A SYNOPTIC FLORA OF SOUTH GEORGIAN MOSSES: II. *Chorisodontium*, *Dicranoloma*, *Dicranum*, *Platyneurum* AND *Conostomum*

By B. G. Bell

Abstract. Those species from South Georgia belonging to the genera *Chorisodontium*, *Dicranoloma*, *Dicranum*, *Platyneurum* and *Conostomum* are described, keys and short historical notes on taxonomy being provided. Distribution data for each species and full lists of all specimens examined are also given. *Conostomum magellanicum* Sull. and *Dicranoloma subimponens* (Card.) Broth. are reported for the first time from the island, while *Dicranum austro-georgicum* C. Muell., *Dicranum nordenskjöldii* Card. and *Conostomum perangulatum* Card. are reduced to synonymy.

The dicranoid species known from South Georgia fall broadly into two groups, one of robust species belonging to *Chorisodontium*, *Dicranoloma*, *Dicranum* and *Platyneurum*, all previously classified under *Dicranum*, and the other of slender species belonging to such genera as *Dicranoweisia* and *Ditrichum*. However, the genus *Holodontium* shows affinities to both groups as it contains robust and slender species. But owing to taxonomic confusion within this genus and to a shortage of material it has been decided to treat the species of *Holodontium* in a later paper along with the remainder of the dicranoid genera.

The species described here all form an important constituent in the vegetation of South Georgia and so it was thought beneficial to include them all in a single key to species. A separate key is provided for the two species of *Conostomum*, one of which is also a very common element of the island's bryoflora.

The format of the text, the description of species and the citation of specimens and field records follows the arrangement of the first paper in this series (Greene, 1973).

Dicranaceae

The species of *Chorisodontium*, *Dicranoloma*, *Dicranum* and *Platyneurum* treated in this paper may be distinguished from each other as follows:

1. Nerve narrow $< 1/3$ width of leaf base 2
   Nerve broad $> 1/3$ width of leaf base 4
2. Cells elongate below, shorter above, often irregular, not or only weakly porose .. .. ***Dicranum oleodictyon***
   Cells elongate throughout, clearly porose below 3
3. Leaves regularly falcate all along shoot, usually toothed for some distance below apex .. .. ***Dicranoloma hariotii***
   Leaves erecto-patent, weakly falcate towards top of shoot, rarely toothed at apex .. .. ***Dicranoloma subimponens***
4. Teeth of subula confined to point or just below, back of nerve smooth to moderately papillose, leaves strict, little altered when dry .. .. ***Chorisodontium aciphyllum***
   Teeth of subula extending for some distance below point, back of nerve coarsely papillose, leaves squarrose, strongly crisped when dry .. .. ***Platyneurum laticostatum***

Holodontium inerme (Mitt.) Broth., a species not previously reported from South Georgia, is the only other robust dicranacean known from the island. It has a nerve $> 1/3$ width of leaf base, a falcato-secund leaf arrangement and a rounded leaf tip, characters which, together with a semi-aquatic habitat, should prevent confusion with *Chorisodontium aciphyllum* or *Platyneurum laticostatum*.

Chorisodontium (Mitt.) Broth.

This genus, characterized particularly by the densely rhizoidal shoots and longly subulate leaves with wide nerve, is represented by a single species on South Georgia.

Chorisodontium aciphyllum (Hook. f. et Wils.) Broth.

Syn. Dicranum aciphyllum Hook. f. et Wils.
Dicranum nordenskjöldii Card.
Dicranum tenuicuspidatum C. Muell.

Stems forming tall, robust, loose to compact, light green turves 3–12 cm. high, sparsely branched and conspicuously tomentose. Leaves 5–10(−10·7)×0·5–1·1 mm., erect, in compact turves closely appressed, linear-lanceolate from a sheathing base, decurrent, tapering to a long channelled subula. Margin plane sparingly toothed towards apex. Nerve wide > 1/3 width of leaf base, diffuse, not or weakly papillose at back. Cells above (8–)10–16(–20)× 6–10 μm., shortly rectangular to quadrate, in base rectangular and weakly to strongly porose, in alar group swollen, incrassate. Dioecious. Seta 1·5–2·5 cm. long, smooth. Capsule 2·5–3·0×0·5–0·7 mm., erect, elongate, cylindrical, smooth. Operculum rostrate. (Fig. 1.)

Habitat and distribution (Fig. 2)

A species mostly occurring in *Festuca* grassland, but also frequent on peat banks and scattered throughout *Polytrichum* banks. Altitude 0–210 m.

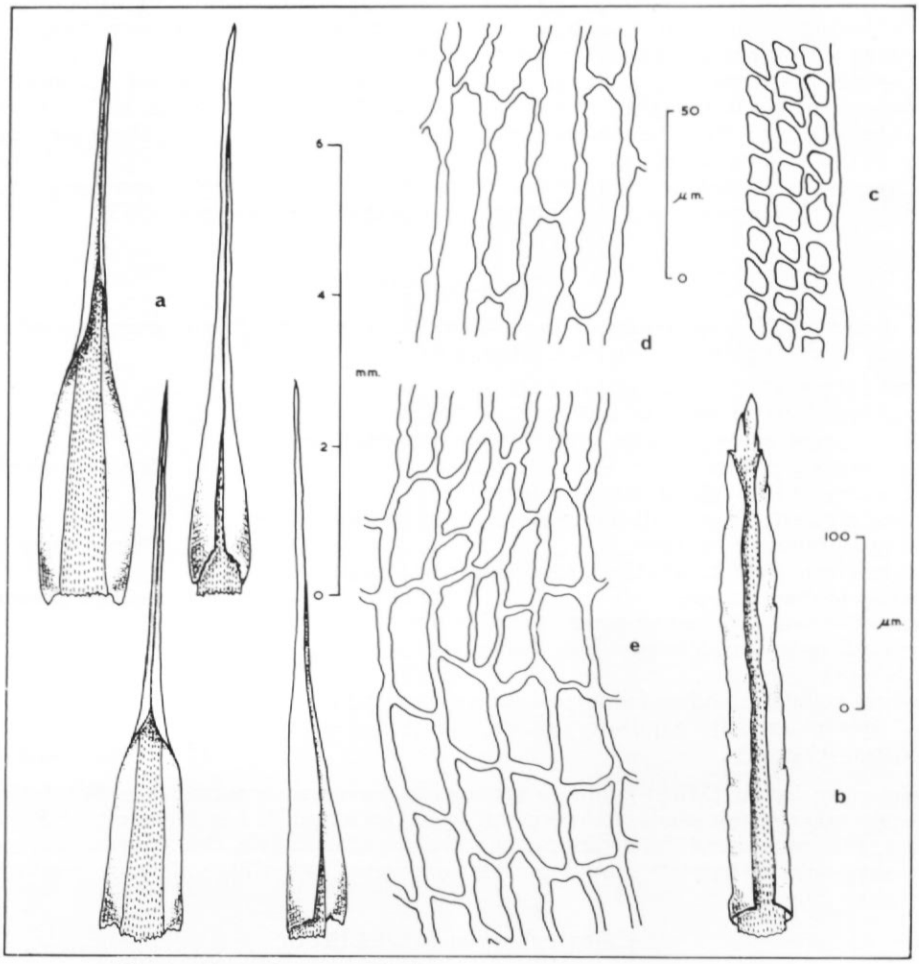

Fig. 1. *Chorisodontium aciphyllum.*
a. Leaves; b. Apex; c. Upper cells; d. Lower cells; e. Alar cells.
Scales: left-hand for leaves; median for cells; right-hand for apex.

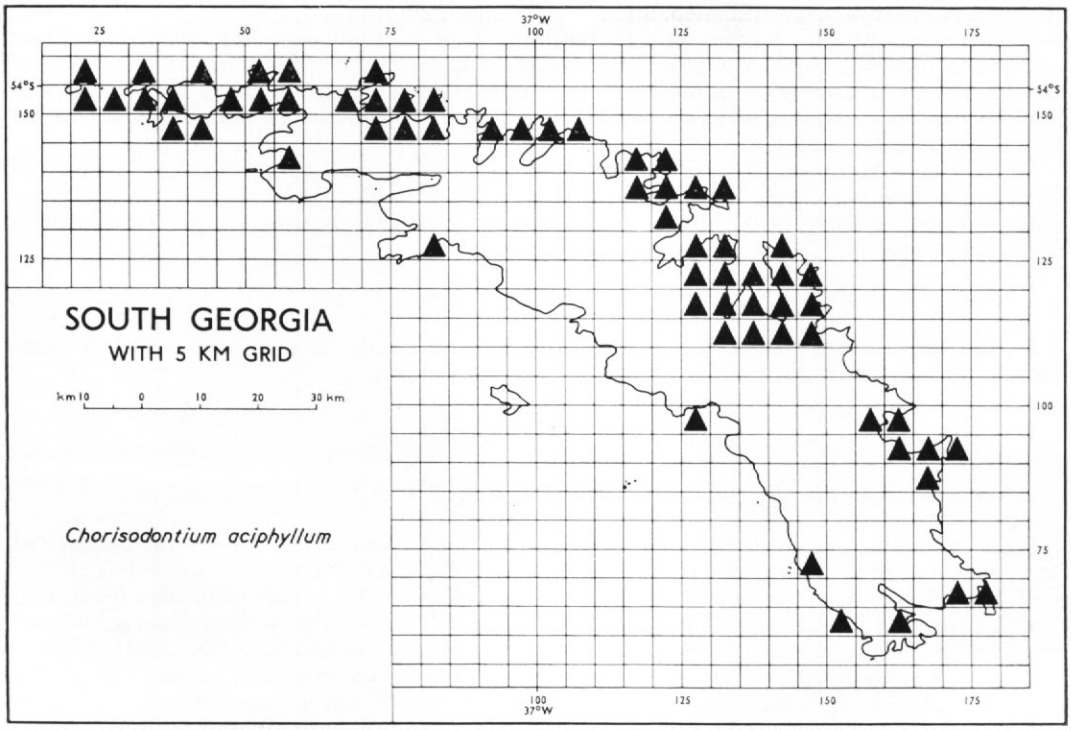

Fig. 2. The known distribution on South Georgia, by 5 km. squares, of *Chorisodontium aciphyllum* based on the specimens and field records given in the Appendix.

