

## NOTES ON SOME FIJIAN MOSSES.

By WILLIAM GREENWOOD.

[Read 26th September, 1945.]

Mr. H. N. Dixon, the noted authority on mosses, died in May, 1944, ending a correspondence with the author which had lasted twenty-five years.

Since "The Mosses of Fiji" appeared (these PROCEEDINGS, IV, 1930, 261-302) Mr. E. B. Bartram has published two important papers on Fijian mosses (Contribution to the Mosses of Fiji, *Occasional Papers, Bishop Museum*, Vol. xi, No. 20, 1936, and Additions to the Mosses of Fiji, *The Bryologist*, Vol. XLVII, 1944). These papers brought the number of mosses known from Fiji to about 250.

During the last few years the late Mr. H. N. Dixon has named numerous Fijian mosses for the author and these include 12 species not previously known from Fiji. Also a number of previously known species have been found in new localities in Fiji. This paper is prepared so as to make this information available. All the numbers given have been collected by the author on the island of Viti Levu and have been seen and named by the late H. N. Dixon.

In "The Mosses of Fiji" the probable number of Fijian mosses was given as about 415. Mr. E. B. Bartram (loc. cit.) thinks this number slightly optimistic and with his opinion the author now agrees.

I have put *Tanithetium* in Sematophyllaceae (not in Hypnaceae, as in "The Mosses of Fiji"), following more recent papers.

## DICRANACEAE.

## DICRANOLOMA BRAUNII (C.M.) Par.

Near summit of Loma Lega Mt., Nadarivatu, c. 3,800 ft., May, 1941; (674).

## DICRANELLA FLACCIDULA Mitt.

On clay banks, hills, Navua to Suva road, Namosi, c. 600 ft., May, 1943; (952).

## DICRANELLA PYCNOGLOSSA (Broth.) Par.

On clay banks, hills, Loma Lega Mt., Nadarivatu, c. 3,700 ft., May, 1941; (778). On clay banks, hills, Navua to Suva road, Namosi, c. 600 ft., May, 1943; (904). On clay banks at roadside, Serua hills, Serua, c. 700 ft., May, 1943; (994).

In "The Mosses of Fiji" this species was ascribed to (Broth.) Broth. in error.

## CAMPYLOPODIUM INTEGRUM (C.M.) Par.

On damp ground, Nadarivatu, c. 3,000 ft., May, 1941; (638). On clay banks, hills, Navua to Suva road, Namosi, c. 700 ft., May, 1943; (949).

## LEUCOLOMA TENUIFOLIUM Mitt.

On trees, Nadarivatu, c. 3,000 ft., May, 1941; (684). On trees, hills, Navua to Suva, Namosi, c. 600 ft., May, 1943; (916).

## CAMPYLOPUS SAMOANUS Broth.

New to Fiji. On wet rock in creek, Nadarivatu, c. 2,700 ft., May, 1941; (637). Only known hitherto from Samoa.

## LEUCOBRYACEAE.

## LEUCOBRYUM SANCTUM Hampe.

On rotten wood, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (900).

## LEUCOBRYUM TAHITENSE Aongstr.

On trees, Mt. Evans, Lautoka, c. 3,600 ft., Dec., 1942; (876).

## LEUCOBRYUM PUNGENS C.M.

On dead wood, Nadarivatu, c. 3,000 ft., May, 1941; (657, 658).

## LEUCOBRYUM SAMOANUM Fleisch. ined.

On dead wood, Nadarivatu, c. 2,800 ft., May, 1941; (655, 656). On rotten wood, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (950, 970).

## LEUCOPHANES PUNGENS Fleisch. ined.

On rotten logs, Nadarivatu, c. 3,000 ft., May, 1941; (662). On dead wood, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (905). On dead wood, Serua hills, Serua, c. 700 ft., May, 1943; (1008).

## EXODICTYON DENTATUM (Mitt.) Card.

On rotten logs, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (965, 983). On rotten wood, Serua hills, Serua, c. 700 ft., May, 1943; (1009).

## FISSIDENTACEAE.

## FISSIDENS DALTONIAEFOLIUS C.M.

On ground in forest, Sigatoka River, Sigatoka, c. 300 ft., Dec., 1940; (577).

## FISSIDENS GLOSSO-BRYOIDES Dix.

On ground, Nadarivatu, c. 3,000 ft., May, 1941; (795).

## FISSIDENS LAGENARIUS Mitt.

On wet rock, Mts., Lautoka, c. 1,800 ft., Sept., 1941; (827).

## FISSIDENS LAUTOKENSIS Dix.

Mr. H. N. Dixon recently re-examined all his material of *F. lautokensis* and came to the conclusion that, of the eleven numbers given under *F. lautokensis* in "The Mosses of Fiji", only two belong there—No. 184 (type) and No. 150. The remainder belong to the following two species.

