

THE GUNONG BENOM EXPEDITION 1967

3. BRYOPHYTES AND FILMY FERNS FROM GUNONG BENOM

By ANNE JOHNSON

THE following is a short account of bryophytes and filmy ferns collected on Gunong Benom from 7-9 April 1967. Apart from three collections by J. A. Bullock at 6000 ft, all specimens were collected between 800 and 3800 ft, from the ground, rock surfaces, and lower tree trunks, where possible up to about 6 feet above ground. All specimens have been lodged in the Cryptogamic Herbarium, School of Biological Sciences, University of Malaya. The accession number is given for each collection.

The material confirms to a certain extent Whitmore's general remarks on epiphytes (1972). The extreme poverty of the bryophyte flora in the lowland forest at 800 ft reflects the effect of rain shadow. There is a sharp change in the bryophyte flora at about 2500 ft, especially in valleys. Above this elevation there is a marked increase in both number of species and their abundance, with up to 100% cover in wet places near the ground. There is little distinction between ground and tree bryophytes. Peat found at 3800 ft is not sphagnum peat, but is composed of dead bryophytes other than sphagnum and vascular plant debris. *Sphagnum junghuhnianum* occurs at higher elevations (Whitmore, 1972).

The flora is similar to that of lowland forest and lower montane forest in other parts of Malaya but is notable for the paucity of members of the Leucobryaceae and Calymperaceae which are far better developed in other areas.

SYSTEMATIC LIST

Dilaenaceae

Pallavicinia indica Schffn. On small stones near the stream, Base camp, 800 ft (B 0964).

Pallavicinia leveiri Schffn. On tree trunks in valley, 2800 ft (B 0950).

Metzgeriaceae

Metzgeria hamata Lindb. On fallen trees in valley, 2800 ft (B 0957).

Riccardiaceae

Riccardia pinguis (L). Gray. In mossy forest, 3800 ft (B 0959).

Riccardia parvula Schffn. On palm inflorescence in valley, 2900 ft (B 0888).

Jungermaniales Acrogynae***Ptilidiaceae***

Trichocolea tomentella Huds. On ground, Base camp, 800 ft (B 0902).

Cephaloziellaceae

Cephaloziella sp. Abundant, in mossy forest, 3800 ft (B 0923, B 0939, B 0940, B 0941).

Bazzaniaceae

Bazzania distans (Nees.) Trev. With seedlings of *Podocarpus*, 6000 ft, collected by J. A. Bullock (B 0899).

Bazzania longicaulis (Lac.) Schffn. In mossy forest, 3800 ft (B 0916, B 0929).

Lejeuneaceae

Schistochila sp. In mossy forest, 3800 ft (B 0923, B 0927, B 0956).

Stictolejeunea sp. At Base camp, 800 ft (B 0962).

Musci***Dicranaceae***

Dicranoloma blumii (Nees.) Par. In mossy forest, 3800 ft (B 0915).

Leucobryaceae

Leucobryum candidum (P. Beauv.) Wils. In mossy forest, 3800 ft (B 0912, B 0955).

Leucophanes octoblepharoides Brid. On trees at Base camp, 800 ft (B 0984); in valley, 2800 ft (B 0890, B 0896).

Syrrhopodontaceae

Syrrhopodon croceus Mitt. In mossy forest, 3800 ft (B 0924).

Syrrhopodon schiffnerianus (Fleisch.) Par. In mossy forest, 3800 ft (B 0931, B 0945).

Syrrhopodon spiculosus Hook. at Grev. In mossy forest, 3800 ft (B 0887, B 0910, B 0914, B 0922, B 0928, B 0958).

Syrrhopodon treubii Fleisch. In valley, 2800 ft (B 0893, B 0898); in mossy forest, 3800 ft (B 0921).

Thyridium undulatum (Broth. et Geh.) Fleisch. In valley, hanging from the trees, 2800 ft (B 0889).

Calymperaceae

Calymperes hampei Doz. et Molk. On trees, Base camp, 800 ft. (B 0889).

Calymperes longifolium Mitt. In isolated patches on trees in the valley, 2800 ft (B 0909).

Orthotrichaceae

Groutiella goniorrhyncha (Doz. et Molk.) Wijk. et Marj. On trees at Base camp, 800 ft (B 0906).

Rhizogoniaceae

Rhizogonium spiniforme (Hedw.) Bruch. On ground in valley, 800 ft (B 0946).

Meteoriaceae

Aerobryopsis longissima (Doz. et Molk.) Fleisch. In valley, 2800 ft (B 0901); in mossy forest, 3800 ft (B 0933).

Neckeraceae

Thamnum ellipticum (v.d.B. et Lac.) Kindb. On tree trunks at Base camp, 800 ft (B 0984).

Thuidiaceae

Thuidium meyenianum (Hpe.) v.b.B. In the valley, 2800 ft (B 0895).

Hookeriaceae

Callicostella pappillata (Mont.) Mitt. On tree bark, Base camp, 800 ft (B 0911); valley on trees, 2800 ft (B 0952).

Distichophyllum mittenii Bosch. et Lac. In mossy forest, 3800 ft (B 0944).

Sematophyllaceae

Clastobryophilum bogoricum (Bosch. et Lac.) Fleisch. Very abundant in mossy forest, 3800 ft (B 0947, B 0951, B 0953, B 0966).

Acroporium diminutum (Brid.) Fleisch. On trees in the valley, 2800 ft (B 0892).

Sematophyllum saproxylophilum (C. Muell.) Fleisch. In the valley, 2800 ft (B 0897).

Trichosteleum mammosum (C. Muell.) Jaeg. In the valley, 2800 ft (B 0961).

Trismegista lancifolia (Harv.) Broth. In mossy forest, 3800 ft (B 0886, B 0930, B 0935).

Hypnaceae

Ectropothecium intorquatum (Doz. et Molk.) Jaeg. In the valley, 2800 ft (B 0963).

Hypnodendraceae

Hypnodendron reinwardtii (Reinw. et Hornsch.) Lindb. In mossy forest, 3800 ft (B 0919, B 0954, B 0960).

Filicinae***Hymenophyllaceae***

Hymenophyllum acanthoides (v.d.B.) Rosenst. In peaty area, 6000 ft, collected by J. A. Bullock (B 0903).

Trichomanes meifolium Bory. On exposed slope, 6000 ft, collected by J. A. Bullock (B 0900).

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- WHITMORE, T. C. 1972. An outline description of the forest zones on north-east Gunong Benom. *Bull. Br. Mus. nat. Hist. (Zool.)* **23**: 9-15.



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