Notes

A very common plant on South Georgia which is readily distinguished in the field by its erect longly subulate leaves. Under the microscope the alar cells are often not seen on detached leaves due to the incrassate nature of their walls causing them to remain attached to the stem. Sporophytes have rarely been seen on South Georgia.

Taxonomy

This species was first described as *Dicranum aciphyllum* Hook. f. et Wils. by Hooker and Wilson (1844) for material collected by Hooker (Lectotype J.D.H. 123, BM, Hermite Island, Cape Horn, Antart. Exp. 1839–1843). Brotherus (1924) transferred the species to *Chorisodontium*. It was reported from South Georgia by Müller (1890), as *Dicranum tenuicuspidatum* C. Muell. (Type Will 47, M, Fundort Umgebung der Station in kleinen Polstern zwischen *Poa flabellata*, 7.i.83), a taxon reduced to synonymy with *C. aciphyllum* by Brotherus (1909). Will's specimen has been examined and agrees with the above description of *C. aciphyllum*.

Owing to the wide morphological variation *C. aciphyllum* is now known to show, other taxa previously given specific rank should also be reduced to synonymy. *Dicranum nordenskjöldii* Card., described by Cardot (1908) for material from the Danco Coast of the Antarctic Peninsula as *Dicranum nordenskjöldii* (Lectotype Skottsberg s.n., spec. origi!, UPS, Graham Land, Moss Isn., 1.xii.1902, Svenska Sydpolarexpeditionen 1901–03), was first reported from South Georgia by Cardot and Brotherus (1923), but it is considered by the author to be only a form of *C. aciphyllum*. In a preliminary note on *D. nordenskjöldii* Cardot (1906*b*) suggested it to be "Espèce voisine, ou, peut-être, race polaire du *D. aciphyllum* Hook. fil et Wils., s'en distinguant par sa nervure généralement moins large et mieux délimitée, et surtout par son tissu basilaire formé de cellules à parois minces ou à peine épaissies, non ou très peu poreuses".

A comparison of the type specimen, and a further specimen from Cape Tuxen (Gain 195, BM; 8.i.1909) mentioned by Cardot (1913), with the type of *Dicranum aciphyllum* and other herbarium material from Antarctic regions, has shown that the distinguishing features of *D. nordenskjöldii* used by Cardot when erecting the species, namely, nerve width, cell wall thickness and porosity, are all extremely variable characters and as such are not acceptable for delimiting separate taxa.

South Georgian specimens of *C. aciphyllum* show the complete spectrum of variability discussed above and agree in all important respects with the type specimen of *Dicranum aciphyllum* particularly in the longly subulate leaves and the characteristic tall turf growth form of this species.

Dicranoloma (Ren.) Ren.

Robust turf-forming plants with longly subulate leaves. Cells strongly porose and elongate throughout, alar cells distinct. Nerve narrow, often indistinct.

Dicranoloma hariotii (C. Muell) Par.

Syn. Dicranum austro-georgicum C. Muell.

Stems moderately robust, forming tall, golden-yellow to yellow-green turves, compacted below, looser above, 5·0–8·5(–11·0) cm. high with few erect branches. Leaves (3·1–)4·8–9·5 (–10·5)×0·4–1·3 mm., regularly falcato-secund, lanceolate to ovate-lanceolate, decurrent, tapering from, or just above, insertion into a long curved, channelled, acumen. Margin weakly revolute for much of its length on one or both sides, usually toothed for some distance below tip. Nerve narrow, < 1/3 width of leaf base, vanishing in acumen. Cells above (29–)38–93 (–110)×5–11(–13) μm., elongate and porose throughout, in alar group inflated, hyaline to weakly coloured. Inflorescences and sporophytes unknown on South Georgia. (Fig. 3.)

Habitat and distribution (Fig. 4)

Plants of a variety of predominantly moist habitats, particularly in *Festuca* grassland, and occasionally as scattered turves in *Polytrichum* banks. Altitude 0–215 (–500) m.

Notes

This species may be readily distinguished in the field by its golden-yellow colour and by the strongly and regularly falcato-secund leaves. Under the microscope, the arrangement of teeth at the leaf apex will readily distinguish it from *Dicranoloma subimponens*.

Taxonomy

The first description of the present species, as it occurs on South Georgia, was given by Müller (1890) as *Dicranum austro-georgicum* C. Muell (Type Will 42, M, Fundort Krokisius-Berg, E.-seite an Felsen in grossen Polstern, Süd-Georgien, 17.ii.83), a species which Roivainen and Bartram (1937) suggested should be reduced to synonymy with *Dicranoloma hariotii* (C. Muell.) Par. This latter species was described by Müller (1885) as *Dicranum harioti* C. Muell. *in litt.* for Fuegian material (Type Hariot 175, BM, Ile Hoste, Baie Orange, Terre de Feu, Mission du Cap Horn) and transferred to *Dicranoloma* by Paris (1904). The two type specimens have been examined and compared with other material determined as *Dicranum austro-georgicum* by Cardot and Bartram, and it is considered that all plants may be referred to *Dicranoloma hariotii*. The lack of the regular falcation of the leaves and the blackish appearance of the Hariot specimen, a combination of characters also shown by a specimen from Molyneux Sound (Dusen 46, BM, as *Leucoloma harioti* (C. Muell.) Broth.) and discussed by Roivainen and Bartram (1937), is probably due, as they suggested, to the particular habitat from which these specimens were collected. In all other respects these plants are similar, particularly in the porose nature of the cells and the toothed leaf apex.

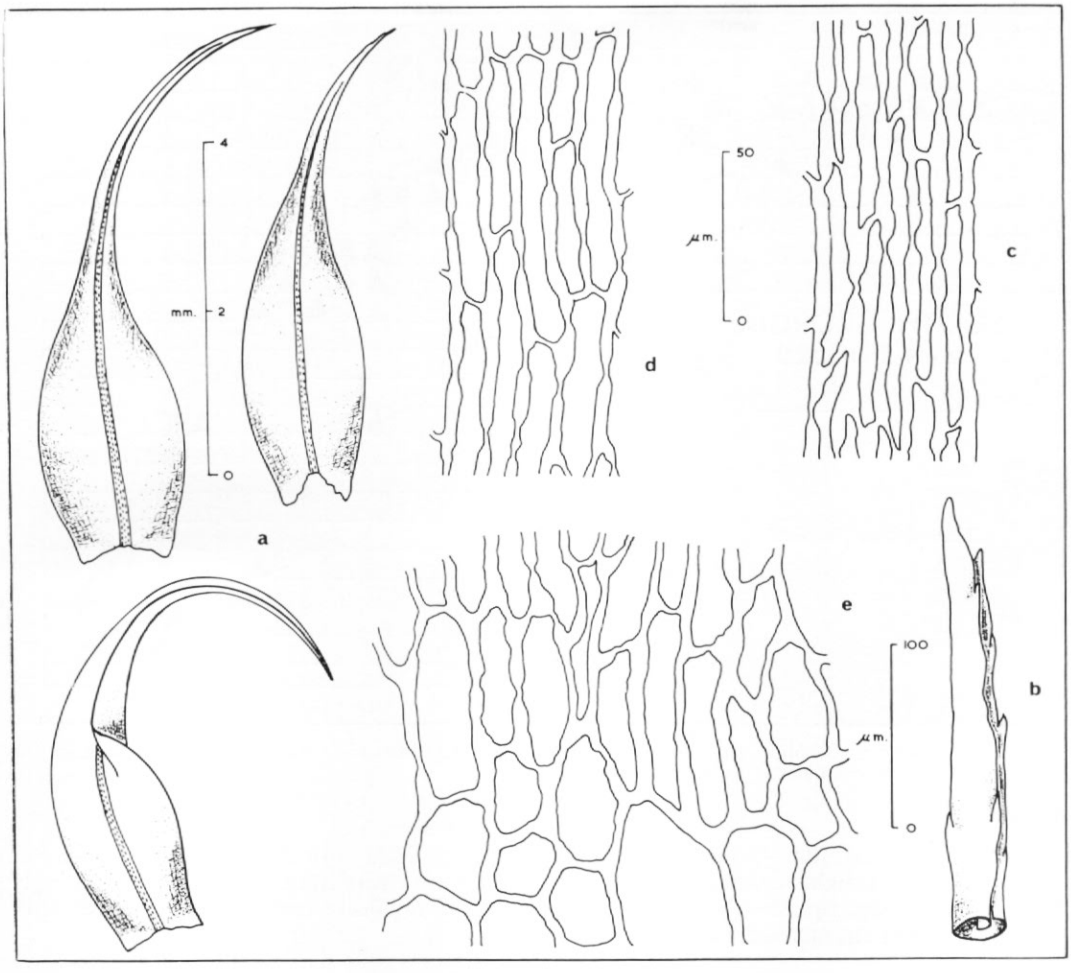

Fig. 3. *Dicranoloma hariotii*.
a. Leaves; b. Apex; c. Upper cells; d. Lower cells; e. Alar cells.
Scales: left-hand for leaves; median for cells; right-hand for apex.

Dicranoloma subimponens (Card.) Broth.

Stems robust, forming tall, yellow-green lax turves (4–)6–10 cm. high, with few erect branches. Leaves (4·2–)4·8–8·6(–9·8)×0·8–2·3 mm., ± secund, invariably so in coma, weakly falcate to straight, ovate to oblong-lanceolate, decurrent, acuminate. Margin weakly revolute on one or both sides towards apex, entire or sparingly and weakly toothed just below tip. Nerve narrow, < 1/3 width of leaf base, indistinct, vanishing in acumen. Cells above (38–)42–80(–115)×(6–)10–14 μm., elongate throughout, strongly porose below, inflated in alar group which may be strongly coloured. Inflorescences and sporophytes unknown on South Georgia. (Fig. 5.)

Habitat and distribution (Fig. 6)

Plants of moist places, e.g. *Rostkovia* flushes, rocks by waterfalls, etc. Altitude 0–210 m.

