

Notes on the Moss Collections

OF THE

Royal Botanic Garden, Edinburgh

BY

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PART II

(With 5 Figures)

The following paper is a continuation of the late Mr. H. N. Dixon's Notes on the Moss Collections of the Royal Botanic Garden, Edinburgh (see supra xix, 279-302, 1938). The manuscript was prepared in the early part of the war and, but for the war, would have been published some years ago.

In the interval, Mr. Dixon died at Northampton on 9th May 1944. Obituary notices have appeared in Nature (10th June 1944), and in Proceedings of the Linnean Society of London, Session 156 (Part 3, 1945).

The types of the new species which Mr. Dixon describes in the present paper are with his Herbarium in the British Museum.

Australia

Fissidens pachyneuron Dix. sp. nov.

§Bryoidium. *Robustulus*. Dense caespitosus; pallide viridis; caules ad 1 cm. alti, plurijugi. Folia sicca *decurvo-falcata*, 1.5-1.75 mm. longa, oblongo-lanceolata, acuta, integerrima, limbidio *perangusto subaequali* (in lamina vaginante latiore) circumdata. Lamina vaginans paullo supra medium folium attingens; lamina dorsalis ad basin folii angustata, paullo decurrens. Costa infra *valida*, versus apicem angustata et leniter sinuosa, *concolor*, *infra apicem* desinens. Cellulae perobscurae, parietibus sat tenuibus, valde irregulares, 5-8 μ , ubique subaequales.

Planta fructifera (No. 83 solum) minor, paucijuga, folia angustiora; seta minus quam 1 cm., pallide rubra, theca inclinata, curvata, pallida. Hab. Richmond R., N.S.W., May 1899; coll. W. W. Watts (2949), type. Oakleigh, Victoria, 16 August 1890; coll. Dr. Morrison; Herb. Edin. (22b). Fernshaw, Dividing Range, Victoria; coll. S. Berggren, Mus. Bot. Lund (83).

Differs from *F. Forsythii* Broth. in the acute leaves, from *F. Dietrichiae* C. M. and *F. praemollis* Broth. (which seems scarcely to differ from *F. Dietrichiae*) in the smaller cells (there 10-13 μ), pale colour, and narrower, longer leaves. It differs from *F. homomallulus* (described below), in the firmer, broader, much less narrowly acuminate leaves, more isodiametric cells with firmer walls.

Fissidens homomallulus C. M. MS. in sched. sp. nov.

§Bryoidium. Sordide viridis, gregarius, terrestris et rupestris, pusillus. Frons *angusta*, folia parum patentia, *flaccida*, saepe *curvata* et *homomalla*, valde asymmetrica, inaequalia et irregularia, e medio folio sensim latiuscule acuminata, acuta, integra. Costa *curvata* et *sinuata*, percurrentes vel sub apice soluta. Lamina vaginans circa dimidiam partem folii attingens, lamina dorsalis *infra valde angustata*, saepe haud folii basin attingens. Limbium laminae vaginantis sat notatum, reliquo *perangustum*, laminae dorsalis saepe *obsoletum*. Cellulae obscurae, irregulares, saepius paullo elongatae, parietibus *tenuibus*; omnino laeves.

Rhizautoicus. Planta ♂ minuta, paucifolia, ad basin plantae fructiferae radiculis adhaerens, bracteis e basi perlata, rotundata, raptim breviter cuspidatis. Seta 5-7 mm. longa, tenuis. Theca breviter oblonga, *inclinata, curvata*; operculum rostellatum. Peristomii dentes e basi lata raptim in crura filiformia angustata, infra arcte lamellati, lamellis dorso prominentibus, interne *cristatis*.

Hab. Lilyvale, N.S.W., Sept. 1891; coll. T. Whitelegge, det. C. Müller (v. Watts & Whitelegge, Census Muscorum Australensium, Part I, p. 24), type. Federal, Richmond R., N.S.W., coll. W. W. Watts (5627). Richmond R. and Brunswick R., N.S.W., at several places; under rocky cliff, Cook's R., coll. Watts (1192, 5636, 5714). Petersham, Sydney, coll. Watts (6787). Creek, Gibson's Farm, Richmond R., coll. Watts (245), authenticated by C. Müller.