## FISSIDENS ABBREVIATUS Mitt.

New to Fiji. Nos. 4, 133, 134, 147, 148, 149.

## FISSIDENS PHILONOTULUS Besch.

New to Fiji. Nos. 363, 458, 495. Previously only known from Tahiti.

## FISSIDENS SYLVATICUS Griff.

New to Fiji. On wet rock, Nadarivatu, c. 2,700 ft., May, 1941; (791, 796). On wet rock, Mt. Evans, Lautoka, c. 3,000 ft., Oct., 1942; a form with leaves strongly falcate, moist and dry; (854). On trunks of tree-ferns, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (924, 962). On wet rock, Serua hills, Serua, c. 700 ft., May, 1943; (1004).

## CALYMPERACEAE.

## SYRRHOPODON MAMILLATUS C.M.

On rotten logs, Serua hills, Serua, c. 700 ft., May, 1943; (1000).

## SYRRHOPODON LUTEUS (Mitt.) Jaeg.

On tree trunks, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (902, 978). Milne's specimen from Ovalau was collected on stones—an unusual habitat.

## SYRRHOPODON LONGIFOLIUS (Mitt.) Dix.

On tree trunks, Mt. Evans, Lautoka, c. 3,000 ft., Oct., 1942; (868).

## SYRRHOPODON LAEVIGATUS Mitt.

On dead wood, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (971).

## CALYMPERES TENERUM C.M.

On rotten wood, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (956).

## CALYMPERES MOLLUCCESE Schwaegr.

On dead wood, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (901, 903).

## CALYMPERES LORIFOLIUM Mitt.

On rotten wood, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (964).

## CALYMPERES MARGINATUM Dix.

On rotten wood, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (967).

## POTTIACEAE.

## RHAMPHIDIUM VEITCHII Dix.

On clay bank, Loma Lega Mt., Nadarivatu, c. 3,800 ft., May, 1941; (603). On clay bank, Serua hills, Serua, c. 700 ft., May, 1943; (1003).

## HYOPHILA BERUENSIS Dix.

New to Fiji. On rocks, Mt. Evans, Lautoka, c. 3,000 ft., Oct., 1942; (859*b*). Only known previously from the Gilbert Islands, on coral rocks near sea-level.

## BRYACEAE.

## BRACHYMENIUM NEPALENSE Hook.

New to Fiji. On rotten stump, Loma Lega Mt., Nadarivatu, c. 3,900 ft., May, 1941; (786). In 1943 it was recorded for the first time from New Guinea and up till then had not been known east of the Philippines.

## BRYUM VITIANUM Dix.

On rocks, Nadarivatu, c. 2,700 ft., May, 1941; (605, 624). On dry banks, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (896).

## BRYUM GREENWOODII Dix.

On wet rocks, Nadarivatu, c. 2,800 ft., May, 1941; (789).

## BRYUM WEBERACEUM Besch.

New to Fiji. On rocks in shade, Mts., Lautoka, c. 1,800 ft., May, 1942; (842, 846). Previously known from Tahiti.

## RHIZOGONIACEAE.

## RHIZOGONIUM SETOSUM Mitt.

On tree trunks, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943. A few stems mixed with *Syrrhopodon luteus* (902). Evidently rare, as this is only the second collection in Fiji.

## BARTRAMIACEAE.

## PHILONOTIS ETESSEI Brøth. and Par.

Nadarivatu, c. 3,000 ft., May, 1941; (790).

## CYRTOPODACEAE.

## BESCHERELLEA CRYPHAEOIDES (C.M.) Fleisch.

On tree trunks, Nadarivatu, c. 3,000 ft., May, 1941; (677).

## PTEROBRYACEAE.

## ENDOTRICHELLA GRAEFFEANA C.M.

On trees, Nadarivatu, c. 3,000 ft., May, 1941; (664).

## EUPTYCHIUM SETIGERUM (Sull.), Brøth.

On trees, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (910).

*SYMPHYSODON VITIANUS* (Sull.) Broth.

On trees, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (914, 953).

## METEORIACEAE.

*PAPILLARIA CROCEA* (Hampe) Jaeg.

On trees, Nadarivatu, c. 3,000 ft., May, 1941; (749), a form with dense, short branching.

*PAPILLARIA INTRICATA* (Mitt.) Jaeg.

On trees, Nadarivatu, c. 3,000 ft., May, 1941; (589, 751).

*PAPILLARIA PELLUCIDA* Broth. and Watts.

On trees, Nadarivatu, c. 2,700 ft., May, 1941; (773), a colour variation.