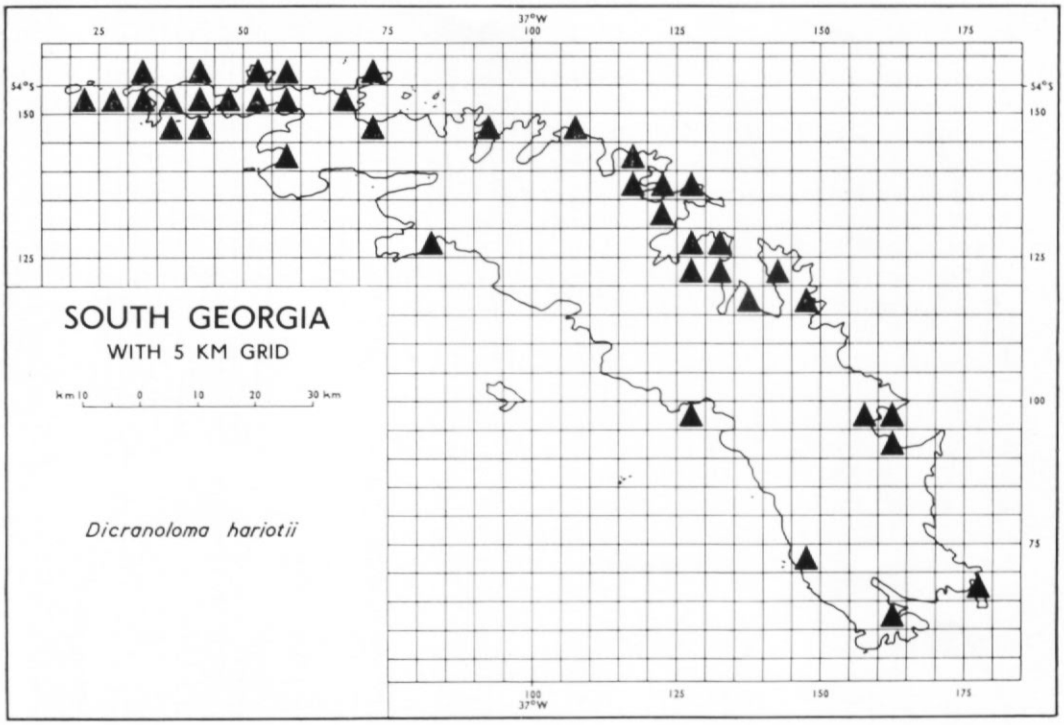

Fig. 4. The known distribution on South Georgia, by 5 km. squares, of *Dicranoloma hariotii* based on the specimens and field records given in the Appendix.

Notes

Because of its size this species is only likely to be confused with *Dicranoloma hariotii*, but the presence of straight to weakly falcate leaves which are entire to only weakly and sparingly toothed below the tip, should distinguish it from the regularly falcato-secund leaves with toothed acumen characteristic of that species.

Taxonomy

Not previously reported from South Georgia, this species was erected by Cardot (1905) as *Dicranum subimponens* Card. for material from Tierra del Fuego (Type Skottsberg 37, S-PA, Isla de los Estados, P. Cook, 18.xi.1903, Svenska Sydpolarexpeditionen 1901–03, Ser. N:R 37). Brotherus (1909) transferred the species to *Dicranoloma*. The type specimen agreed in all respects with the South Georgian material, particularly in its growth form.

Dicranum Hedw.

A large genus as understood by Cardot (1908) but owing to the transfer of many species to other genera it is now represented by a single species on South Georgia. The genus is characterized by plants having falcato-secund leaves with not to weakly porose cells throughout the leaf and conspicuous, usually coloured, alar groups.

Dicranum oleodictyon Dix.

Stems slender, forming short to moderately tall, compact turves 2·5–4·0 (–4·5) cm. high, branching sparse. Leaves 2·0–3·5(–4·2) × 0·25–0·7 mm., falcato-secund, ovate-lanceolate or from a ± oblong base, not or only weakly decurrent, tapering into a narrow channelled subula. Margin plane and entire throughout. Nerve narrow, < 1/3 width of leaf base, vanishing

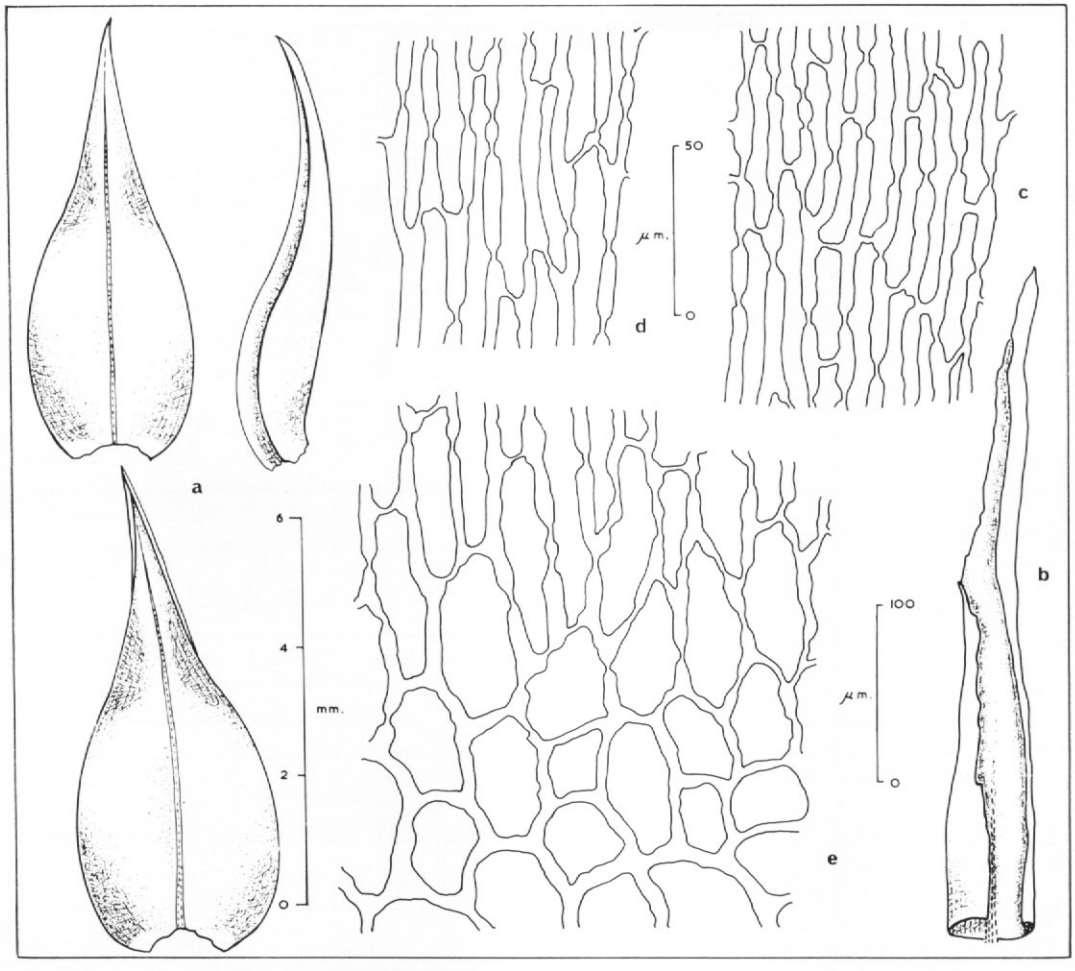

Fig. 5. *Dicranoloma subimponens*.
a. Leaves; b. Apex; c. Upper cells; d. Lower cells; e. Alar cells.
Scales: left-hand for leaves; median for cells; right-hand for apex.

in subula. Cells above 8–51 × 6–13 μm., irregular to shortly rectangular, not or only weakly porose, elongate below, at margin short towards base, in alar group enlarged, hyaline or brown. Perichaetial leaves enlarged, sheathing. Seta 1·2–1·4 cm. long, smooth. Capsule 1·5–2·0 × 0·5 mm., ovate, smooth, straight to a little curved, erect to slightly inclined. Operculum rostrate. (Fig. 7.)

Habitat and distribution (Fig. 8)

Plants of *Festuca* grassland and rock crevices. Altitude 0–450 m.

Notes

A local species, which is nevertheless well distributed on South Georgia, *D. oleodictyon* can be identified most easily in the field by its compact growth form and regularly falcato-secund leaves, but under the microscope the cell pattern is also distinctive. The sporophytes, described here for the first time, were from a single specimen from Hope Point, Cumberland East Bay

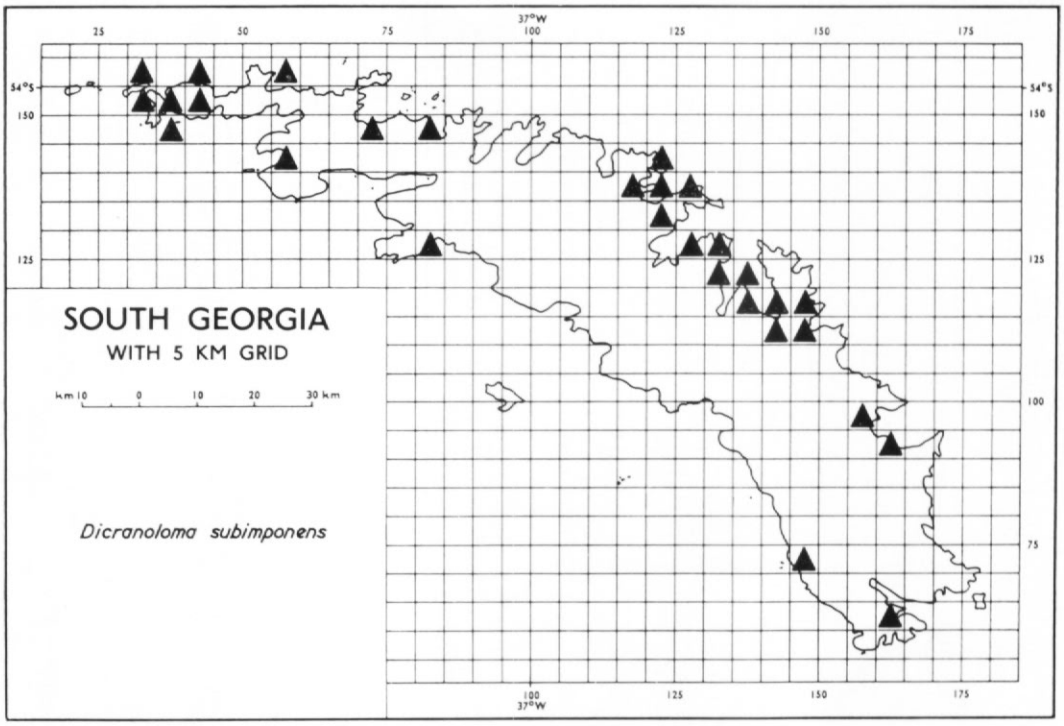

Fig. 6. The known distribution on South Georgia, by 5 km. squares, of *Dicranoloma subimponens* based on the specimens and field records given in the Appendix.