A rather untidy little species, with soft, flaccid leaves, very irregular in form and direction. Near to *F. semilimbatus* Hampe & C. M., but with much broader leaves and obscure cells.

Fissidens elamellosus C. M. & Hampe—Oakleigh, Victoria, 17 July, 1894; coll. Dr. Morrison; Herb. Edin. (5). Western Australia; Herb. Edin. (3419). Syn. *F. macrodus* Hampe. I have examined the types of both plants in Hampe's Herbarium, and I cannot find any specific difference.

Dicranum trichopodium Mitt.—Karridale, Western Australia, coll. Dr. Morrison, Oct. 1898; Herb. Edin. (115). King George's Sound, Australia, Nov. 1830; Herb. Edin. (147). New to Australia. Distr. Tasmania; New Zealand.

This species is omitted from Paris, Index, and also from Brotherus, Musci, Ed. II.

Campylopus Kirkii Mitt.—Oakleigh, S.E. Victoria, 18 Aug., 1895; coll. Dr. Morrison; Herb. Edin. (94). New to Australia. Distr. New Zealand; Tasmania.

Schlotheimia funiformis Tayl. MS. sp. nov.

Sat gracilis. Folia sicca *arcte spiraliter funaliter torquata*, leniter corrugata; folia perichaetia *longe exserta*, superne angustata, seta *crassiuscula*; theca cylindrica, sub ore haud contracta, *laevis*.

Hab. Nov. Hollandia; Herb. Edin. (138).

Collector's name not given. Differs from *S. Brownii* and *S. Baileyi* Broth. (which I take to be only a small form of *S. Brownii*) in the funiform leaf arrangement, longly exserted bracts, thicker seta, and smooth capsule.

Leucolepis acanthoneura (Schwaegr.) Lindb.—A specimen of this (437) is labelled as from Australia, an obvious error, as the species is confined to North America.

Endotrichella elegans (Doz. & Molk.).—v. sub. New Hebrides.

Pterobryum australiense Dix. sp. nov.

Frons unica adest, 26 cm. longa, stricta, per totam longitudinem fere regulariter, sat conferte pinnata, ramis media fronde 3–4 cm. longis, versus apicem decrescentibus, hic illic parcissime, brevissime ramulosis. Folia dense conferta, rigida, patula, sicca parum mutata, ramea 2 mm. longa, versus basin .75 mm. lata, e basi fere ad apicem sensim angustata, triangulari-lanceolata, *vix vel haud plicata*, marginibus planis, integerrimis; costa sat valida, subpercurrent, in acumine *fusco* soluta. Cellulae anguste lineares, saepe subsigmoideae, parietibus firmis, marginibus saepe colore intensiore; infra sensim elongatae, basilares longe lineares, subincrassatae, ad insertionem aurantiae, alares nullae.

Perichaetia cauli sita, folia quam caulina duplo longiora, internis e basi late cordato-ovata aurantiaca raptim in acumen rigidum, aciculare, integrum vel subintegrum contracta; costa angustior, ad apicem fere continua; areolato paullo laxior, cellulis basilaribus multo laxioribus, brevioribus.

Hab. N.S.W. Herb. Edin. (179A).

A magnificent plant, in habit resembling *Pterobryella breviacuminata* Besch., but more simply and distantly branched, and with much more shortly pointed leaves. In the absence of fruit it is not certain that this may not be a *Pterobryella*, but as the distribution of that is much more restricted it is safer to refer it to *Pterobryum*. Neither genus is recorded from Australia; and in the absence of more precise data, and the rather remarkable fact that such a striking plant could have been overlooked by collectors generally, one cannot help feeling that a certain amount of suspicion is attached to the locality.

Papillaria filipendula (H. f. & W.) Jaeg.—"Nov. Hollandia, Fraser, 1825. *Pilotrichum pendulinum* Tayl. MSS., 1843;" Herb. Edin. (152). A single branched stem, about 50 cm. long, with a fruit, and numerous perichaetia. It is accompanied by careful water-colour sketches, from which mainly the following description has been drawn up.

The fruit has not been described hitherto.

Fruit from the primary branches and branchlets. Seta 1.25 mm., about twice the length of the perichaetium. Calyptra narrow, pilose. Capsule with operculum 1.5 mm. long, brown, elliptic; lid rostrate. Peristome drawn as with reddish teeth, linear-lanceolate, rather remotely barred; no basal membrane shown; processes reddish, filiform, articulate.

