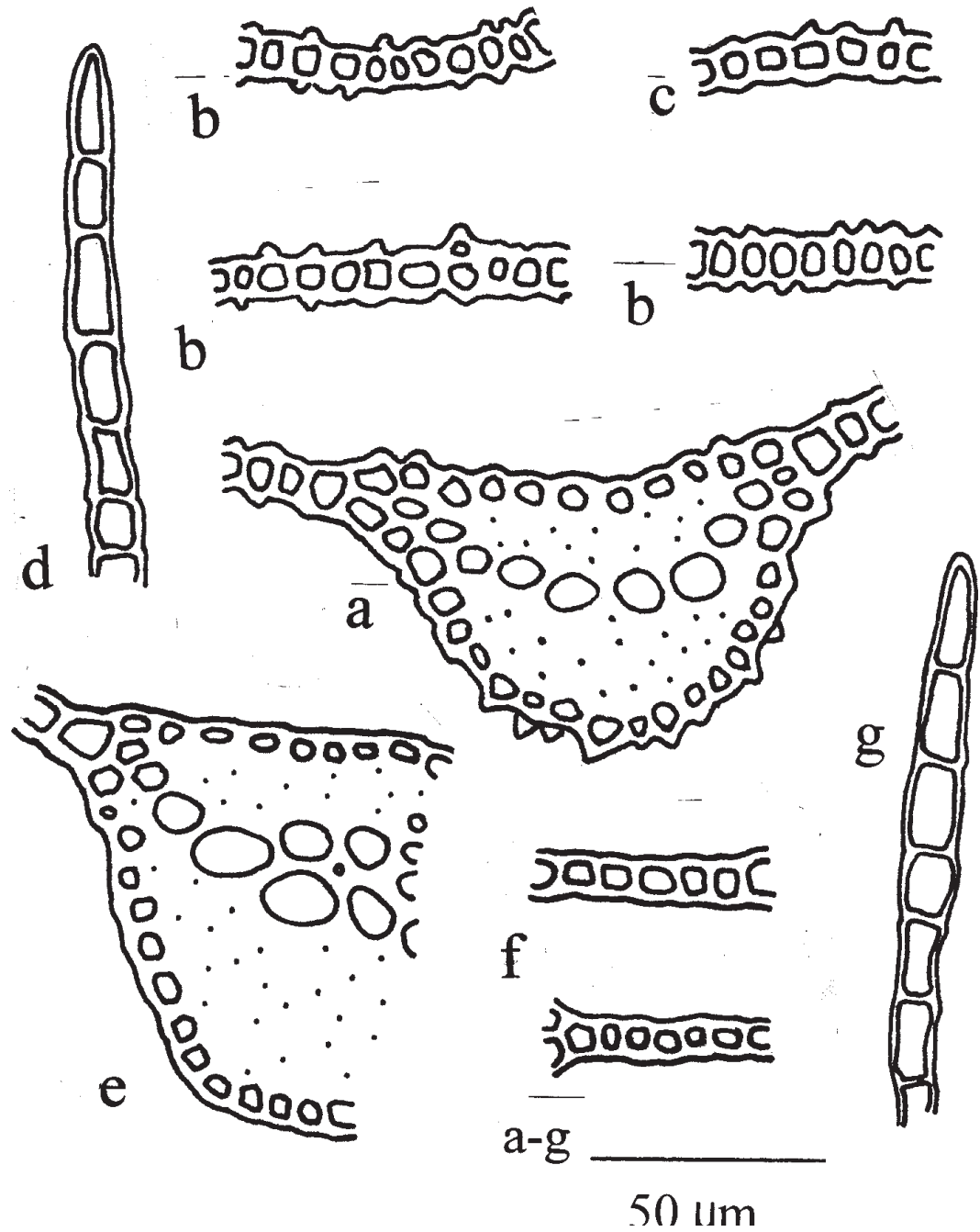


Fig. 1. a-d. *Calymperes serratum* A. Braun ex Müll. Hal. (unusual form). a-c: cross-sections of leaves (a: through costa, b, c: through chlorophyllose lamina); d: apical region of axillary paraphyses. e-g. *Calymperes serratum* A. Braun ex Müll. Hal. (typical form). e-f: cross-sections of leaves (e: through costa, f: through chlorophyllose lamina); g: apical region of axillary paraphyses. a, b, drawn from Sabah, *Ellis DAM337* (BM). c, d, drawn from Kalimantan, *Ellis K5.11. 00* (BM). e, g, drawn from Kalimantan, *Ellis K5.14. 00* (BM).

are unipapillose (Fig. 1 b, c). Otherwise, the features of these collections agree well with those of *Calymperes serratum*. Most significantly, they possess leaves with an obscurely defined hyaline lamina, and axillary paraphyses formed from shortly subrectangular cells (Fig. 1d, g).

#### Habitat

Both collections of the aberrant form of *Calymperes serratum* occurred on trunks of *Diospyros* spp in low altitude pristine forest. The material from Danum Valley was associated with *Calymperes graeffeanum* Müll. Hal., and that from Tabalong with *Callicostella papillata* (Mont.) Mitt., *Pelekium velatum* Mitt. and *Calymperes strictifolium* (Mitt.) G. Roth.

In the vicinity of the specimen from Tabalong, trunks of *Endertia* supported populations of *Calymperes serratum* with typical features, whereas no other occurrence of this species, normal or aberrant, was discovered at Danum.

**Specimens examined.** Sabah. Danum Valley, Main Trail West, below 760 m, 23 August 1997,

*Ellis DAM337* (BM). Kalimantan. Tabalong District, 1°36'0"S 115°31'27"E, 350 m, 3 April 2000, *Ellis K5. 11. 00* (BM).

#### References

- Ellis LT. 2001.** New synonymy in some Asian species of *Syrrhopodon* (Calympeaceae: Musci). *Bull. Nat. Hist. Mus. Lond. (Bot.)* **31** (1): 1-4.
- Ellis LT, Tan BC. 1999.** The moss family Calymperaceae (Musci) in the Philippines. *Bull. Nat. Hist. Mus. Lond. (Bot.)* **29** (1): 1-46.
- Wolseley PA, Ellis LT, Harrington AJ, Moncrieff C. 1998** [**1996**]. Epiphytic cryptogams at Pasoh Forest Reserve, Negri Sembilan, Malaysia – quantitative and qualitative sampling in logged and unlogged plots. In: Lee SS, Dan TM, Gauld ID, Bishop J. (eds). *Conservation, management and development of forest resources*. Kuala Lumpur: Forest Research Institute of Malaysia, 61-83 pp.