(Longton, 819, AAS, CHR, NY). Owing to their immaturity, a more detailed description of capsule characteristics was impossible.

Taxonomy

This species was erected by Dixon (1935) for sterile material collected by Trøim in the vicinity of Grytviken. Neither the type nor any authentic material identified by Dixon has been seen, but the specimens examined agree well with Dixon's description.

Platyneurum (Card.) Broth.

This genus is represented by a single species on South Georgia and is characterized by having leaves with a dentate margin above and a wide nerve which is extremely papillose on the back.

Platyneurum laticostatum (Card.) Broth.

Syn. Dicranum laticostatum Card.

Stems robust, forming compact turves (1·5–)3–4·5 cm. high, sparingly branched. Leaves (3·5–)4·2–7·7(–8·4)×0·7–1·4(–1·8) mm., squarrose, strongly crisped when dry, ovate-lanceolate, decurrent, tapering to a channelled subula. Margin plane, weakly to strongly toothed for entire length of subula. Nerve wide, > 1/3 width of leaf base, filling subula, abundantly and coarsely papillose on back. Cells above 5–14(–16)×(3–)5–11 μm., almost quadrate, obscure, below shortly rectangular, in alar group, which almost reaches to nerve, conspicuous, coloured, inflated, incrassate. Inflorescences and sporophytes unknown on South Georgia. (Fig. 9.)

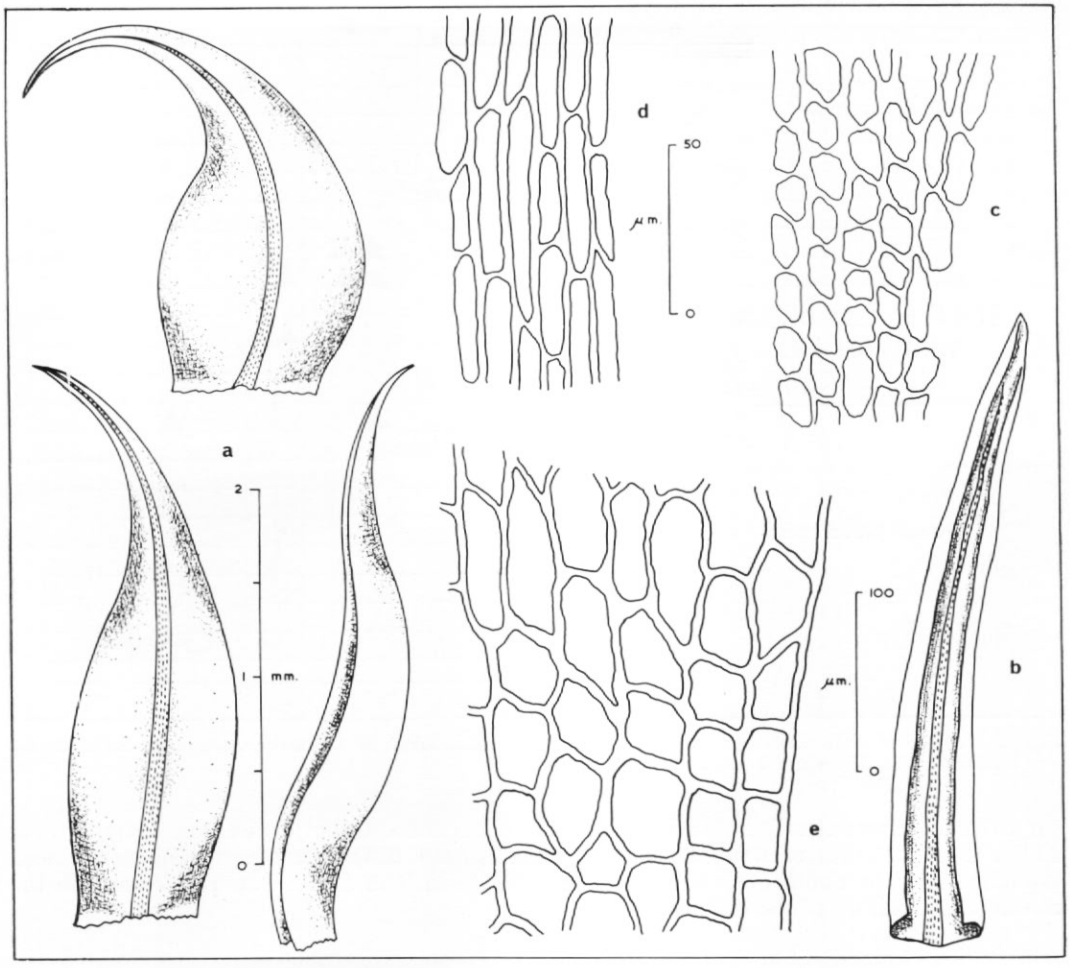

Fig. 7. *Dicranum oleodictyon.*
a. Leaves; b. Apex; c. Upper cells; d. Lower cells; e. Alar cells.
Scales: left-hand for leaves; median for cells; right-hand for apex.

Habitat and distribution (Fig. 10)

A species of a range of habitats but mostly associated with *Festuca grassland.* Altitude 0–210 (–300) m.

Notes

P. laticostatum may be readily distinguished, particularly in the dry condition, by the extremely strong crisping of the leaves. Under the microscope the densely papillose nature of the back of the nerve is another distinctive character which will readily separate this species from *Chorisodontium aciphyllum.*

Taxonomy

First reported from South Georgia as *Dicranum laticostatum* Card. by Cardot (1906*a*), who had earlier (Cardot, 1900) described the species (Type Racovitza 193, e specim. origin., S-PA,

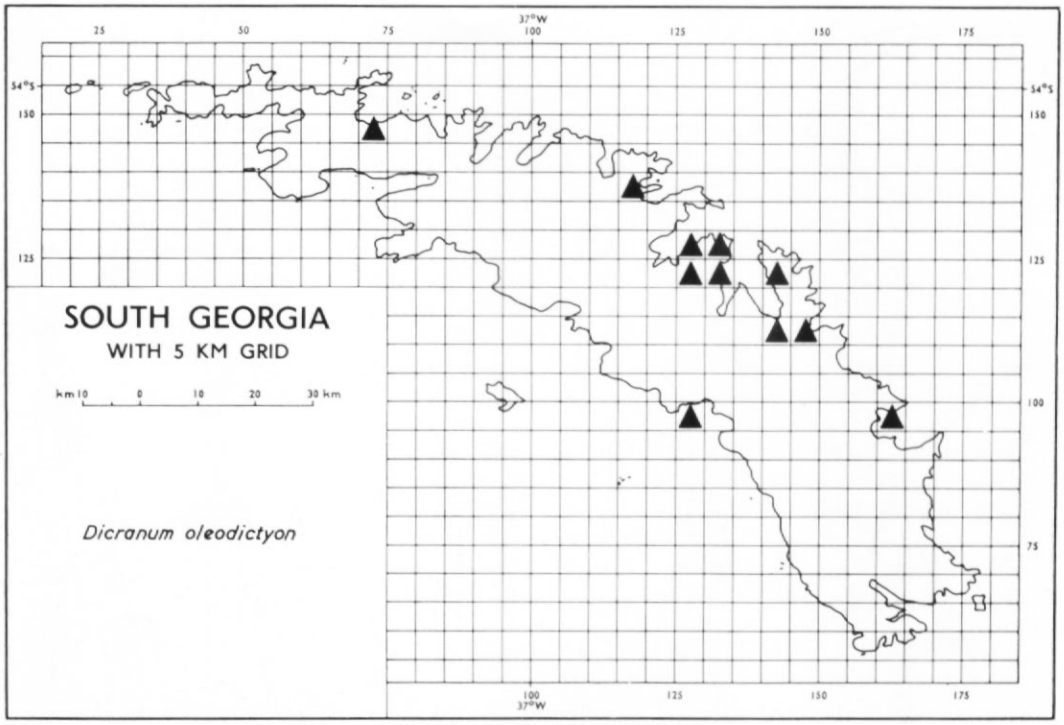

Fig. 8. The known distribution on South Georgia, by 5 km. squares, of *Dicranum oleodictyon* based on the specimens and field records given in the Appendix.

sur troncs d'arbres renversés, environs du lac de Lapataia, Canal du Beagle, Terre-de-Feu, 1897). It was transferred to *Platyneurum* by Brotherus (1924). The type specimen has been examined and the South Georgian material agrees with it in all respects particularly in the characteristic nature of the back of the nerve.

BARTRAMIACEAE

Conostomum Sw.

Species within this genus are characterized by having their leaves arranged in five ranks giving the shoot a ridged appearance, and by the teeth of the single peristome being united at their apices.

The genus is represented on South Georgia by two species which may be distinguished as follows:

1. Leaves ovate to oblong, apex obtuse. Nerve broad, ill-defined, ceasing below apex .. .. ***C. magellanicnm***
   Leaves lanceolate to ovate-lanceolate, acuminate. Nerve well-defined, narrow, excurrent .. .. ***C. pentastichum***

Conostomum magellanicum Sull.

Syn. Conostomum perangulatum Card.