Fabronia leptura Tayl. MS. sp. nov.

Pro genere robusta, argentea, ramis elongatis, subteretibus. Folia sicca erecta, appressa, magna, 2–2.5 mm. longa, lanceolata vel ovato-lanceolata, peracute acuminata, fere pilifera, integerrima, perconcava, marginibus uno latere versus basin reflexo, ceterum planis. Costa apud basin crassa, superne angustata, circa 2/3 folii attingens. Cellulae lineares vel angustissime rhomboideo-lineares, basilares plurimae, laxae, quadratae, partem basilarem omnino implentes, ad marginem serie unica alte adscendentes.

Dioica. Planta ♂ tantum visa.

Hab. King George's Sound, New Holland; coll. Alan Cunningham, ex herb. G. J. Lyon; Herb. Edin. (336a) type. Swan River, Australia, 1843; coll. Jas. Drummond; Herb. Edin. (336).

Specimens of this plant exist at Kew, and probably elsewhere, as *Hypnum lepturum* Tayl. MS. or *Fabronia leptura* Tayl. MS. (cf. Brotherus, Musci, sub *Fabronia*), but it appears not to have been published. Although clearly of the Fabroniaceae, and related to the African *F. Gueinzii* Hampe, and to *Ischyrodon seriolus* C. M., the exact position in absence of fruit cannot be certainly determined.

Helicodontiadelphus australiensis Dix.—This was described as gen. & sp. nov., in Journ. of Bot., 1936, p. 5.

Homalothecium australiense Dix. sp. nov.

Gracilis. Caules 4–5 cm. longi, dense, irregulariter, *brevissime* pinatim ramosi, flavo-virides, ramis siccis saepe curvatis. Folia parva, 1.5–2 mm. longa, anguste lanceolata, *longe tenuiacuminata*, saepe subcapillaria, integra vel superne indistincte denticulata, *leniter* plicata, concava, marginibus apud basin explicatis, auriculis *parvis*, paullo latioribus, *fortiuscule denticulatis*. Costa sat valida, ad basin acuminis soluta. Cellulae angustissimae, parietibus firmis, pallidis; alares *plures, bene distinctae*, abrupte breviores, irregulares, ovales, etc.

Cetera ignota.

Hab. King George's Sound, near Halston; Australia, Feb. 1827; Herb. Edin. (335).

Probably collected by Alan Cunningham.

A very small species, nearest to the Teneriffe *H. barbelloides* Dix.; it has fewer alar cells than this and more finely acuminate leaves.

It is the only species of the genus known from the Southern Hemisphere.

Meiothecium secundifolium Dix. sp. nov.

Ab omnibus speciebus foliis siccis *fortiter hamato-secundis*, atque ramis saepe apice hamato jam distinctum. Stramineum, haud nitidum. Folia *latissime ovata vel suborbiculata*, breviter acutata (ramae brevissime obtusiuscule apiculata), marginibus planis vel ad apicem leniter incurvis, integris; cellulae superiores elliptico-lineares, sigmoideae, subincrassatae, versus margines paullo latiores, apicales breviores, latiores, basiales longiores, ad insertionem aurantiacae, supra-alares plures, breves, subrectangulares, alares magnae, paucae, aurantiacae, quadrato-rectangulares vel rectangulares, pellucidae. Folia perichaetialia angustiora, elongata, patula; seta *laevis, usque ad 8 mm. longa* (immatura).

Hab. With *Papillaria flavo-limbata*, Australia; coll. Dr. Morrison; Herb. Edin. (148 p.p.).

Very distinct in the form and direction of the leaves. *M. Wattsii* Broth. has a seta only 2 mm. long, and lanceolate leaves.

Sematophyllum caespitosum (Sw.) Mitt.—Busselton, C. Naturaliste, West Australia, 22 Mar. 1898; coll. Dr. Morrison; Herb. Edin. (106). Smith's Mill, Darling Range, W. Australia, 13 Nov. 1897; coll. Dr. Morrison; Herb. Edin. (125). Van Diemen's Land, 1824; coll. Dr. Spence and Mrs. R. Neill; Herb. Edin. (234). All these, as well as a further specimen I have from Australia (in Riviera, ad truncum et ad scopulos, Dec. 1925; coll. Vignardi) have the whole plant of a rich glossy orange brown, and are of the same habit; they are perhaps worth a varietal name.

