

NEW MOSSES FROM TIERRA DEL FUEGO

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About ten years ago I had the privilege of studying an extensive collection of mosses made by Dr. H. Roivainen in his capacity as botanist with the scientific expedition of the Finnish Geographical Society to Tierra del Fuego in 1928-29. All of the material was returned to Finland and subsequently I received a complete series of specimens including the types of many new species which resulted from the study, all of which are now in my herbarium.

In 1937 Dr. Roivainen published the results of his bryological investigations relating to Sphagnaceae, Andreaeaceae, Fissidentaceae, Ditrichaceae, Seligeriaceae and Dicranaceae.¹ This was to be followed by treatments of the succeeding groups but since then the unsettled conditions in Europe and especially in Finland have not only prevented further publications but have made it highly uncertain when, if ever, we may expect to have the remaining results of Dr. Roivainen's personal observations and studies. Meanwhile it seems advisable to record the descriptions of the new species, many of which are of the utmost interest.

DICRANACEAE

Chorisodontium sericeum Bartr. sp. nov.

Caespites densi, aureo-lutescentes, inferne fuscii. Caulis ad 2 cm. altus, haud tomentosus, ramosus. Folia caulina circa 5 mm. longa, superne falcato-secunda, ovato-lanceolata, concava, sensim in acumen aristatum planum apice denticulatum attenuata; costa pallida, ad basin 50 μ lata, excurrente; cellulis alaribus distinctis, sequentibus linearibus, sinuosis, superioribus subquadratis vel oblongis. Folia perichaetia e basi longe convoluta, subulata; seta 2.5 cm. longa, rubra, theca erecta, cylindrica; peristomium destructum. Caetera ignota.

Chile: Prov. de Magallanes, Isle Clarence, Puerto Beubasin, ad saxa, No. 2297 **type**.

While similar to *C. lanigerum* (Besch.) Broth., this species seems to be constantly distinct in the flat, sharply toothed leaf tip, the narrower costa, and the stems almost devoid of either radicles or tomentum.

POTTIACEAE

Molendoa fuegiana Bartr. sp. nov.

Sat robusta, dense caespitosa, olivaceo-viridis, inferne fuscens. Caulis circa 1.5 cm. altus, ramosus, inferne tomentosus, dense foliosus. Folia sicca contorta, madida arcuato-

¹ Roivainen, H. Bryological Investigations in Tierra del Fuego. Ann. Bot. Soc. Zool.-Bot. Fenn. Vanamo, 9(2):v-x; 1-58. 1937.

patula, flexuosa, comalia stellata, ad 2.5 mm. longa, lineari-lanceolata, canaliculata, acuminata; marginibus erectis, undulatis, papilloso-crenulatis; costa valida, fusca, ad basin 100 μ lata, excurrente, mucronata, apice papillosa; cellulis superioribus rotundato-quadratis vel transverse dilatatis, chlorophyllosis, obscuris, dense papillosis, marginalibus hic illic bistratis, inferioribus linearibus, rectangularibus. Caetera ignota.

Fuegia media: Lago Blanco, Puesto de los Indios, ad rupes, Nos. 162a, 163 **type**, 173.

As compared with the description of *M. boliviana* Broth. and *M. Herzogii* Broth. the leaves of *M. fuegiana* are appreciably longer while in *M. andina* Mitt. the leaves are narrower below and the upper leaf cells smaller and not transversely elongate.

Didymodon ampliretis Bartr. sp. nov.

Caespites compacti, virides, inferne fuscantes. Caulis 1–1.5 cm. altus, pluries divisus, gracilis. Folia sicca parce contorta, humida erecto-patentia, ovato-lanceolata, canaliculata, sensim angustata, apice subobtusata; marginibus minute papilloso-crenulatis, medium versus anguste reflexis; costa valida, infra summum apice evanida; cellulis superioribus rotundato-quadratis, dense chlorophyllosis, obscuris, papillosis, marginalibus bistratis, inferioribus rectangularibus, pellucidis. Caetera ignota.

Fuegia media: Lago Fagnano, punta Pizzaro, ad rupes, No. 1217 **type**; *Fuegia bor.*: Estancia Esperanza, No. 427.

By comparison with *D. diaphanobasis* Card. of Mexico, the upper leaf cells of *D. ampliretis* are much more chlorophyllose and obscure while the basal cells are shorter with more firm, pellucid lateral walls.