Stems forming lax turves 1·0–3·5 cm. high, occasionally scattered among other mosses, yellow-green above brown below, branching sparse with abundant rhizoids at base of main

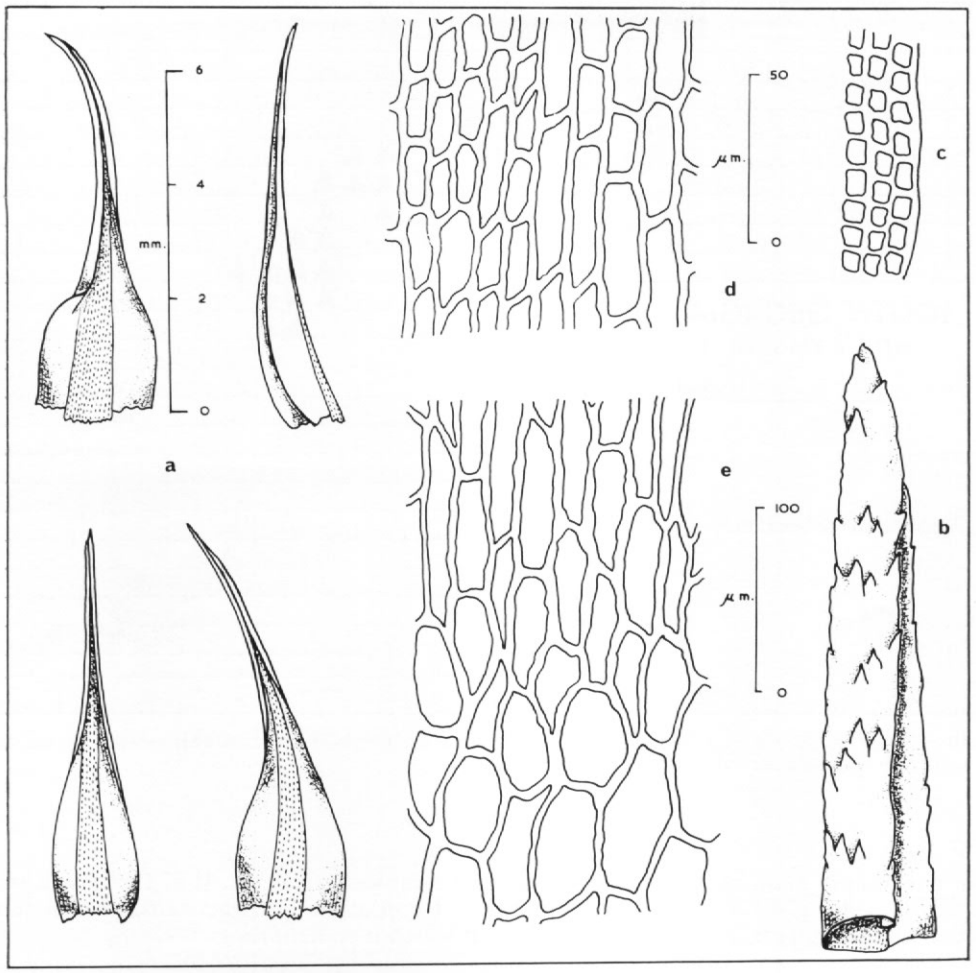

Fig. 9. *Platyneurum laticostatum*.
a. Leaves; b. Apex; c. Upper cells; d. Lower cells; e. Alar cells.
Scales: left-hand for leaves; upper right-hand for cells; lower right-hand for apex.

shoot and below each innovation. Leaves 0·9–1·7(–2·4)×0·3–0·7 mm., closely imbricate, 5-ranked, ovate to oblong, apex obtuse. Margin plane, frequently crenulate towards apex. Nerve broad > 1/3 width of leaf base, diffuse, ceasing below apex, weakly to moderately papillose towards the apex on both surfaces. Cells above (17–)20–41(–62)×5–15(–18) μm., regularly to irregularly rhomboid, papillose, rectangular below, in margin elongate forming a narrow border. Perichaetial bracts oblong, acuminate, variably denticulate. Seta 0·8–1·2 cm. long, straight, yellow-red smooth. Calyptra cucullate. Capsule generally symmetrical, erect, sulcate. Operculum rostrate, curved. (Fig. 11.)

Habitat and distribution (Fig. 12)

A species of predominantly wet habitats, e.g. wet rock faces and *Deschampsia* swards. Altitude 3–380 m.

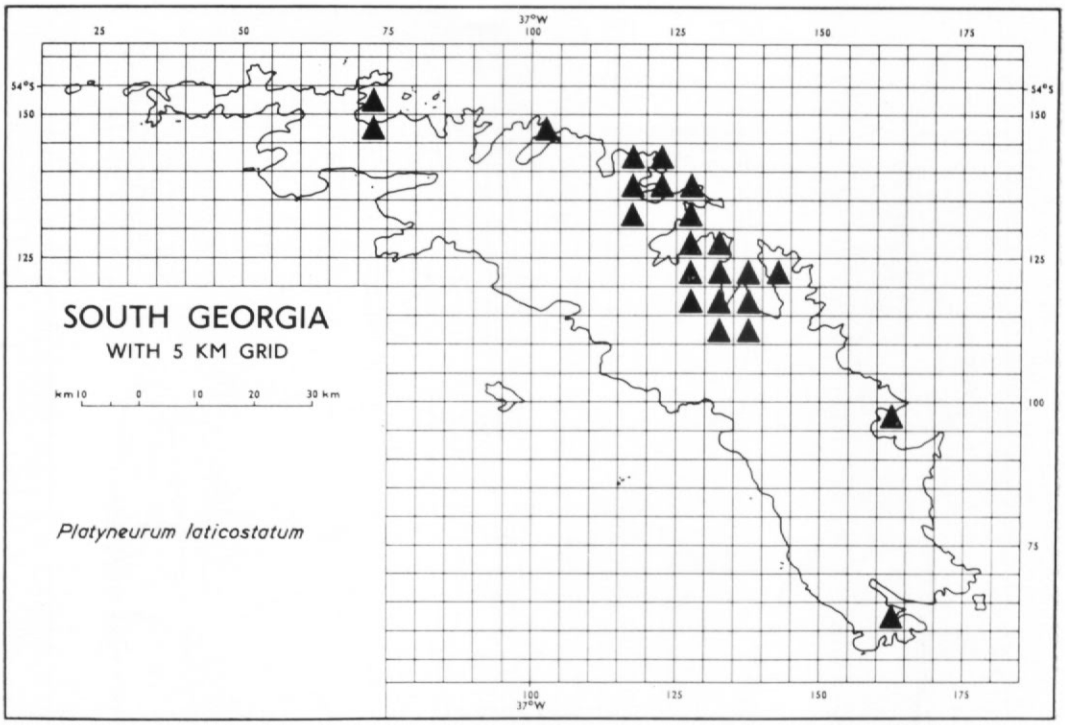

Fig. 10. The known distribution on South Georgia, by 5 km. squares, of *Platyneurum laticostatum* based on the specimens and field records given in the Appendix.

Notes

An uncommon plant rarely found fruiting. The 5-ranked arrangement of the leaves, which lack a hair point, gives the shoot a compact ridged appearance, characteristics which should prevent confusion with species of *Philonotis* with which it sometimes grows.

Taxonomy

Conostomum magellanicum is reported here for the first time from South Georgia. It was described by Sullivant (1850) for material collected on Isle Hoste during the United States Exploring Expedition of 1838–1842 (Type BM ex K, Orange Harbor, Fuegia, US.Ex.Ex. Wilkes 1838–1842, Recd. xii.62). The Kew specimen was found to agree in all respects with the South Georgian plants. Later, Cardot (1905) described a similar species, *Conostomum perangulatum*, for material collected in another locality on Isle Hoste (Type Skottsberg 109, S-PA, Bahia Tekenika, Terre-de-Feu, 1902) saying "Par la forme de ses feuilles, oblongues, obtuses, à nervure très large, disparaissant sous le sommet, cette espèce nouvelle se rapproche beaucoup du *C. magellanicum* Sullv.; elle en diffère par ses feuilles disposées en cinq séries extrêmement apparentes, crénelées-denticulées vers le sommet et fortement papilleuses dans la partie supérieure sur les deux faces de la nervure, par ses feuilles périchétiales érodées-dentées, enfin par son inflorescence dioïque (plante mâle inconnue). Plante très rigide à l'état sec".

A comparison of the type specimens of both *C. magellanicum* and *C. perangulatum*, particularly for those characters mentioned by Cardot, shows that *C. perangulatum* is merely a form of *C. magellanicum* which has a more distinct 5-ranked leaf arrangement. Both specimens have some leaves which are crenulate towards the apex with papillae on both surfaces of the upper part of the nerve. The perichaetial leaves are similar in being oblong, acuminate and

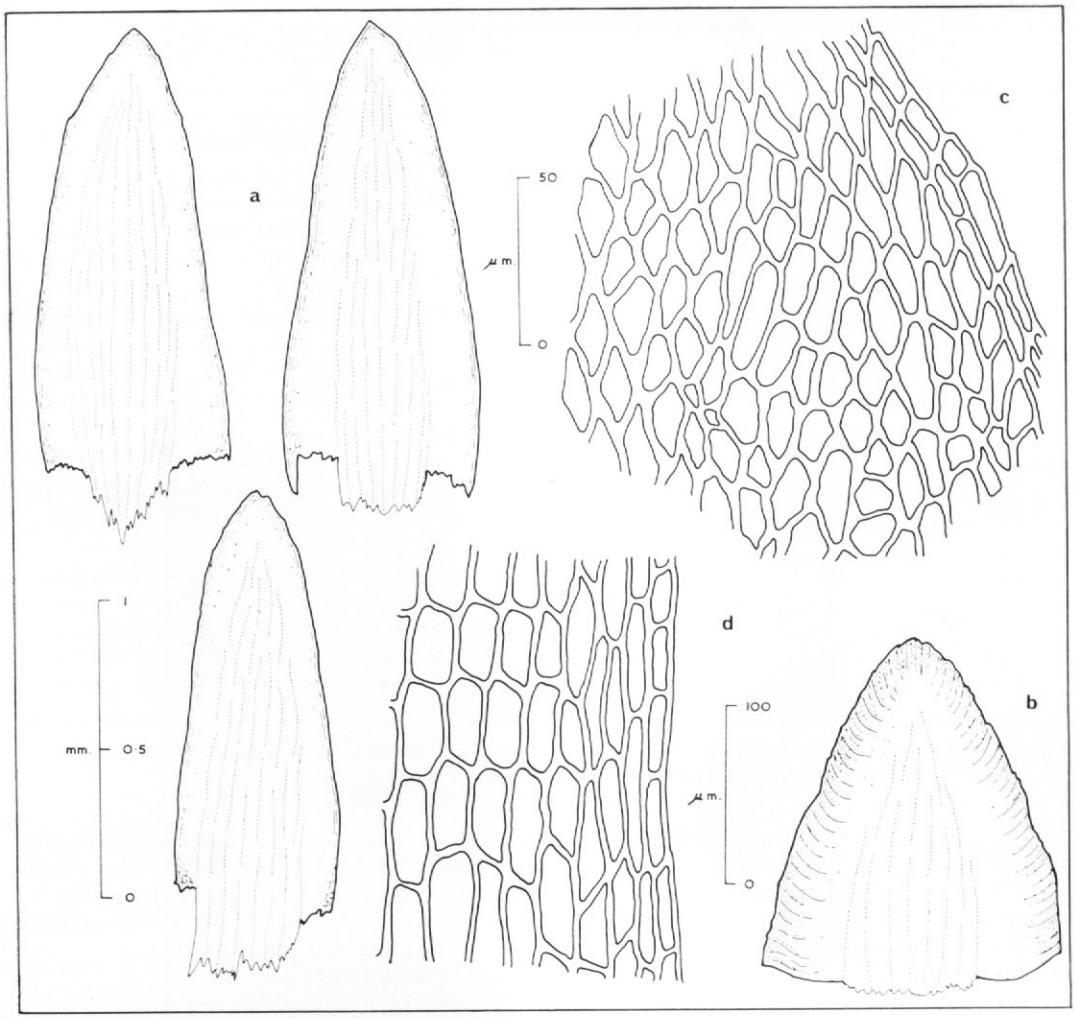

Fig. 11. *Conostomum magellanicum.*
a. Leaves; b. Apex; c. Upper cells; d. Lower cells.
Scales: left-hand for leaves; median for cells; right-hand for apex.

variably denticulate. Cardot (1908) suggested that *C. perangulatum* was dioecious because he could not find male inflorescences on fertile stems. The author was also unable to confirm a monoecious condition for either of the type specimens.