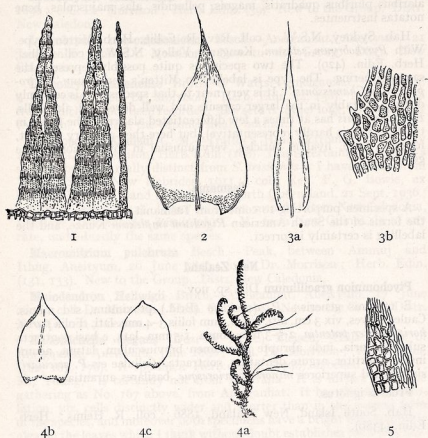


FIG 1. *Pleurothotrichum nukahivense*, part of peristome $\times 60$.
 2. *Fabronia leptura*, leaf $\times 20$.
 3. *Homalothecium australiense*, (a) leaf $\times 20$, (b) auricle $\times 100$.
 4. *Meiothecium secundifolium*, (a) stem $\times 2$, (b) stem leaf $\times 20$,
 (c) branch leaf $\times 20$.
 5. *Ectropothecium sydneyense*, alar cells $\times 200$.

Ectropothecium sydneyense Dix. sp. nov.

E. Chamissonis (Hornsch.) Jaeg. peraffine. Differt habitu laxiore, theca majore, deoperculata 1.5 mm. longa (ibi perminuta, vix. 75 mm. longa), seta brevior, vix 1 cm. (ibi 1.5 cm. alta), bracteis perichaetii latoribus, paullo brevius subulatis, et praecipue foliorum cellulis alaribus pluribus quadratis, magnis, pellucidis, alas majusculas, bene notatas instruente.

Hab. Sydney, N.S.W.; coll. Rev. R. Collie, Herb. Mitten, type. With *Pyrrhobryum setosum*, Kangaroo Valley, N.S.W.; coll. Collie; Herb. Edin. (429). The two specimens quite possibly represent the same gathering. The type is labelled in Mitten's herbarium "*Ectropothecium Chamissonis*." It is very near to that species, but is certainly distinct, notably in the larger capsule and well developed alar cells, *E. Chamissonis* has at times a few differentiated alar cells (the figure in the Bry. jav. is hardly representative), but here they are very distinct, forming large, hyaline auricles, very unusual in this section of the genus.

Tasmania

A specimen purporting to come from Tasmania proved to be one of the forms of the South American *Rigodium implexum* Kunze, and the labelling is certainly incorrect.

New Zealand**Ptychomnion gracillimum** Dix. sp. nov.

E minimis generis; *P. densifolio* (Brid.) proximum, sed minus. Caules breves, vix 3 cm. alti, *rigidi*, cum foliis 3-4 mm. lati. Folia *parva*, *horizontaliter patentia*, 2.5-3 mm. longa, 1.5 mm. lata, e basi contracta suborbicularia, inde abrupte in acumen breviusculum, latum, acuminatum, fortiter, argute dentatum, contracta. Cellulae eis *P. acicularis* similia, sed superiores *minores brevioresque*, basilares aurantiacae.

Fructus ignotus.

Hab. South Island, New Zealand, 1886; coll. R. Helms; Herb. Edin. (438b).

Mixed with *Weymouthia cochlearifolia* and *Rhacopilum strumiferum*. A very distinct species, in its small size comparable with *P. ptychocarpum*, but that has elongate, flexuose, very slender stems; the present plant is rigid, with habit of *P. aciculare*, of which it is a miniature, differing not only in size but in the small, short upper cells. *P. densifolium* resembles it somewhat in habit, and size, but has quite different leaves, recurved, with less abrupt; shorter acumen.

Breutelia elongata (H. f. & W.) Broth.—Campbell's Id., Antarct. Exp. 1839-43, coll. J. D. Hooker; Herb. Edin. (239). Part of the original gathering.

Orthorrhynchium philippinense (Hampe) C. M.—A specimen of this is labelled as from New Zealand, but here again the locality must certainly be incorrect.