*METEORIUM MIQUELIANUM* (C.M.) Fleisch.

On trees, Nadarivatu, c. 3,000 ft., May, 1941; (743, 800).

*FLORIBUNDARIA FLORIBUNDA* (Doz. and Molk.) Fleisch.

On trees, Nadarivatu, c. 3,000 ft., May, 1941; (799).

*FLORIBUNDARIA AERUGINOSA* (Mitt.) Fleisch.

On trees, Nadarivatu, c. 3,000 ft., May, 1941; (628).

*AEROBRYOPSIS VITIANA* (Sull.) Fleisch.

On trees, Nadarivatu, c. 3,000 ft., May, 1941; (631).

*AEROBRYOPSIS LONGISSIMA* (Doz. and Molk.) Fleisch.

On dead wood, Nadarivatu, c. 3,000 ft., May, 1941; (630, 679).

*AEROBRYOPSIS STRIATULA* (Mitt.) Broth.

New to Fiji. On dead wood, Nadarivatu, c. 2,700 ft., May, 1941; (782). On humus, Loma Lega Mt., c. 3,900 ft., May, 1941; (588). Known previously from the Austral Islands and New Hebrides.

## NECKERACEAE.

*NECKEROPSIS LEPINEANA* (Mont.) Fleisch.

On trunks of trees, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (957, 928 a slender form).

*HIMANTOCLADIUM IMPLANUM* (Mitt.) Fleisch.

On wet rocks in creek, Sigatoka River valley, Sigatoka, c. 500 ft., Dec., 1940; (586).

## HOOKERIACEAE.

*DISTICHOPHYLLUM VITIANUM* (Sull.) Besch.

On decomposing rock, hills Navua to Suva, Namosi, c. 700 ft., May, 1943; (980). On dead wood, Serua hills, Serua, c. 700 ft., May, 1943; (993).

*DISTICHOPHYLLUM FLAVESCENS* (Mitt.) Par.

On rotten wood, Nadarivatu, c. 3,000 ft., May, 1941; (816).

## HYPOPTERYGIACEAE.

*HYPOPTERYGIUM TAHITENSE* Aongstr.

On dead wood, Nadarivatu, c. 3,000 ft., May, 1941; (643, 676).

*HYPOPTERYGIUM SEMIMARGINATULUM* C.M.

The specific name of this moss is incorrectly given in "The Mosses of Fiji" and "Paris Index".

## RHACOPILACEAE.

*RHACOPILUM PACIFICUM* Besch.

On wet rocks, Nadarivatu, c. 3,000 ft., May, 1941; (693).

## THUIDIACEAE.

## CLAOPODIUM NERVOSUM (Harv.) Fleisch. (C. AMBLYSTEGIOIDES Dix.).

On dead wood, Nadarivatu, c. 3,000 ft., May, 1941; (620, 767). In naming No. 767 Mr. Dixon wrote: "This is a form of the plant which I named *C. amblystegioides*; but it varies so much that I think it must be considered a form of the Indian species."

## THUIDIUM CYMBIFOLIUM (Doz. and Molk.) Bry. Jav.

On dead wood, Nadarivatu, c. 3,000 ft., May, 1941; (651, 653).

## THUIDIUM MEYENIANUM (Hampe) Bry. Jav.

On dead wood, Nadarivatu, c. 2,700 ft., May, 1941; (808b, with *Vesicularia calodictyon*).

## THUIDIUM GLAUCINOIDES Broth.

On dead wood, Nadarivatu, c. 2,700 ft., May, 1941; (780).

## HYPNACEAE.

## ETROPOTHECIUM PERCOMPLANATUM Broth.

On wet bank, Nadarivatu, c. 3,000 ft., May, 1941; (592).

## ETROPOTHECIUM PERCOMPLANATUM Broth. var. FALCATUM Dix.

On dead wood, Nadarivatu, c. 3,000 ft., May, 1941; (698). On dead wood, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (930, 943).

## ETROPOTHECIUM INCUBANS (Reinw. and Hornsch.) Jaeg.

New to Fiji. On rotten wood, Serua hills, Serua, c. 700 ft., May, 1943; (1012). Known from Ceylon, Java and Sumatra.

## ETROPOTHECIUM SODALE (Sull.) Mitt.

On rotten wood, Nadarivatu, c. 3,000 ft., May, 1941; (594).

## ETROPOTHECIUM PACIFICUM Mitt.

On rotten log, Serua hills, Serua, c. 700 ft., May, 1943; (986).

## ETROPOTHECIUM TUTUILUM (Sull.) Mitt.

On rotten log, hills Navua to Suva, Namosi, c. 800 ft., May, 1943; (912).