Conostomum pentastichum (Brid.) Lindb.

Syn. Conostomum australe Sw.
Conostomum rhyncostegium C. Muell.

Stems forming extensive turves or large cushions (1·5–)3–5(–9·0) cm. high, tightly compacted by abundant rhizoids, yellow-green above, brown below, branching fastigiate, sparse. Leaves (1·2–)1·6–2·1(–3·1)×0·3–0·5(–0·6) mm., imbricate wet or dry, 5-ranked, lanceolate or oblong-lanceolate, acuminate. Margin plane or narrowly revolute, denticulate at and a little

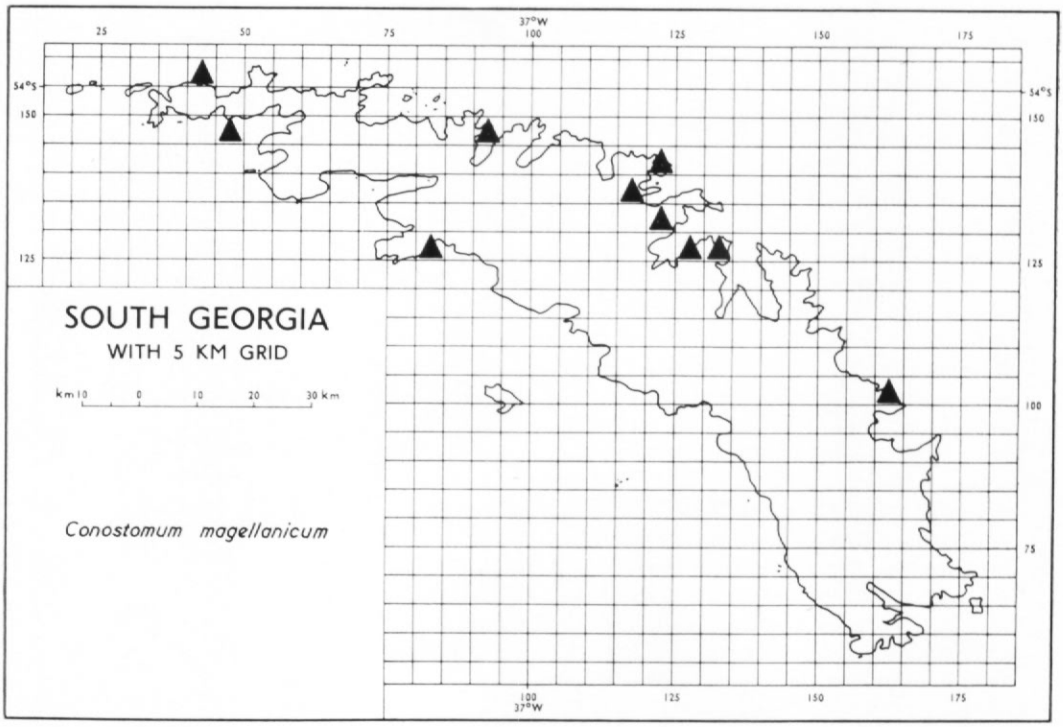

Fig. 12. The known distribution on South Georgia, by 5 km. squares, of *Conostomum magellanicum* based on the specimens and field records given in the Appendix.

below apex. Nerve narrow < 1/3 width of leaf base, well-defined, excurrent in hair point (0·3–)0·4–0·8(–1·1) mm. long. Cells above, (17–)20–41(–62) × 5–15(–18) μm., mostly irregularly rhomboid, rounded, variably papillose, becoming elongate below, narrow, rectangular or rhomboidal. Monoecious, inflorescences terminal. Perichaetial bracts longer than leaves, nerve longly excurrent. Seta 0·9–1·5(–1·7) cm. straight, yellow-red, smooth. Calyptra cucullate. Capsule gibbous, inclined, sulcate when dry. Operculum rostrate. (Fig. 13.)

Habitat and distribution (Fig. 14)

A common species of many habitats including *Festuca* grassland, exposed ledges and rock crevices. Altitude 0–120 m.

Notes

This species, which regularly fruits on South Georgia, may easily be recognized by its 5-ranked leaf arrangement together with the lanceolate to oblong-lanceolate leaf shape ending in a conspicuous hair point of variable length.

Taxonomy

First reported from South Georgia as *Conostomum rhyncostegium* C. Muell., this species was described by Müller (1890) for material collected during the German International Polar-Year Expedition of 1882–83 (Lectotype Will 9, M, Fundort: Quelle auf dem Hochplateau, in dicht verfilzten Polstern, findet sich ausserdem nicht selten an Bachufern (Kl. Wasserfall, Gletscherthal), Süd-Georgien, Januar 1883). Cardot (1908) subsequently reduced it to synonymy with *C. australe* Sw., a name which is made superfluous by the existence of *Bartramia*

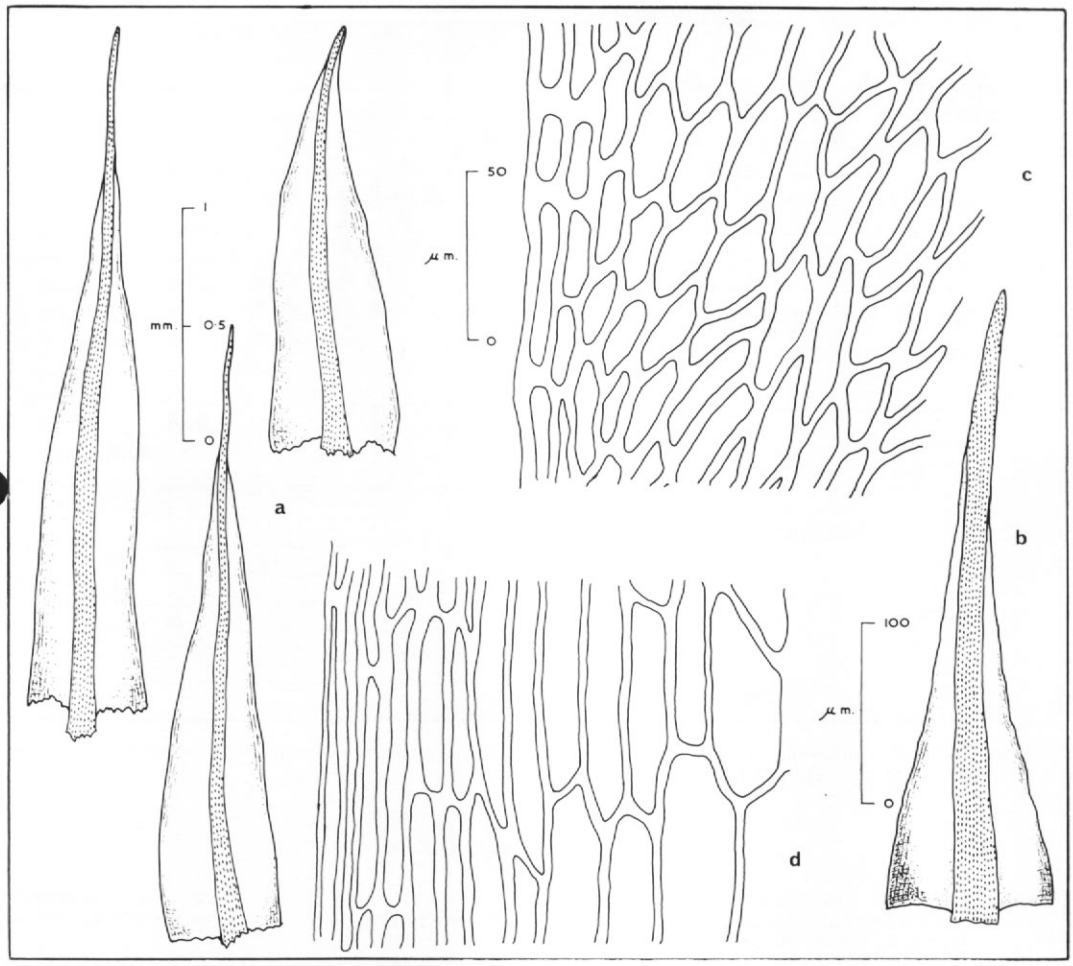

Fig. 13. *Conostomum pentastichum*.
a. Leaves; b. Apex; c. Upper cells; d. Lower cells.
Scales: left-hand for leaves; median for cells; right-hand for apex.

pentasticha Brid. (Bridel, 1803), a species transferred to *Conostomum* by Lindberg (1863). The type specimen of *B. pentasticha* has not been examined but that of C. *rhyncostegium* has been.

ACKNOWLEDGEMENTS

I am grateful to the Directors and Keepers of the following Institutions and Herbaria for the loan of specimens: British Museum (Nat. Hist.); Royal Botanic Gardens, Kew; Botanische Staatssammlung, München; Museum National d'Histoire Naturelle, Paris; Palaeobotanical Department, Naturhistoriska Riksmuseum, Stockholm; and the Institute of Systematic Botany, University of Uppsala. I should also like to thank Mrs. D. M. Greene for her assistance with the use of the data bank, Miss M. Gardiner for the drawings and Dr. S. W. Greene for his help during the investigation and in the preparation of the manuscript. I am also grateful to Professor J. G. Hawkes, Mason Professor of Botany, University of Birmingham, for facilities provided in the Department of Botany.