Camptochaete ramulosa (Mitt.) Jaeg.—New Zealand; coll. ? Dr. Crosbie; Herb. Edin. (210). A form with long, flexuose, almost flagelliform branches, much resembling in habit *C. vaga* (Hornsch.) Broth.

New Hebrides

Leucobryum aduncum Doz. & Molk.—Anelgauhat, Aneityum, 9 June 1896; coll. Dr. Morrison; Herb. Edin. (152, 175). New to the Group. Distr. Wide in Indo-Malaya.

Leucobryum conocladum Besch.—Anelgauhat, Aneityum, 9 June 1896; coll. Dr. Morrison; Herb. Edin. (39). New to the Group. Distr. New Caledonia.

Leucobryum neo-caledonicum Besch.—Anelgauhat, Aneityum, 21 June 1896; coll. Dr. Morrison. New to the Group. Distr. New Caledonia.

Leucobryum aneitense Broth. & Watts.—Anelgauhat, Aneityum, 9 June 1896; coll. Dr. Morrison; Herb. Edin. (2, 138). No. 138 is in fruit, which has not been recorded. The seta is rather long, two to almost three cm., and thin, the capsule small, normal.

Syrrhopodon Kindelii C. M.—Traitor's Head, Erromanga, 20 July 1896; coll. Dr. Morrison; Herb. Edin. (108). This is certainly *C. Muelleri*'s species, but is it really distinct from *S. tristichus*? I have it also from Tongoa Santo, New Hebrides, 1911; coll. Rev. F. G. Bowie, ex herb. G. Webster; and from Cairns, North Queensland, 21 Sept. 1936; coll. H. Flecker (2342). It has only been recorded from New Caledonia, I believe. *Syrrhopodon parvicaulis* C. M., from New Guinea, is, at any rate, undoubtedly the same species.

Macromitrium pulchrum Besch.—Peak, between Ammuj and Ithug, Aneityum, 26 June 1896; coll. Dr. Morrison; Herb. Edin. (131, 133). New to the Group. Distr. New Caledonia.

Mniodendron Hellwigii Broth.—Anelgauhat, Aneityum, 17 June 1896; coll. Dr. Morrison; Herb. Edin. (178). New to the Group. Distr. New Guinea; Ceram.

Endotrichella elegans (Doz. & Molk.) Fleisch.—Hills North of Anelgauhat, Aneityum, June 1896; coll. Dr. Morrison; Herb. Edin. (162, 167, 176). A specimen Herb. Edin. (179b), labelled "N.S.W.; Mr. Young," is certainly not from Australia. It is in fact the same gathering as No. 167 above, from Anelgauhat. It has the same areolation, viz. cells distinctly wider and shorter than in the normal form of the species, and moreover both specimens have a bright blue epiphytic alga on the leaves which I think without doubt establishes their identity.

Chaetomitrium hebridense (Dix.) sp. nov.

C. lanceolatum Bry. jav. habitu simile. Caespites densi, olivaceo-virides, vix nitidi; caulis brevis, dense ramosus et ramulosus; folia conferta, patula, saepe leniter complanta, minima, concava, ovata, breviter acuminata, superne arcte, tenuiter denticulata, ecostata; cellulae laevis, serie unica marginali saepe inanes, pellucidiores. Autoicum et phyllautoicum. Perichaetium elongatum, bracteis internis latis, subtruncatis et cuspidatis, ubique subciliolatis. Seta circa 1 cm., laevis, apicem versus tantum leniter mamillosa. Theca curvata, horizontalis, collo longo in setam defluente. Calyptra cucullata, brevissime tomentosa. Operculum longirostre.

Hab. Hills near Seaview, Undine Bay, Efaté, New Hebrides, 27 Aug. 1896; coll. Dr. Morrison; Herb. Edin. (87c), type. Ibidem, (93, 94, 99).

Very near to *C. lanceolatum*, but the cells there are more or less spiculate, while here they are nearly or quite smooth, and the seta is practically smooth, while there it is "dornig papillos" above.

Chaetomitrium aneityense Broth. & Watts, f. brachyphylla.—Hills N. from Anelgauhat, Aneityum, 1 June 1896; coll. Dr. Morrison; Herb. Edin. (155). A form with leaves much shorter, wider, and with wider points than in the type.