## ETROPOTHECIUM ADNATUM Broth.

On rotten wood, Sigatoka River valley, Sigatoka, c. 500 ft., Dec., 1940; (576). On rotten wood, Nadarivatu, c. 2,700 ft., May, 1941; (752).

## ETROPOTHECIUM MALACOBLASTUM (C.M.) Par.

On wet rocks, Serua hills, Serua, c. 700 ft., May, 1943; (1001).

## VESICULARIA CALODICTYON (C.M.) Broth.

On submerged rocks in creek, Sigatoka River valley, Sigatoka, c. 500 ft., Dec., 1940; (584).

## LEUCOMIACEAE.

## LEUCOMIUM ANEURODICTYON (C.M.) Jaeg. (L. DEBILE (Sull.) Mitt.).

In a letter (Sept., 1941), Mr. Dixon wrote: "The plants which I have referred to *Leucomium debile* must be named *L. aneurodictyon* (C.M.) Jaeg. as Fleischer found that *L. debile* was only a synonym of this."

## SEMATOPHYLLACEAE.

## MEIOTHECIUM RECHINGERI Broth.

New to Fiji. On rotten wood, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (894).

In naming this species Mr. Dixon wrote: "This is certainly the plant referred by Bartram to this species (Polynesian Mosses), and has the two forms of leaf very marked, while the colour is a bright green, as in Brotherus' original plant."

## MEIOTHECIUM MICROCARPUM (Harv.) Mitt.

On dead wood, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (931). On trees, Navua, Serua district, near sea-level, May, 1943; (945, a robust, deep green form).

## ACROPORIUM SUBULATUM (Hampe) Fleisch.

New to Fiji. On trees, mts., Lautoka, c. 1,800 ft., Aug., 1941; (818).  
Known previously from Borneo, Siam, Malay Peninsula and Philippines.

## RHAPHIDOSTICHUM THELIPORUM (C.M.) Broth.

On dead wood, mts., Lautoka, c. 2,000 ft., May, 1942; (845).

## TRICHOSTELEUM HAMATUM (Doz. and Molck.) Jaeg.

On rotten wood, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (898).

## TRICHOSTELEUM BOSCHII (Doz. and Molck.) Jaeg.

On rotten logs, hills, Navua to Suva, Namosi, c. 900 ft., May, 1943; (906, 974).

## TAXITHELIUM PAPILLATUM (Harv.) Broth.

On trees, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (975, with *Taxithelium samoanum*).

## TAXITHELIUM SAMOANUM (Mitt.) Broth.

On trees, hills, Navua to Suva, Namosi, c. 700 ft., May, 1943; (975, with *Taxithelium papillatum*). On dead wood, Serua hills, Serua, c. 700 ft., May, 1943; (992).

## TAXITHELIUM LINDBERGHII (Bry. Jav.) Ren. and Card.

On rotten wood, Mt. Evans, Lautoka, c. 3,600 ft., Dec., 1942; (872, a small form).  
On dead wood, hills, Navua to Suva, Namosi, c. 800 ft., May, 1943; (954).

## TAXITHELIUM TENUISSETUM (Sull.) Mitt.

On trees, Serua hills, Serua, c. 700 ft., May, 1943; (999).

## TAXITHELIUM PROTENSUM Dix.

On dead wood, hills Navua to Suva, Namosi, c. 800 ft., May, 1943; (959).

## BRACHYTHECIACEAE.

## RHYNCHOSTEGIUM JAVANICUM (Bel.) Besch.

New to Fiji. On dead wood, Nadarivatu, c. 3,000 ft., May, 1941; (613, with *Vesicularia calodictyon* Broth).

## HYPNODENDRACEAE.

## HYPNODENDRON VITIENSE (C.M.) Mitt.

On trees, Nadarivatu, c. 3,000 ft., May, 1941; (680, a dark green form).

## MNIODENDRON TAHITICUM Besch.

On rotten wood, Nadarivatu, c. 3,000 ft., May, 1941; (601, 758).

## POLYTRICHACEAE.

## POGONATUM GRAEFFEANUM (C.M.) Jaeg.

On wet soil, Nadarivatu, c. 2,700 ft., May, 1941; (619, a form with short, crowded leaves). On clay bank, Loma Lega Mt., Nadarivatu, c. 3,900 ft., May, 1941; (681). On clay banks, hills, Navua to Suva road, Namosi, c. 600 ft., May, 1943; (934). On clay banks at roadside, Serua hills, Serua, c. 600 ft., May, 1943; (995).

## PSEUDORHACELOPUS PHILIPPINENSIS Broth.

On clay banks, hills, Navua to Suva road, Namosi, c. 600 ft., May, 1943; (895). On clay banks at roadside, Serua hills, Serua, c. 700 ft., May, 1943; (1005, 1006).