Tortula robusta Hook. & Grev. var. **laxa** Bartr. var. nov.

Cellulis laminalibus laxioribus, 15–20 μ latis, grosse papillosis.

Fuegia media: Lago Linch, in silva paludosa, No. 189; Lago Linch, Cerro Chico, in reg. alp., No. 1357; Estancia Cameron, Puesto Medio, in prato humido, No. 1895 **type**; *Fuegia occidentalis*: Fjordo de Agostini, Bahia Groth Hansen, No. 254; Fjordo Martinez, ad rupes sericiticas, No. 583.

The collections referred here differ from typical *T. robusta*, as I understand it, in the large, lax, thin-walled cells of the upper lamina which are coarsely papillose with C-shaped papillae. The costa is smooth to papillose on the back. The leaves are narrower than those of *T. rivularis* Dus. and not as strongly serrate, while the cells are appreciably larger than in *T. pseudorobusta* Dus.

GRIMMIACEAE

Grimmia scabripes Bartr. sp. nov.

Autoica, caespitosa, sat robusta, fusco-viridis. Caulis prostratus, 3–4 cm. longus, ramosus. Folia caulina conferta, sicca appressa, humida erecto-patentia, ovato-lanceolata, concava, sensim in pilum hyalinum spinulosum attenuata, 2–3 mm. longa, 1 mm. lata; costa valida, in pilum producta, dorso papillosa; marginibus integris, toto fere longitudine late recurvis; cellulis superioribus rotundatis, altissime papillosis, hic illic bistratis, margines versus 3–4 stratis, inferioribus rectangularibus, parietibus maximis incrassatis sinuosisque. Folia perichaetia erecta, majora, costa angustiore; capsula immersa, breviter pedicellata, oblonga; peristomium aurantiacum, dentibus lanceolatis, integris; sporae lutescentes, laeves, diam. 8–10 μ .

Chile: Prov. de Nuble, Recinto, Las Trancas, ad truncos *Nothofagi antarcticae*, alt. 1150 m., No. 1003 **type**.

Readily distinguished from any of the forms of *G. apocarpa* and, in fact, from any of the species of the section *Schistidium* by the coarsely papillose leaf cells. A cross section of the leaf shows the papillae to the best advantage but they may be clearly seen in profile on the roll of the leaf without sectioning.

Rhacomitrium limbatum Bartr. sp. nov.

Robustum, dense caespitosum, nigrescens. Caulis erectus, ad 4 cm. altus, irregulariter divisus. Folia conferta, sicca erecta, parce flexuosa, humida patentia, 3.5–4 mm. longa, ovato-lanceolata, sensim acuminata, superne carinata, toto ambitu limbo lato incrassato circumducta; marginibus integris, inferne reflexis, superne planis; costa valida, excurrente; cellulis inferioribus linearibus, parietibus incrassatis, valde sinuosis, superioribus brevioribus, oblongis, costa versus bistratis, margines versus 6–9 seriatis 3–4 stratis. Seta 5–6 mm. longa; peristomii dentes rufescentes, ad basin divisi, papilloso; sporae papillosoe, diam. 15–22 μ .

Fuegia occid.: Fjordo Finlandia, Brazo Aina, ad saxa, No. 502; Fjordo Martinez, ad rupes uliginosas, No. 594; Fjordo de Agostini, Bahia Groth Hansen, No. 2268; Chile: Prov. de Magellanes, Fuegia occid., Monte Buckland, alt. 500 m., Nos. 2084a, 2644; Isla Clarence, Puerto Beaubasin, ad saxa, Nos. 2313, 2316 **type**.

This exceedingly fine and interesting species is immediately distinguished from any of the forms of *R. crispulum*, and also from any member of the genus with which I am familiar, by the broad, fleshy leaf border extending from the apex almost to the insertion.

Rhacomitrium scabrifolium Bartr. sp. nov.

Robustum, aureo-lutescens. Caulis ad 8 cm. longus, irregulariter divisus, ramis breviter ramulosis. Folia 3.5 mm. longa, sicca erecta, humida erecto-patentia, ovato-lanceolata, plicata, superne canaliculata, sensim in pilum hyalinum denticulatum producta; marginibus papilloso-crenatis, reflexis; costa depressa, angusta, ad medium folii evanida; cellulis omnibus elongatis, linearibus, papilloso, parietibus incrassatis, lutescentibus, valde sinuosis. Caetera ignota.