Entodon plicatiformis Dix. sp. nov.

§Xanthopus. *E. plicato* C. M. proximum et peraffine, vix differt nisi propter endostomii processus distincte *verticaliter striolatos* (ibi laeves). Seta 1.5–2 cm.; bracteae perichaetii apicibus subsquarrosis. Dentes perichaetii supra verticaliter, infra transverse striolati; processus *subaequilongi*, sat robusti, integri.

Hab. On coral rocks, summit of Peak, Undine Bay, Efaté, New Hebrides, 20 Aug. 1896; coll. Dr. Morrison; Herb. Edin. (73).

Scarcely differs from *E. plicatus* except in the striolate processes, but as other species have been based on equally slight grounds this must take its place with them.

Acroporium oxyporum (Doz. & Molk.) Fleisch.—Syn. *Acroporium serricalyx* (Broth. & Watts) Broth. Peak between Ammuj and Ithug, Aneityum; 26 June 1896; coll. Dr. Morrison; Herb. Edin. (132, 134). Ibidem, Hills N. of Anelgauhat, 1 June 1896; Herb. Edin. (164). Hills, Undine Bay, Efaté, 20 Aug. 1896; coll. Dr. Morrison; Herb. Edin. (76, 79). I can find no difference whatever, either vegetatively or in the fruit, between *A. serricalyx* and *A. oxyporum*. At the time of the description of the former, *A. oxyporum* was only known from Java and Borneo, with the possible addition of Ceylon, and probably Brotherus would not have compared the New Hebrides plant, but since that time the distribution of *A. oxyporum* has been found to be considerably extended, and there is no geographical argument against the two being identical.

Trichosteleum neo-caledonicum Thér.—Traitor's Head, Erromanga, 20 July 1896; coll. Dr. Morrison; Herb. Edin. (106). This agrees well with the New Caledonian plant, according to the description. Like most of the species of this group, it can hardly be considered as more than a segregate of *T. hamatum*.

Ectropothecium Gunnii Broth. & Watts—Summit of peak, south of Ithumu, Aneityum, 30 June 1896; coll. Dr. Morrison; Herb. Edin. (115). This agrees exactly with *E. Gunnii* except for the fact that I have found a ♂ flower on a fertile stem, while *E. Gunnii* is normally dioicous; but it cannot be separated on that account. *E. aneityense* is quite different.

Ectropothecium hebridense Dix. sp. nov.

§Trachythecium. Densissime caespitosum, corticola, flavo-virens, subnitidum, gracile. Folia sicca madidaque plus minusve complanata, *minima*, vix 1 mm. longa, ovato-lanceolata, raptim in subulam breviusculam, tenuem, saepe subfalcatam angustata, *integra*, ecostata, marginibus planis. Cellulae pellucidae, laeves, rhomboideo-lineares, basilares parum laxiores, alares vix ullae.

Autoicum. Perichaetium turgidiusculum, bracteis longiuscule, tenuiter subulatis, *integris*, apicalibus recurvis. Seta circa 1 cm., vel paullo ultra, pallida. Theca *minuta*, *pendula*, sicca suburceolata, *leniter mamillosa*, *hic illic tuberculosa*; operculum *plano-convexum*, *mamillatum*.

Hab. New Hebrides; Hills, Efaté, 27 Aug. 1896; coll. Dr. Morrison; Herb. Edin. (70), type. Hills, Undine Bay, Efaté 27 Aug. 1896; coll. Dr. R. Morrison; Herb. Edin. (97). Hills near Seaview, Undine Bay, (87a). Traitor's Head, Erromanga, 20 July 1896 (107, 10a). Ascent of peak, S. of Ithumu, Aneityum, 30 June 1896 (116).

This would seem to be a frequent moss in the group. It has rather the foliage of *Isopterygium*, but the capsule is distinctly Ectropothecioid. The surface is almost smooth, but here and there may be irregularly tuberculate, while vegetatively it comes very near some of the species of the Section Trachythecium, and I think must be referred there, while showing the unsatisfactory nature of that as a genus. It is near to *Trachythecium Dixoni* Herz., but differs in the narrower, more gradually acuminate leaves, narrower cells, and generally smaller size. *E. verrucosum* (Hampe) Jaeg. has more longly and finely subulate leaves, slightly prominent cells at back, and rougher capsule. *Hypnum mamillatum* C. M. (New Guinea) is probably nearer to it, but no specimens are to be found in the Berlin Herbarium, and it is moreover an undescribed species.

