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A small collection of bryophytes from Montserrat, West Indies

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Abstract. Four species of liverworts and 13 taxa of mosses have been identified from samples collected in Montserrat in 1980, 11 of which appear to be new to the island.

Introduction

A small collection of liverworts was made by the second author in Montserrat, Leeward Islands, West Indies in April 1980. They were examined and some named by E.W. Jones in 1982/83, and *Nardia succulenta* was subsequently identified by R. Grolle. In 2000, the first author re-examined the collection and dissected out several mosses.

Eleven of the taxa listed below seem to be new to Montserrat, and are asterisked in the absence of evidence to the contrary. However, on a melancholy note - following volcanic activity from 1995 and particularly in 1996 and December 1997, certainly one site, and probably both, are lost. Great Alp Falls and White River are in a ghaut which has been engulfed in a pyroclastic flow. Aymer's Ghaut has suffered only by deposition of ash, but up to 30 cm of it, so it seems very likely this site has also been destroyed so far as bryophytes are concerned.

Collection sites

1. Great Alp Falls and White River, W. side of the South Soufrière Hills, 16°41'29"N 62°11'1"W; alt: 150-165 m; 15 April 1980. Very shaded sites in wooded ravine with steep sides, in places nearly vertical. Noticeable smell of hydrogen sulphide at time of collection, the sites being little more than 1 km from Galway's Soufrière.
2. Aymer's Ghaut, near Plymouth, 16°42'10"N 62°12'9"W; alt: 120 m; 29 March 1980. Wooded ravine.

For each record, the site number is given in parentheses after the habitat details. Determinations are by the first author, unless otherwise indicated. Species presumed new to the island = *

Liverworts

**Cephaloziaopsis intertexta* (Gottsche) R.M.Schust. On vertical rock face (1), *Banwell M2*, det. E.W. Jones. On patches on permanently wet rocks at foot of waterfall in shady ravine (water iron- and sulphur-laden), *c. per.*, (1), *Banwell M2, M7a, M9*, det. E.W. Jones. C. and S. America; W. Indies.

**Cheilolejeunea trifaria* (Reinw., *et al.*) Mizut. On steep rock face, roots and dead leaves (1), *Banwell M3a*, det. E.W. Jones. Nearly pantropical, extending outside the tropics to Taiwan and Japan.

**Lophocolea liebmanniana* Gottsche On decaying trunk of fallen tree (1), with *Lejeunea* sp., *Isopterygium subbrevisetum*, *Leucomium strumosum*, *Banwell M4a*, det. E.W. Jones. C. and S. America; widespread in the W. Indies,.

**Nardia succulenta* (Rich. ex Lehm.) Spruce Extensive patches on permanently wet rocks at foot of waterfall (tufts bright yellow-brown from the iron- and sulphur-laden water) (1), *Banwell M6* (det. R. Grolle), *M8*. Recorded in the W. Indies also from Guadaloupe, Martinique and St. Kitts; elsewhere from Mexico and S. America.

Mosses

**Callicostella belangeriana* (Besch.) A.Jaeger On decaying trunk of fallen tree (1), with *Calymperes palisotii*, *Leucomium strumosum*, *Lejeunea* sp., *Banwell M4g*. In this specimen, though the leaf apices are often rather short and abruptly tapered (which, in Buck (1998) is usually a differentiating character of *C. depressa*), costal apices invariably end in a single spine, and leaf cells are usually elongate. W. Indies, from Puerto Rico to St. Lucia.

Calymperes afzelii Sw. Scattered stems amongst *Cheilolejeunea* sp. on roots growing over rock face (1), *Banwell M5b*, conf. L.T. Ellis. Pantropical; widespread in the W. Indies.

Calymperes palisotii var. *richardii* (Müll.Hal.)

S.Edwards On decaying trunk of fallen tree (1), with *Leucomium strumosum*, *Lejeunea* sp., *Banwell M4n*, conf. L.T. Ellis. Florida and Mexico to northern S. America; W. Indies; Galapagos Islands.

**Fissidens elegans* Brid. On decaying trunk of fallen tree (1), with *Calymperes palisotii*, *Leucomium strumosum*, *Lejeunea* sp., *Banwell M4j*, conf. R.A. Pursell (PAC). United States to northern S. America; W. Indies, not previously from the Leeward Islands.

**Fissidens hornschurchii* Mont. Scattered shoots amongst *Lejeuneaceae* and *Sematophyllum* sp., on steep rock face (1), *Banwell M3e*; on decaying trunk of fallen tree (1), with *Calymperes palisotii*, *Leucomium strumosum*, *Lejeunea* sp., *Banwell M4e*, both det. R.A. Pursell (PAC). C. America south into S. America; W. Indies.

**Fissidens inaequalis* Mitt. On decaying trunk of fallen tree (1), with *Calymperes palisotii*, *Leucomium strumosum*, *Lejeunea* sp., *Banwell M4d*, det. R.A. Pursell (PAC). Mexico south into S. America; W. Indies, not previously from the Leeward Islands.

**Fissidens perfalcatus* Broth. Scattered shoots amongst *Lejeuneaceae* and *Sematophyllum* sp., on steep rock face (1), *Banwell M3j*, det. R.A. Pursell (PAC). Mexico south into S. America; W. Indies, not previously from the Leeward Islands.

Isopterygium subbrevisetum (Hampe) Broth. On decaying trunk of fallen tree, *c. sp.* (1), with *Calymperes palisotii*, *Leucomium strumosum*, *Lejeunea* sp., *Banwell M4f*. Tropical C. and S. America; widespread in the W. Indies.

**Leucomium strumosum* (Hornsch.) Mitt. On decaying trunk of fallen tree (1), with *Calymperes palisotii*, *Isopterygium subbrevisetum*, *Lejeunea* sp., *Lophocolea liebmanniana*, *Banwell M4c*. Pantropical; widespread in the W. Indies.

**Sematophyllum subsimplex* (Hedw.) Mitt. Creeping amongst mosses and liverworts on steep rock face, *c. sp.* (1), *Banwell M3c*, det. B.J.

O'Shea. C. and northern S. America; W. Indies; tropical Africa.

Syrrhopodon incompletus var. ***incompletus*** Schwaegr. Scattered stems amongst *Cheilolejeunea trifaria*, on tree roots (1), *Banwell M3h*. Eastern Americas from New York to Brazil; W. Indies; E. Africa.

Syrrhopodon prolifer var. ***scaber*** (Mitt.) W.D.Reese On decaying trunk of fallen tree (1), with *Calymperes palisotii*, *Leucomium strumosum*, *Lejeunea* sp., *Banwell M4h*. Southern United States to northern S. America; W. Indies.

Taxithelium planum (Brid.) Mitt. On decaying trunk of fallen tree (1), with *Callicostella belangeriana*, *Fissidens* spp., *Leucomium strumosum*, *Banwell M4m*. Pantropical; widespread in the W. Indies.

Collection *M4* is mainly of a sterile *Lejeunea*, which E.W. Jones considered to be probably *L.*

laetivirens, but without fertile material it cannot be positively named. A *Cheilolejeunea* (*M5*) growing on roots over a rock face (1) was provisionally named by E.W. Jones as *C. adnata* (Kunze) Grolle. However, the leaves lack cilia and are not caducous, and the lobule has a rather elongated apical tooth, which might suggest another species is to hand.

The collections of *Fissidens* are currently held in PAC, but will go eventually to MO; the rest of the collections are deposited at NMW.

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Reference

Buck, W.R. 1998. *Pleurocarpous mosses of the West Indies*. Bronx: New York Botanical Garden.