Chile: Prov. de Magellanes, Fuegia occid., Monte Buckland, alt. 500–700 m., No. 241; Puerto Yarton, Pico Nariz, reg. alp. No. 820; Fjordo Finlandia, Brazo Aino, No. 1970; Fjordo de Agostini, No. 2068 **type**; Bahia Sarmiento, No. 2465.

The combination of plicate leaves and papillose leaf cells will separate this species from any of its Fuegian associates. In *R. ptychophyllum* Mitt. of New Zealand, the leaves are plicate but the short lateral branchlets are lacking and the leaf cells are smooth.

FUNARIACEAE

Funaria (Entosthodon) **pungens** Bartr. sp. nov.

Autoica, pusilla, gregaria, lutescente-viridis. Caulis 3–5 mm. altus, inferne radiculosus. Folia ovato-oblonga, acuminata, concava, comalia 2.5–3 mm. longa; marginibus integris, erectis, saepe ad basin uno latere inflexis; costa tenui, longe ab apice folii evanida;

cellulis superioribus oblongo-hexagonis, ad 50 μ latis, inferioribus rectangularibus. Seta erecta, rubella, ad 18 mm. longa; theca erecta, pyriformis; peristomium simplex, dentes rufi, papilloso; sporae fuscescentes, diam. 25–28 μ .

Fuegia occidentalis: Fiordo Martinez, Bahia Sarmiento, No. 2358 **type**.

This species will be distinguished from *F. chiloensis* Mitt. by the sharply acuminate leaves and the broader and laxer areolation of the upper part of the leaf.

SPLACHNACEAE

Tayloria magellanica (Brid.) Mitt. var. **gigantea** Bartr. var. nov.

Caules 18–20 cm. alti, dense compacti.

This seems to be only an extremely robust form with densely tufted parallel stems, up to 2 dm. high, showing very clearly the zones of growth. The development is unusual and in this condition the plant is an exceptionally fine one.

Fuegia occidentalis: Fjordo Finlandia, prope Montem Nylandiam, No. 1745 **type**.

BRYACEAE

Mielichhoferia multiflora Bartr. sp. nov.

Syncoica; flores plures stipitati. Caespites compacti, superne lutescente-virides, nitidi, inferne dense fusco-radiculosi. Caulis erectus, ad 2.5 cm. altus, dense julaceo-foliosus. Folia erecta, imbricata, ovato-lanceolata, acuminata, carinato-concava; marginibus erectis, superne denticulatis; costa valida, infra apicem folii evanida; cellulis anguste rhomboideis, basilaribus rectangularibus. Seta 8–10 mm. longa, lutescente-rubra; theca inclinata, asymmetrica; annulus latus; endostomium pallidum, corona basilaris humilis, processus angusti, linea divisurali distincti; operculum depresso conicum, apiculatum; sporae lutescentes, diam. ad 20 μ .

Chile: Prov. de Nuble, Cordillera de Chillan, alt. 2200 m., No. 1699 **type**.

In some respects the details of this species closely approximate the description of *M. leptoclada* C. M., but in *M. multiflora* the leaves are erect and closely imbricated and the segments of the endostome show a median line.

The numerous stalked flower buds are conspicuous and may be a good diagnostic character. While the fertile flowers are syncoicous, the remaining undeveloped buds are often composed entirely of antheridia. Either the archegonia in these buds are abortive or the inflorescence is heteroicous.

Bryum (Cernuiformia) **Roivainenii** Bartr. sp. nov.

Syncoicum; caespitosum, caespitibus densiusculis, sordide viridibus. Caulis ad 5 mm. altus, basi fusco-tomentosus, innovando-ramosus. Folia ad 3 mm. longa, ovata, acuta, haud decurrentia, concava; marginibus anguste recurvis, integris; costa crassa, fusca, infra apicem folii evanida vel percurrente; cellulis oblongo-hexagonis, firmis, basilaribus rectangularibus, concoloribus, marginibus elongatis, limbum biseriatum, fuscescentem efformantibus. Seta circa 2 cm. longa, rubra; theca nutans, oblongo-piriformis, sicca deoperculata, haud constricta; exostomii dentes fusco-lutei, endostomum sordide luteum, papillosum, processus angusti, exostomio adhaerens; sporae 18–22 μ in diam.

Chile: Prov. de Magellanes, Fuegia occid., Fjordo Finlandia, Brazo Aino, No. 2110 **type**.