MS. received 28 May 1971

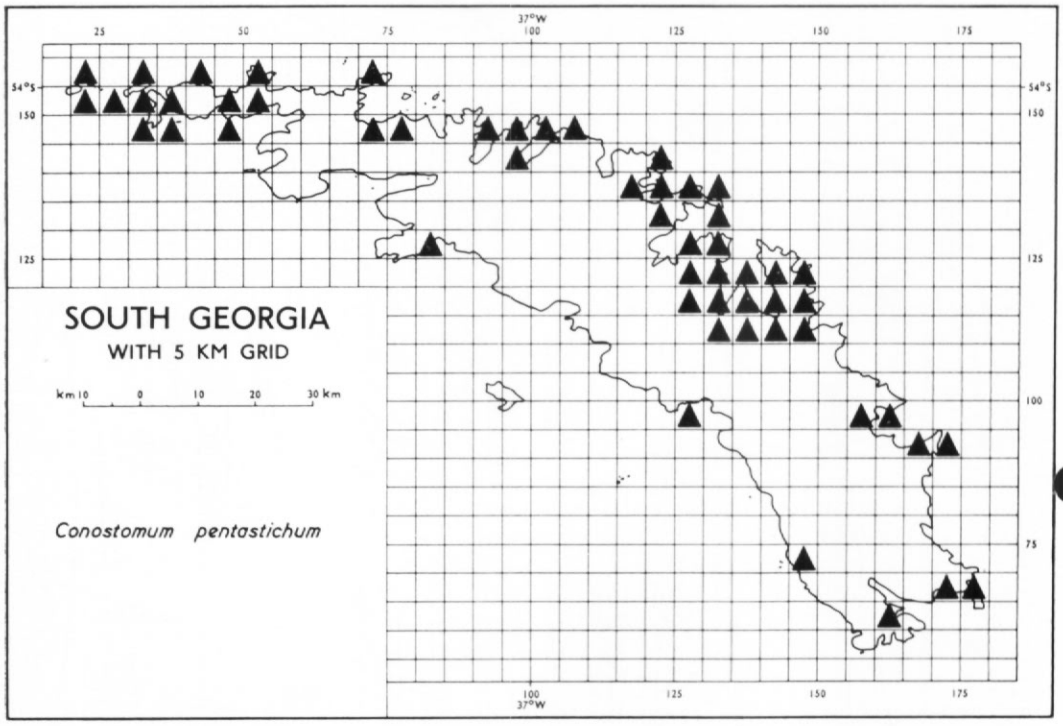

Fig. 14. The known distribution on South Georgia, by 5 km. squares, of *Conostomum pentastichum* based on the specimens and field records given in the Appendix.

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APPENDIX

DETAILS OF THE SPECIMENS AND FIELD RECORDS FROM WHICH THE DISTRIBUTION FIGURES WERE COMPILED

The references to herbaria cited after each specimen follow those recommended by Lanjouw and Stafleu (1964) except that AAS has been used for specimens in the British Antarctic Survey herbarium, at present housed in the Department of Botany, University of Birmingham, and INACH has been used for the herbarium of the Instituto Antártico Chileno, Triana 849, Santiago de Chile. The six figures before the specimens or field records refer to the 5 km. squares of the distribution maps, eastings being cited before northings.

Field records have only been cited for those squares from which no permanent specimens exist, their numbers indicating their file order in the data bank associated with the Survey's herbarium. Field records were provided by the following people: T. V. Callaghan, 1967–68; C. M. Clapperton, 1967–68; G. C. S. Clarke, 1967–68; N. J. Collins, 1969–70; J. A. Edwards, 1969–70; D. M. Greene, 1967–68; S. W. Greene, 1967–68; R. E. Longton, 1963–64; R. I. L. Smith, 1969–70; D. W. H. Walton 1969–70; E. P. Wright 1969–70.

A print-out from the data bank of the collecting details for the specimens cited in the Appendix is available on request from the Botanical Section of the British Antarctic Survey.

Chorisodontium aciphyllum (Hook. f. et Wils.) Broth.

020 150 Field record 2224. 020 155 Field record 2225

025 150 Field record 2226. 030 150 Greene 212 (BM, CHR), Greene 245 (AAS), Greene 254b (AAS), Greene 269 (BM), Greene 322 (AAS, INACH), Greene 336 (BM, LE), Greene 344 (AAS, MEL, NY, PC, S-PA), Greene 1165 (BM, O, PRE, TNS), J. Smith M153 (AAS, PC), J. Smith M154 (BM), J. Smith M161 (AAS, INACH, LE), J. Smith M162 (BM). 030 155 Field record 2228. 035 145 Field record 2227. 035 150 Greene 469 (BM, O, PRE, TNS), Greene 483b (AAS), Greene 508 (AAS, O), Greene 512 (BM, TNS), Greene 1089 (AAS, BA), Greene 1112 (BM, INACH, MEL). 040 145 Field record 2232. 040 155 Field record 2230. 045 150 Field record 2229

050 150 Field record 1739. 050 155 Field record 2231. 055 140 Greene 1134 (AAS, PC, S-PA). 055 150 Clarke and Greene CG36 (AAS, S-PA). 055 155 Field record 1737. 065 150 Field record 1754. 070 145 Bonner 181 (AAS), Bonner 186 (AAS, BA), Greene 1222 (AAS, CHR, LE, NY, PC), Greene 1253 (BA, BM, INACH, LE, PRE). 070 150 Field record 1756. 070 155 Greene 624 (AAS, BA, CHR)

075 145 Field record 2233. 075 150 Field record 1758. 080 125 Greene 2655 (AAS), Greene 2732 (BA, BM, O, TNS), J. Smith M97 (AAS). 080 145 Field record 1741. 080 150 Field record 2235. 090 145 Greene 1701 (BM, LE, NY, PRE). 095 145 Field record 2234

100 145 Field record 2236. 105 145 Field record 2237. 115 135 Greene 1388 (AAS, CHR, MEL, S-PA), Longton 62 (AAS, BA), Longton 106 (AAS, CHR), Longton 129 (BM). 115 140 Field record 1760. 120 130 Greene 2935 (AAS, NY, PRE, S-PA), Longton 178 (AAS), Longton 179 (BM). 120 135 Greene 3369 (BM, O, PC, TNS), Longton 85 (BM, O), Sladen JB19/2 (BM), Sladen JB19/22 (BM). 120 140 Sladen JB17/2 (BM)

125 095 Greene 2560 (AAS, O, S-PA). 125 115 Field record 2238. 125 120 Field record 1724. 125 125 Greene 1575 (BM, NY, O, TNS), Greene 1602 (AAS, BA, INACH), Greene 2929 (BM). 125 135 Clarke and Greene CG135 (AAS). 130 110 Field record 1722. 130 115 J. Smith M5 (AAS, INACH), J. Smith M7 (BM, MEL). 130 120 Bonner 254 (BM), Bonner 259 (BM), Bonner 279 (BM), Bonner 282 (BM, NY), Greene 3521 (AAS, LE), Greene 3522 (AAS), Longton 456 (AAS, TNS), Longton 796 (BM), Sladen JB18/4 (BM), J. Smith M1d (BM, CHR), J. Smith M40 (AAS, NY, PC, PRE), J. Smith M46a (AAS), J. Smith M58 (AAS), J. Smith M64 (AAS, PRE), J. Smith M66 (BM), J. Smith M140 (AAS, O, S-PA), J. Smith M141 (BM, TNS), J. Smith M142a (AAS), J. Smith M143b (BM), J. Smith M148 (AAS). 130 125 Bonner 235 (BM), Bonner 238 (BM), Bonner 263 (BM, PC, S-PA), Bonner 274 (BM), Clarke and Greene CG176 (BM), Greene 108 (AAS, BA), Greene 2914 (AAS, MEL), J. Smith M49 (AAS, BA, TNS), J. Smith M51 (BM, CHR, NY). 130 135 Field record 1742. 135 110 Field record 1761. 135 115 Field record 1727. 135 120 Bonner 240 (BM). 140 110 Field record 1735. 140 115 Field record 2220. 140 120 Greene 538 (AAS, NY, PC, PRE, S-PA), Greene 580 (BM, INACH, LE, MEL), Greene 927 (AAS, LE, MEL, NY, PC), Greene 1052 (BM, O, PRE, S-PA, TNS). 140 125 Field record 2221. 145 070 Bonner 201 (AAS), Greene 2805 (AAS, INACH, LE). 145 110 Field record 2222. 145 115 Greene 811 (BA, BM, CHR, INACH). 145 120 Field record 2223

150 060 Bonner 216 (AAS), Bonner 222 (AAS). 155 095 Greene 2141 (AAS, TNS). 160 060 Greene 2822 (BM, CHR). 160 090 Field record 1744. 160 095 Greene 2281 (BM, CHR, MEL, PC), Will 47 (M, as *Dicranum tenui-cuspidatum* C. Muell.). 165 085 Cameron and Kennett 2 (AAS),

Cameron and Kennet 3 (AAS, BM). 165 090 Field record 1747. 170 065 Field record 1750. 170 090 Field record 1749

175 065 Field record 1751

Inadequately localized

Damp hills, on scree, Bird Island, 5.xii.1957, Bonner 230 (AAS, CHR); Damp hills, on scree, Bird Island, 5.xii.1957, Bonner 233 (AAS); King Haakon Bay, Leg. A.B. Dickinson, 15.x.1964, Longton 809 (AAS)

Dicranoloma hariotii (C. Muell.) Par.

