

Bryophytes of the Northern Mariana Islands, Micronesia III. Pleurocarpous Mosses

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Abstract A list of pleurocarpous mosses from the northern Mariana Islands is presented. Fourteen species of 12 genera and five families were enumerated. Localities, habitats, specimens examined and miscellaneous notes are provided for each species.

Key words: Pleurocarpous mosses, northern Mariana Islands.

The biological expedition to the northern Mariana Islands was conducted by the Natural History Museum and Institute, Chiba, in cooperation with the Department of Natural Resources (Commonwealth of the Northern Mariana Islands) and the University of Guam Marine Laboratory between 10 May and 10 June 1992. As a member of the group, T. Furuki collected bryophytes during the expedition. Among these 62 specimens of pleurocarpous mosses were investigated and a list is given in this paper.

Study Sites

The party visited nine of the islands: Uracas, Maug, Asuncion, Agrihan, Pagan, Alamagan, Guguan, Sarigan and Anatahan, and stayed at each island between one and six days. The sites studied are located along route a to t as shown in Furuki (1994, fig. 1).

Enumeration of Species

The arrangement of species is alphabetical. Each species name is followed by the localities, which are arranged from north to south, habitats, the specimens number(s) and miscellaneous notes. A complete set of specimens is deposited in the herbarium of the Natural History Museum and Institute, Chiba (CBM), and an incomplete set of duplicates is deposited in Hiruzen Research Institute, Okayama University of Science (HIRU).

1. *Acanthorrhynchium papillatum* (Harv.)
Fl. (Sematophyllaceae)

AGRIHAN: route f, 550 m alt., on root of tree-fern, Furuki 10809 (CBM-BB-11247).

New to the Mariana Islands.

2. *Acroporium stramineum* (Reinw. et Hornsch.) Fl. (Sematophyllaceae)

ASUNCION: route e, 650 m alt., Furuki 10846 (CBM-BB-11284). ALAMAGAN: route m, 700 m alt., Furuki 10967 (CBM-BB-11403).

New to the Mariana Islands.

3. *Aerobryopsis wallichii* (Brid.) Fl. (Metesoriaceae)

ASUNCION: route e, 600 m alt., on soil, Furuki 10836 (CBM-BB-11274).

Smith (1976) listed two species of the genus *Aerobryopsis* (*A. longissima* and *A. pernitens*) from the Caroline Islands in his "Mosses of Micronesia". These two species were reduced to synonyms of *A. wallichii* by Noguchi (1976). New to the Mariana Islands.

4. *Callicostella* cf. *papillata* (Mont.) Mitt.
(Hookeriaceae)

ALAMAGAN: route n, 340 m alt., on root of tree-fern, Furuki 10576 (CBM-BB-11014).

Shapes of leaves and laminal cells and features of the costae of the specimen resemble those of *C. papillata*. However, the laminal cells are less papillose than those of *C. papillata*.

The genus *Callicostella* has not been reported from the northern Mariana Islands (Smith, 1976).

5. *Ectropothecium pacificum* Mitt. (Hypnaceae)

ALAMAGAN: route m, 700 m alt., on humus, Furuki 10943 (CBM-BB-11380); on soil, Furuki 10973 (CBM-BB-11407); on soil, Furuki 10982 (CBM-BB-11414); 600 m alt., on soil, T. Furuki 10937b (CBM-BB-11510).

New to Micronesia.

6. *Ectropothecium cf. sodale* (Sull.) Mitt. (Hypnaceae)

AGRIHAN: route f, 550 m alt., on root of tree-fern, Furuki 10811 (CBM-BB-11249). PAGAN: route l, 75 m alt., on rocks, Furuki 10642 (CBM-BB-11080).

These are closely resembled to *E. sodale* originally known from the Society Islands, but the leaves of these specimens are less falcate than those of *E. sodale*.

7. *Ectropothecium zollingeri* (C. Muell.) Jaeg. (Hypnaceae)

ANATAHAN: route s, 20 m alt., on rocks, Furuki 10354 (CBM-BB-10792).

This species has been reported from the Bonin Islands (Inoue and Iwatsuki, 1969). New to the Mariana Islands.