This species seems to be distinct from both *B. austro-chilense* and *B. dicarpum* in the broader, less sharply pointed leaves and the thick, strong costa.

Bryum (Inclinatiformia) **fuegianum** Bartr. sp. nov.

Synoiicum; gracile, caespitosum, caespitibus mollibus, pallide viridibus, inferne fuscescentibus. Caulis erectus, 2 cm. altus, gracilis, innovando-ramosus, innovationibus erectis, circa 2 cm. longis, base radiculosis. Folia sicca erecta, contorta, humida erecto-patentia, spathulata vel obovata, breviter acuminata, usque ad 3 mm. longa, 1.5 mm. lata; marginibus inferne reflexis, integris; costa infra apicem folii evanida vel percurrente; cellulis laxis, teneris, oblongo-hexagonis, basilaribus rectangularibus, rubris, marginalibus elongatis, limbum 3-4 seriatum efformantibus. Seta tenuissima, rubra, 5-6 cm. longa; theca nutans; exostomii dentes fusco-lutei; endostomium hyalinum, papillosum, processus angusti, superne dentibus adhaerens, cilia 0, sporae 25 μ in diam.

Fuegia media: Puesto Medio de la Estancia Cameron, in palude, No. 8 **type**.

Bryum (Cernuiformia) **austro-chilense** Bartr. sp. nov.

Synoiicum; caespitosum, viridibus, inferne fuscescentibus. Caulis ad 1 cm. altus, basi fusco-tomentosus, innovando-ramosus. Folia sicca erecta, contorta, late ovata, breviter acuminata, carinato-concava, circa 1.5 mm. longa; marginibus anguste reflexis; costa fusca, percurrente; cellulis laxis, oblongo-hexagonis, basilaribus rectangularibus, concoloribus, marginalibus elongatis, limbum biseriatum efformantibus. Seta ad 2 cm. alta, rubra; theca nutans, pyriformis, 3 mm. longa; exostomii dentes fusco-lutei, apice hyalini, endostomium pallide luteum, processus angusti, superne dentibus adhaerens, cilia 0; sporae papillosae, 25 μ in diam.

Chile: Prov. de Nuble, Cordillera de Chillan, alt. 2000-2200 m., Nos. 1042, 1043, 1693 **type**.

Perhaps near *B. obscurum* Card. & Broth. but in comparison with the description of this species, the leaves of *B. austro-chilense* are smaller, the costa percurrent and the leaves of the innovations not comose at the tips.

Bryum (Cernuiformia) **dicarpum** Bartr. sp. nov.

Species precedenti forsitan affinis sed costa infra apicem folii evanida, sporis majoribus et theca pendula, microstoma.

Synoiicum; similar in habit and vegetative characters to *B. austro-chilense* but the leaves slightly larger, up to 2.5 mm. long with the costa ending just below the apex; setae constantly two from the same perichaetium; capsules pendulous, small-mouthed; spores 32-35 μ in diam.

Fuegia bor.: Hotel Bouqueron, in loco paludoso, No. 317 **type**.

Bryum (Inclinatiformia) **macrosporum** Bartr. sp. nov.

Dioicum; caespitosum, caespitibus densis, viridibus. Caulis erectus, 3-5 mm. altus, superne comoso-foliosus, inferne fusco-tomentosus. Folia comalia late oblongo-ovata, acuminata, carinato-concava, sicca erecta; marginibus integris, anguste reflexis; costa rubra, in aristam usque 300 μ longam, levem excedente; cellulis rhomboideis, basilaribus rectangularibus, rubris. Seta circa 2 cm. alta, rubra; theca pendula, 1 mm. longa, oblonga; exostomii dentes lutei, apice hyalini, endostomium hyalinum, processus

angusti, fenestrati, ciliis interpositis 3, parum brevioribus, haud appendiculatis; sporae lutescentes, papillosae, 30 μ in diam.

Chile: Prov. de Magellanes, Fuegia media, Lago Fagnano, Punta Pizaro, No. 1211 **type**.

By the dioicous inflorescence this species is allied to *B. vernicosum* Dus. and *B. Hatcheri* Dus. but is distinct from both in the well-developed cilia of the inner peristome and the larger spores.

Bryum (Pseudotriquetra) **brachycarpum** Bartr. sp. nov.