Vesicularia perviridis (Aongstr.) C. M.—Hills near Seaview, Undine Bay, Efaté, 27 Aug. 1896; coll. Dr. R. Morrison; Herb. Edin. (90, 97b). A somewhat untypical form, which has been referred variously to several species, but seems best placed here, though slightly differing in areolation. I have the same form from Tongoa Santo, in the same Group, Sept. 1909; coll. Rev. F. G. Bowie, ex. herb. Geo. Webster.

Tahiti

Ectropothecium sodale (Sull.) Mitt.—Tahiti; coll. Beechey; Herb. Edin. (184, 236). These show neat little pear-shaped, brown, shortly stalked bulbils sparsely in the axils of the upper leaves.

E. sodale is very much like *E. Chamissonis*, and has often been taken for it, but it is dioicous.

Vesicularia calodictyon (C. M.) Broth.—Tahiti, coll. Beechey; Herb. Edin. (180). New to Tahiti. Distr. Samoa.

Elizabeth I.

It may be worth while here to repeat the correction already made, viz. that *Macromitrium elizabethae* Dix., (Ann. Bryol. vii, 158) proved to be identical with *M. tongense* Sull.

Sematophyllum caespitosum (Sw.) Mitt.—Elizabeth I; Herb. Edin. (100). No collector's name given. A plant which I can match quite well with Mauritius specimens.

Nukahiva, Marqu  sas Is.***Pleurorthotrichum nukahivense* Dix. sp. nov.**

Habitus, staturaque *P. chilensis* Broth. Caulis usque ad 8 cm. longus, curvatus et geniculatus, *interrupte* foliosus, distanter, parce ramosus. Folia sicca flexuosa, *nullo modo crispata*, 7–8 mm. longa, patentisquarrosa, e basi latiore, ovata, leniter plicata, sensim ligulato acuminata, versus apicem saepe undulata, marginibus hic illic anguste recurvis, subintegris; costa sat valida, valde carinata, subpercurrans. Cellulae ovaes vel breviter rectangulares, irregulares, infra sensim elongatae, basilares elongatae, lineares.

Fructus laterales, plures; perichaetii folia externa praelonga, thecam superantia, interna parva, angusta, acicularia. Theca circa 3 mm. longa, elliptica, costata, in setam subaequilongam sensim defluens. Calyptra dense pilosa. Peristomium pallidum; dentes irregulares, nunc segregati, nunc conjuncti, saepe fissi vel rimosi, inferne dilatati et in membranam pallidiorem fusi; superne *grosse, humiliter* papilloso, irregulares. Endostomium *nullum*. Spori 25–30 μ .

Hab. Nukahiva, Marqu  sas Is., ut videtur corticola; coll. Barclay; Herb. Edin. (237).

The third known species of this remarkable genus. It is near to *P. chilense*, but differs in some notable characters; the leaves, which there are more or less crisped when dry, and enrolled at the points, are here only lightly flexuose; and the peristome is very different. I have found no trace of endostome in a moderately perfect example. The teeth are much more irregular in form and outline than the figures of *P. chilense* show.

The third species, *P. cryptocarpum* Bartr., from Costa Rica, is a very different plant.

***Calypothecium Urvilleanum* (C. M.) Broth.**—Nukahiva, coll. Barclay; Herb. Edin. (80). A robust, dense-leaved form.

Hawaii

A plant purporting to come from here is *Dicranella heteromalla* (Hedw.), and the localization is certainly wrong.

New Caledonia

A small set of specimens labelled "New Zealand, Mossman," are undoubtedly erroneously described. Fortunately there is internal evidence which leaves no doubt that they came from New Caledonia, one of them Herb. Edin. (434) being *Symphysodon enervis* Broth. & Par., which is endemic in that island. A second Herb. Edin. (432) is *Hypnodendron subspiniervium* (C. M.) Lindb., known only from two or three Pacific groups, including New Caledonia. The third is *Ptychomnion aciculare*, which is indeed a New Zealand plant, but equally occurs in New Caledonia.