8. *Floribundaria floribunda* (Dozy et Molk.) Fl. (Meteoriaceae)

ASUNCION: route e, 625 m alt., on boulders, Furuki 10841 (CBM-BB-11279). ALAMAGAN: route m, 700 m alt., on humus, Furuki 10965 (CBM-BB-11401); on soil, Furuki 10974 (CBM-BB-11408).

This species were reported from the southern Mariana Islands (Saipan and Guam; Smith, 1976). New to the northern Mariana Islands.

9. *Isopterygium minutirameum* (C. Muell.) Jaeg. (Hypnaceae)

AGRIHAN: route f, 550 m alt., on trunk of tree, Furuki 10776 (CBM-BB-11214); on trunk of tree, Furuki 10799 b (CBM-BB-11508); on root of tree, Furuki 10808 (CBM-BB-11246). PAGAN: route l, 50 m alt., on soil, Furuki 10634 (CBM-BB-11072). ALAMAGAN: route m, 700 m alt., on soil, Furuki 10961b (CBM-BB-11389); on humus, Furuki 10968b (CBM-BB-11511); 600 m alt., on root of tree-fern, Furuki 10992 (CBM-BB-11424); route n, 450 m alt., on soil, Furuki 10598b (CBM-BB-11504). ANATAHAN: route t, 350 m alt., on trunk of tree, Furuki 10397 (CBM-BB-10835).

This species has been reported from the Bonin Islands (Hahajima; Inoue and Iwatsuki, 1970) and the southern Mariana Islands (Saipan, Guam; Smith, 1976). New to the northern Mariana Islands.

10. *Leucomium strumosum* (Hornsch.) Mitt. (Leucomiaceae)

AGRIHAN: route f, 550 m alt., on root of tree-fern, Furuki 10810 (CBM-BB-11248).

Allen (1987) revised the genus *Leucomium*, and recognized two species in the genus. He considered *L. strumosum* as a pantropical species. New to Micronesia.

11. *Meiothecium microcarpum* (Harv.) Mitt. (Sematophyllaceae)

AGRIHAN: route f, 100 m alt., on trunk of tree, Furuki 10678 a (CBM-BB-11116); 125 m alt., on fallen logs, Furuki 10693 (CBM-BB-11131); 120 m alt., on trunk of tree, Furuki 10706a (CBM-BB-11144). PAGAN: route l, 225 m alt., on trunk of tree, Furuki 10667 (CBM-BB-11105). ALAMAGAN: route n, 250 m alt., on trunk of palm tree, Furuki 10551 (CBM-BB-10989).

This species was reported from Guam (Smith, 1976). New to the northern Mariana Islands.

12. *Sematophyllum microcladiellum* Fl. (Sematophyllaceae)

AGRIHAN: route f, 125 m alt., on trunk of tree, Furuki 10683 (CBM-BB-11121); 110 m alt., on trunk of palm tree, Furuki 10713 (CBM-BB-11151). ALAMAGAN: route n, 360 m alt., on trunk of tree, Furuki 10585 (CBM-BB-11023). ANATAHAN: route t, 350 m alt., on trunk of tree, Furuki 10378 (CBM-BB-10816); on trunk of tree, Furuki 10396 (CBM-BB-10834).

New to the Mariana Islands.

13. *Taxithelium instratum* (Brid.) Broth. (Sematophyllaceae)

PAGAN: route l, 100 m alt., on soil, Furuki 10649 (CBM-BB-11087). ANATAHAN: route q, 200 m alt., on boulders, Furuki 10314 (CBM-BB-10744); on rocks, Furuki 10326 (CBM-BB-10764).

This species was reported from Saipan and Guam (Smith, 1976). New to the northern Mariana Islands.

14. *Vesicularia montagnei* (Bel.) Broth. (Hypnaceae)

AGRIAHAN: route f, 20 m alt., on fallen logs, Furuki 10674 (CBM-BB-11112). ANATAHAN: route q, 200 m alt., on soil, Furuki 10293 (CBM-BB-10731); on soil, Furuki 10301 (CBM-BB-10739); on rocks, Furuki 10329 (CBM-BB-10767); route s, 50 m alt., on rocks, Furuki 10363 (CBM-BB-10801); 70 m alt., on rocks, Furuki 10366 (CBM-BB-10804); route t, 350 m alt., on soil, Furuki 10387 (CBM-BB-10825).

This species has been reported from Rota and Guam (Smith, 1976). New to the northern Mariana Islands.

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