Dioicum; caespitibus densis, pallide viridibus, intus fuscescentibus. Caulis erectus, innovando-ramosus. Folia ovata, breviter acuminata, limbata, ad 2.5 mm. longa; marginibus inferne anguste revolutis, summo apice minute denticulatis; costa inferne rubra, percurrente vel breviter excedente; cellulis rhomboideis, basilaribus oblongis, rubris, marginalibus elongatis, limbum 3-4-seriatum efformantibus. Seta 5-6 cm. longa, tenuis, rubra; theca pendula, 2.5 mm. longa, piriformis; cilia appendiculata; operculum convexum, apiculatum; sporae lutescentes, diam. 18-20 μ .

Fuegia media, Estancia la Marina, in palude, No. 677 **type**.

This species is apparently near *B. zeballosicum* Card. & Broth. but is clearly distinguished from this and any of the allied group by the much longer setae and the short, pyriform capsules with the neck only about half as long as the sporangium.

Bryum (Caespitibryum) **pauperculum** Bartr. sp. nov.

Dioicum; caespitosum, caespitibus densis, superne lutescenti-viridibus, intus fuscescentibus. Caulis vix 1 cm. longus, inferne fusco-radiculosus. Folia sicca appressa, humida erecto-patentia, triangulari-lanceolata, ad 2.5 mm. longa, sensim acuminata; marginibus fere ad apicem revolutis, integris; costa valida, in aristam laevem excedente; cellulis oblongo-hexagonis, basilaribus rectangularibus, rubris, alaribus laxis, marginalibus elongatis, limbum indistinctum efformantibus. Seta circa 2 cm. longa; exostomii dentes pallide lutescentes, endostomium hyalinum, papillosum, cilia appendiculata; sporae minutissime papillosae, fuscae, diam. circa 30 μ .

Chile: Prov. de Magellanes, Fuegia occid., Cabo San Pablo, Nos. 658 **type**, 670.

This species evidently stands in close proximity to *B. caespiticum* but the leaf outline is different, the margins and the arista are entire and the spores twice as large.

Bryum (Rosulata) **pseudothyridium** Bartr. sp. nov.

Dioicum; robustum, caespitosum, caespites densi, pallide lutescente-virides, nitidiusculi. Caulis erectus, dichotome innovans, dense rufo-tomentosus, ad 4 cm. altus. Folia ad apicem innovationem congesta, sicca erecta, flexuosa, spiraliter contorta, humida erecto-patentia, oblongo-obovata, apiculata, late limbata, ad 5 mm. longa; marginibus fere ad apicem revolutis, apicem versus remote denticulatis; costa crassa, basi rubella, in apiculum laevem excedente; cellulis ovato-hexagonis, basilaribus rectangularibus, infimis rubris, marginalibus linearibus, multiseriatis, limbum latum distinctum efformantibus. Seta ad 2.5 cm. longa, rubella, flexuosa; theca nutans vel pendula, oblongo-cylindrica, brevicollis, circa 3 mm. longa; operculum conicum, apiculatum; exostomii dentes fusco-lutei, apice hyalini, 0.6 mm. alti, endostomium pallide luteum, papillosum, corona basilaris alta, processus angusti, rimosi, cilia 3, valde appendiculata; sporae minute papillosae, diam. 12 μ .

Chile: Prov. de Magellanes, Fuegia occid., Puesto Yarton, loco uliginoso, No. 893 **type**; Fuegia media, Rio Bueno, Nos. 386, 1089.

An unusually handsome moss which is distinct from *B. Lechleri* C. M. and *B. andicola* Hook. in the more elongate and robust stems and the broad leaf border, up to 150 μ wide in the upper half of the leaf and composed of 8–15 rows of narrow linear cells.

BARTRAMIACEAE

Philonotis luteola Bartr. sp. nov.

Caespites compacti, pallide lutescente-virides. Caulis 5–6 cm. altus, inferne parce radiculosus, ramosus, ramis gracilis, laxifolius. Folia erecta, oblongo-ovata, breviter acuminata, haud plicata 2–2.5 mm. longa; marginibus planis, superne serrulatis; costa lata, male limitata, infra apicem dissoluta, dorso superne papillata; cellulis omnibus laevibus, laxiusculis, superioribus rhomboidalibus, inferioribus longioribus, marginalibus haud distinctis. Caetera ignota.

Fuegia media: Estancia Vicuna, Puesto 20, Cerro Fuentes, reg. alp., No. 734 **type**.

The unbordered leaves, broader costa and absence of any differentiated marginal cells at the basal angles will at once separate this species from any of the forms of *P. vagans*. It is distinguished from *P. acicularis* (C. M.) by the plane margined leaves and from both *P. varians* Card. and *P. parallela* Dus. by the costa ending below the apex.

Breutelia angustiretis Bartr. sp. nov.

Caespites densi, nitidi, superne lutescente-virides, inferne fusci, dense rufo-tomentosi. Caulis 4–5 cm. altus, irregulariter ramosus. Folia erecto-patentia, subflexuosa, e basi ovata, plicatula sensim longissime cuspidata, ad 4.5 mm. longa; marginibus integris, e basi anguste recurvis, superne planis; costa angusta, percurrente vel excurrente; cellulis omnibus anguste linearibus, laevibus, parietibus incrassatis, lutescentibus, infimis brevioribus, rubellis, parietibus sinuosis. Fructus ignotus.

Fuegia occidentalis: Fjordo Martinez, Bahia Pluschow, Nos. 592 **type**, 1136; Chile: Prov. de Magellanes, Isla Dawson, Puerto Valdez, in silva humida, Nos. 1326, 2563.

This species and *B. chrysura* (C. M.) Broth. are closely allied to *B. integrifolia* (Tayl.) Jaeg. A critical study of this group may show that the specific characters are too unstable to afford any practical basis for classification.

ORTHOTRICHACEAE

Macromitrium (Teichodontium) *coriaceum* Bartr. sp. nov.

Laxe caespitosum, lutescente-viride, intus fuscescens. Caulis repens, dense ramosus, ramis suberectis, usque ad 1 cm. longis, ramulosis. Folia sat densa, sicca erecta, contorta, humida erecto-patentia, lanceolata, plicata, breviter acuminata, superne carinata, 1.5–2 mm. longa; marginibus superne denticulatis; costa sub apice evanida; cellulis superioribus ovalis, incrassatis, laevibus, basilaribus anguste rectangularibus, valde incrassatis. Seta erecta, laevissima, 7–8 mm. longa; theca laevissima, oblongo-cylindrica, exothecio coriaceo; exostomium circa 30 μ altum, dentibus inter se concretis, papillois, endostomium exostomio majus, processus 32, lati, obtusi, dense papillois; calyptra nuda, laciniata; sporae papilloae, diam. 50–60 μ .

Chile: Prov. de Chiloe, Puerto Barroso de la Penins, Tres Montes, Nos. 1563, 1570 **type**, 1588, 1628.

Clearly distinguished from *M. Rusbyanum* E. G. Britt. and *M. macrosporum* Herz. by the longer segments of the inner peristome and the naked calyptrae.

LEMBOPHYLLACEAE

Camptochaete arbusculans Broth. ex Bartr.

Dioica; caespitosa, lutescente-viridis. Caulis sublignosus, bipinnate ramosus, ramis teretibus, saepe flagelliformiter attenuatis. Folia conferta, concava, imbricata, latissime ovata vel obovata, minute apiculata, 1.5 mm. longa, 1 mm. lata; marginibus erectis, superne denticulatis; costa variabilis, nunc simplex et fere ad medium folii producta, nunc brevis et binis vel nulla; cellulae anguste rhomboideae, laevissimae, apicales breviores, alares sat numerosae.

Chile: Prov. de Nuble, Recinto, Las Trancas, alt. 1200 m., No. 1600; Chile australis in montibus Cordillera de la Costa supra Angol oppidam in truncis arborum, Dusen No. 338, Nov. 11, 1896, **type**.

Roivainen's No. 1600 is exactly similar to Dusen's No. 338, issued as *Camptochaete arbusculans* Broth. which has been made available for comparison through the kindness of M. Theriot. The species is included by Brotherus in Ed. 2 of the Pflanzenfamilien but as the description seems never to have been published it may be validated by the above brief diagnosis.

The stem and branch leaves are not clearly differentiated. The leaves are very broadly ovate or obovate, minutely apiculate, alar cells rather numerous, upper cells small, parenchymatous, rhomboidal, median and lower cells narrower; margins erect, denticulate above; costa variable, short and double or even lacking, often single and extending nearly to mid-leaf. The variable costa is an anomalous character in *Camptochaete* but the plants are otherwise characteristic so I believe they may be included here under **Rigodiella** sect. nov. characterized as follows:

Folia caulina et ramea vix diversa; costa maxime variabilis, nunc simplex et bene evoluta, nunc binis et brevis vel nulla.

HOOKERIACEAE

Sauloma tenella (H. f. & W.) Mitt.

Fuegia media: Rio Bueno, in silva Nothofagi, No. 2008.

New to South America. The broad distribution of so many austral types which are common to New Zealand and the tip of the South American continent is again emphasized by the occurrence of this species in Fuegia.

AMBLYSTEGIACEAE

Hygroamblystegium: I think Reimers (Hedwigia **66**:71. 1926) is entirely justified in transferring the following species to *Hygroamblystegium*. They are certainly better placed here than in *Pseudoleskea*.

The group is a very intricate one and the distinctions so slight and inconstant that I doubt if they can be resolved into definite specific identities. The large series collected by Dr. Roivainen seems to be separable into two fairly distinct types as outlined in the tentative key presented below.

Leaves closely appressed

Loosely tufted plants **H. filum**

Densely tufted plants, stems parallel **H. filum** var. **compactum**

Leaves spreading or secund

Habit rigid, leaves strongly secund, uncinat at tips **H. fuegianum** var. **secundum**

Habit lax

Costa short excurrent

Very slender plants **H. fuegianum** var. **gracilis**

More robust plants

Leaves erect-spreading or secund **H. fuegianum**

Leaves widely spreading **H. fuegianum** var. **Skottsbergii**

Costa long excurrent **H. fuegianum** var. **excurrens**

Hygroamblystegium filum (C. M.) Reim.

Hygroamblystegium filum var. **compactum** Bartr. var. nov.

Caules elongati, ad 10 cm. longi, dense compacti, cellulae superiores breviter hexagonae.

Chile: Prov. de Magellanes, Fuegia media, Lago Linch, Cerro Chico, reg. alp., No. 1380 **type**.

An unusual form with long, parallel, densely tufted stems and short upper leaf cells.

Hygroamblystegium fuegianum (Besch.) Reim.

The following sporophyte characters are taken from No. 1016 which is in good fruit.

Seta slender, reddish, smooth, about 2 cm. long, twisted to the right when dry. Capsule cylindric, curved, constricted below the mouth when dry, urn 2 mm. long; peristome large, pale yellow; lid not seen; calyptra pale, early deciduous; spores smooth, 10–12 μ in diam.

Hygroamblystegium fuegianum var. **Skottsbergii** (Card.) Bartr. comb. nov.

Pseudoleskea fuegiana (Besch.) Card. var. *Skottsbergii* Card.

Hygroamblystegium fuegianum var. **excurrens** (Card. & Broth.) Bartr. comb. nov.

Amblystegium excurrens Card. & Broth.

Hygroamblystegium fuegianum var. **gracilis** (Card. & Broth.) Bartr. comb. nov.

Pseudoleskea fuegiana (Besch.) Card. var. *gracilis* Card. & Broth.

Hygroamblystegium fuegianum var. **secundum** Bartr. var. nov.

Caules rigidi. Folia saepe fortiter falcato-secunda.

Chile: Prov. de Magellanes, Fuegia media, Lago Fagnano, Punta Pizaro, No. 1213 **type**.

Very different from any of the allied forms in the rigid, rather robust stems, uncinat at the tips and with the leaves clearly falcate-secund.

Calliergidium austro-stramineum (C. M.) Bartr. comb. nov.

Hypnum austro-stramineum C. M.

Dr. Grout (Moss Fl. N. Amer. 3(2): 100. 1931) has advanced what seem to be adequate reasons for separating this group from *Drepanocladus*.

Calliergon sarmentosum (Wahlenb.) Kindb.

Very similar to the plants of the northern hemisphere in every way except that the apical leaves of the young branches and stems are more closely imbricated to form a terete tip ending in a cuspidate point.

BRACHYTHECIACEAE

Brachythecium longidecurrens Bartr. sp. nov.

Autoicum; lutescente-viride, nitidulum. Caulis irregulariter ramosus, ramis arcuatis. Folia dense conferta, scariosa, sicca imbricata, humida erecto-patentia, caulina e basi longe decurrente latissime cordato-ovata, in acumen breviusculum constricta, 1.5–1.7 mm. longa; marginibus inferne reflexis, superne planis, fere e base minute denticulatis; costa valida, ad 4/5 folii evanida; cellulis linearibus, inferioribus brevioribus et latioribus, alaribus rectangularibus, pellucidis. Folia ramea angustiora, sensim acuminata. Folia perichaetialia ecostata, in acumen patulum subito constricta; seta rubella, 2 cm. longa, superne scaberula; theca horizontalis, sicca arcuata, 1.5 mm. longa, fusca.

Chile: Prov. de Magellanes, Fuegia media, Rio Bueno, in silva, Nos. 2018 type, 2025, 2063.

These plants have something of the habit of *B. rivulare* Bry. Eur. but are immediately distinguished by the acuminate leaves, the longer costa, and the setae which are smooth below.

Brachythecium (Julacea) **micro-collinum** Bartr. sp. nov.

Autoicum; tenellum, pallide viride. Caules intertexti, depressi, irregulariter pinnati, ramis curvato-patulis. Folia minuta, sicca imbricata, humida erecto-patentia, concava, ovato-lanceolata, acuminata, haud decurrentia, circa 0.5 mm. longa; marginibus toto ambitu denticulatis; costa valida, ad 4/5 folii evanida, extremitate dentiformi; cellulis linearibus vel lineari-rhomboideis, basilaribus laxioribus, rectangularibus, infimis ovalibus vel breviter rectangularibus. Folia perichaetialia enervia, e base subvaginante in acumen abrupte constricta, marginibus ad basin integris, superne argute denticulatis; seta rubella, 6–7 mm. longa, laevissima; theca horizontalis, 1 mm. longa.

Chile: Prov. de Nuble, Recinto, in silva umbrosa, alt. 750 m., Nos. 954, 955 type.

Near *B. collinum* (Schleich.) but much smaller in every way and with a stouter, longer costa ending in a spine on the back. *B. arenarium* Card. & Broth. is described as having the stem leaves ending in a long, subulate acumen. This character, if constant, should preclude any confusion with *B. micro-collinum*.

PLAGIOTHECIACEAE

Plagiothecium nitidum (Hook. f. & Wils.) Bartr. comb. nov.

Leskea nitida Hook. f. & Wils.

I have outlined elsewhere (Manual of Hawaiian Mosses, p. 224. 1933) my reasons for thinking that *Catagonium* is a poorly defined genus. The above species does not appear to be generically distinct from *Plagiothecium*.

Calliergonella complanata Card. & Broth.

To judge from a fragmentary specimen of the type collection consisting of two stems and a few detached leaves which I have seen through the kindness of Dr. Linkola, is apparently one of the forms of *Eucatagonium politum* (Hook. f. & Wils.) with the leaves not clearly distichous.

SEMATOPHYLLACEAE

Sematophyllum aureo-nitidum Bartr. sp. nov.

Dioicum? Caespites depressi, sat densi, lutescente-virides, nitidi. Caulis ad 3 cm. longus, irregulariter ramosus. Folia conferta, falcata, e basi ovato-oblonga abrupte longe acuminata, ecostata, circa 2 mm. longa; marginibus planis, inferne integris, superne denticulatis; cellulis anguste linearibus, incrassatis, infimis lutescentibus, admodum porosis, alaribus 3-4, oblongis, vesiculososis, hyalinis vel lutescentibus. Folia perichaetia ovato-oblonga, breviter acuminata; marginibus superne irregulariter denticulatis; seta rubella, laevissima, circa 12 mm. longa. Caetera ignota.

Chile: Prov. de Magellanes, Fuegia occid., Fjordo Martinez, ad rupes, No. 579; Fjordo Martinez, Bahia Sarmiento, No. 2351 **type**.

More robust than *S. callidum* (Mont.) Mitt. from which it also differs in the more glossy leaves hooked at the tips of the branches. The description of *Hypnum leucocytus* C. M. suggests something similar but Dixon remarks (Studies in the Bryology of New Zealand, Pt. VI, p. 309. 1929) that this species is not glossy while *S. aureo-nitidum* is characterized by a lustrous, almost metallic sheen.

POLYTRICHACEAE

Dendroligotrichum squamosum (Hook. f. & Wils.) Broth.

Numerous collections of this species show the end cells of the lamellae in cross section are either two-parted or single and the lamellae 4-5 cells high. The end cells have two lumens when two-parted and are scarcely suggestive of *Polytrichum commune* to which Dixon (Studies in the Bryology of New Zealand, Pt. IV, p. 235. 1926) indicates that it may have some affinity.

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Bartram, Edwin B. 1946. "New Mosses from Tierra del Fuego." *Farlowia :a journal of cryptogamic botany* 2(3), 309–319. <https://doi.org/10.5962/p.316010>.

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