020 150 Field record 2240

025 150 Field record 2239. 030 150 Greene 244 (AAS, MEL, O, PC, S-PA), Greene 310 (BA, BM, INACH, NY, PRE), Greene 1168 (AAS, BA, LE, PC, TNS), Greene 1995 (AAS, INACH, LE, NY, PRE, S-PA). 030 155 Greene 404 (AAS, CHR, LE, S-PA). 035 145 Field record 2241. 035 150 Greene 470 (BM, NY, O, TNS). 040 145 Field record 2246. 040 150 Field record 2242. 040 155 Field record 2243. 045 150 Field record 2244

050 150 Field record 1740. 050 155 Field record 2245. 055 140 Greene 1146 (BM, CHR, MEL, O, PRE). 055 150 Clarke and Greene CG42 (AAS), Clarke and Greene CG48 (BM, CHR, INACH). 055 155 Greene 652 (BM, LE, O, PRE). 065 150 Field record 1755. 070 145 Greene 1221 (BA, BM, INACH, LE, NY, O, PC, S-PA, TNS). 070 155 Greene 614 (AAS, CHR, MEL, PC)

080 125 Greene 2744 (AAS), J. Smith M98 (AAS), J. Smith M103 (AAS), J. Smith M118 (BM). 090 145 Greene 1705 (AAS, BA, INACH, MEL, PRE, TNS)

105 145 Field record 2247. 115 135 Clarke and Greene CG125 (AAS), Greene 1387 (AAS, MEL, PRE, S-PA). Greene 3159 (AAS, CHR, NY, O, PRE, TNS), Greene 3303 (BM, CHR, LE, PC, S-PA), Longton 50 (AAS, BA, CHR, INACH, LE, MEL, NY, O, PC, TNS). 115 140 Clarke and Greene CG166 (BM, MEL, PC). 120 130 Longton 148 (BA, BM, O). 120 135 Clarke and Greene CG59 (AAS, LE), Greene 3410 (AAS, BA, INACH, MEL, PRE), Sladen JB19/10 (BM)

125 095 Greene 2559 (BM). 125 120 Field record 1726. 125 125 Greene 1586 (BM, CHR, INACH, NY, PC), Greene 2925 (BM, INACH, LE). 125 135 Clarke and Greene CG149 (AAS). 130 120 Greene 158 (BA, BM, PRE, TNS), Greene 3512 (BM, NY, PC). 130 125 Bonner 236 (BM), Bonner 276 (BM), Clarke and Greene CG174 (AAS, NY), Greene 1785 (BM, CHR, LE, MEL, NY, O, PC, S-PA), Greene 3575 (AAS, CHR, INACH, LE, MEL, NY, PC, PRE, S-PA, TNS), J. Smith M68c (BM). 135 115 Field record 1730. 140 120 Greene 1051 (AAS, BA, INACH, S-PA, TNS). 145 070 Greene 2762 (BM, PRE). 145 115 Longton 309 (AAS, BA, MEL, S-PA, TNS).

155 095 Greene 2201 (BA, BM, CHR, MEL, NY, O, TNS). 160 060 Greene 2483 (AAS, INACH, LE, PC), Greene 2829 (AAS, BA, CHR, MEL, O, S-PA, TNS). 160 090 Field record 1746. 160 095 Will 42 (M, as *Dicranum austro-georgicum* C. Muell.)

175 065 Field record 1752

Inadequately localized

King Haakon Bay, leg. A.B. Dickinson, 15.x.1964, Longton 811a (AAS)

Dicranoloma subimponens (Card.) Broth.

030 150 Greene 223 (AAS, LE), Greene 384 (BA, BM, NY, PRE, TNS), J. Smith M165 (AAS, CHR). 030 155 Greene 411 (AAS, MEL, O, PC, S-PA). 035 145 Field record 2250. 035 150 Greene 459 (AAS, BA, INACH, MEL, O, S-PA, TNS). 040 150 Greene 728 (AAS). 040 155 Field record 2251

055 140 Greene 1145 (AAS, CHR, INACH, LE, NY, PC, PRE, S-PA, TNS). 055 155 Greene 644 (BM, CHR, LE, NY, PRE), Greene 653 (BA, BM, O). 070 145 Greene 1345 (BM, CHR, LE, NY, O, PRE, TNS)

080 125 Greene 2683 (AAS, INACH), Greene 2731 (BM, LE, MEL, NY, O, PC, PRE, S-PA, TNS), J. Smith M113 (BA, INACH), J. Smith M128 (AAS). 080 145 Clarke and Greene CG7 (AAS, BA, INACH, MEL, PC)

115 135 Clarke and Greene CG124 (BM), Greene 1389 (AAS), Greene 3238 (AAS, INACH, MEL, O, PC, S-PA), Longton 63 (AAS, LE, NY, PRE, TNS), Longton 107 (BM, MEL, O, PC, S-PA), Longton 110 (AAS). 120 130 Greene 3005 (BA, BM, INACH, MEL, O, PC, PRE, S-PA, TNS), Longton 118 (BA, BM, INACH, NY, S-PA), Longton 177 (AAS), Longton 180 (BM, CHR, MEL, O, PRE), Longton 214 (AAS). 120 135 Clarke and Greene CG109 (BM, CHR, LE, NY, O, PC, PRE, S-PA, TNS), Greene 3413 (BA, BM, CHR, LE, NY, PRE, TNS). 120 140 Bonner 243 (BM)

125 125 Greene 1542 (BA, BM, CHR, INACH, O, PC, S-PA, TNS), Greene 1606 (AAS, LE, MEL, NY, S-PA). 125 135 Clarke and Greene CG121 (AAS, MEL). 130 120 Clarke and Greene CG201 BM, INACH), Greene 1515 (AAS, BA, INACH, MEL, PC, PRE, S-PA) Greene 1766 (BM, CHR, INACH, NY, PRE). 130 125 Clarke and Greene CG172 (AAS, CHR). 135 115 Field record 1728. 135 120 Field record 1733. 140 110 Field record 1736. 140 115 Longton 280 (AAS), Longton 281 (AAS), Longton 282 (BM). 145 070 Greene 2766 (AAS, CHR, LE, NY), J. Smith M110 (AAS). 145 110 Longton 373 (AAS, LE, PC, TNS). 145 115 Longton 326 (AAS, BM)

155 095 Greene 2202 (BM, O, TNS), Greene 2298 (AAS, BA, LE, MEL, PC, S-PA). 160 060 Greene 2482 (BA, BM, CHR). 160 090 Field record 1745

Dicranum oleodictyon Dix.

070 145 Bonner 175 (AAS, O)
115 135 Greene 3322 (AAS, S-PA)
125 095 Greene 2556 (BM, PRE). 125 120 Greene 1530 (AAS). 125 125 Greene 1573 (BM, LE, MEL). 130 120 Greene 173 (BM), Greene 1836 (BM, INACH), Longton 819 (AAS, CHR, NY). 130 125 Clarke and Greene CG316 (AAS, BA), Greene 1827 (BA, BM, CHR, LE, NY, PRE, TNS). 140 110 Longton 255 (AAS, INACH, MEL, O, PC). 140 120 Longton 417 (BM, TNS). 145 110 Greene 879 (AAS, BM, PC, S-PA)
160 095 Greene 2279 (AAS)

Platyneurum laticostatum (Card.) Broth.

070 145 Greene 1214 (AAS, BA, CHR, INACH, LE, MEL, NY). 070 150 Field record 1757
100 145 Field record 2248. 115 130 Greene 3012 (AAS, BA, INACH, LE, NY, O, PC, PRE, S-PA), Greene 3101 (BM, LE, PC, TNS). 115 135 Greene 1472 (BM, MEL, NY), Greene 3227 (AAS, BA, INACH, MEL, O, PRE, S-PA), Longton 65 (AAS, MEL, NY, PC). 115 140 Clarke and Greene CG157 (BM, O, S-PA). 120 135 Longton 84 (BM, PRE, S-PA), Sladen JB19/28 (BM). 120 140 Greene 3358 (BA, BM, CHR, INACH, NY, TNS), Longton 89 (AAS, MEL, O, PC, TNS)
125 115 Field record 2249. 125 120 Field record 1725. 125 125 Greene 1581 (BA, BM, CHR, INACH, LE, O, PC, PRE, S-PA, TNS). 125 130 Longton 162b (AAS). 125 135 Clarke and Greene CG150 (AAS, CHR, LE, NY, PRE, TNS). 130 110 Field record 1723. 130 115 J. Smith M4 (AAS, O, S-PA, TNS), J. Smith M30b (BA, BM, CHR, INACH, LE). 130 120 Clarke and Greene CG196 (BA, BM, INACH, LE, MEL), Greene 192 (AAS, O, TNS), Greene 1520 (AAS, BA, CHR, INACH, LE, O, PC, PRE, S-PA, TNS), Greene 3513 (AAS, CHR, MEL), Greene 3582 (AAS, NY, PC), Sladen JB18/5 (BM), J. Smith M1c (BM, PRE), J. Smith M57 (AAS, BA), J. Smith M61 (BM, CHR). 130 125 Clarke and Greene CG175 (AAS, MEL, PC), Greene 109 (AAS, CHR, NY, PRE, S-PA), Greene 121 (BM, PC), Greene 1935 (AAS, CHR, LE, NY, PRE), Greene 1937 (BA, BM), Greene 3580 (BM, INACH, LE, MEL, NY, O, PC, PRE, S-PA, TNS). 135 110 Field record 1764. 135 115 Field record 1729. 135 120 Field record 1734. 140 120 Greene 1065 (BA, BM, INACH, MEL, NY, O, PC, PRE, S-PA, TNS)
160 060 Greene 2827 (BM, LE, MEL). 160 095 Greene 2295 (AAS, CHR, INACH, MEL, O, PC, S-PA, TNS)

Conostomum magellanicum Sull.

040 155 Field record 2185. 045 145 Field record 2181
080 125 Greene 2681 (BM). 090 145 Greene 1653 (AAS)
115 135 Greene 3230 (AAS, BM, CHR, INACH, LE, MEL, S-PA, TNS). 120 130 Greene 2994 (BM, PC). 120 140 Greene 3354 (BM)
125 125 Greene 1550a (AAS). 130 125 Clarke and Greene CG152 (AAS), Clarke and Greene CG189 (BM), Clarke and Greene CG190 (AAS), Greene 1800 (BM, NY)
160 100 Greene 2359 (AAS, BA, BM, CHR, INACH, LE, MEL, NY, PC, PRE, S-PA, TNS)

Conostomum pentastichum (Brid.) Lindb.

020 150 Field record 2184. 020 155 Field record 2190
025 150 Field record 2207. 030 145 Field record 2198. 030 150 Greene 208 (BA, BM, MEL, PC), Greene 237 (AAS, CHR, LE, NY, PRE), Greene 242 (AAS, BA, CHR, INACH, LE, MEL, NY, PC, PRE, S-PA, TNS), Greene 1997b (AAS). 030 155 Field record 2203. 035 145 Field record 2197. 035 150 Greene 457 (BM, INACH, S-PA, TNS), Greene 1085 (AAS, S-PA). 040 155 Field record 2182. 045 145 Field record 2196. 045 150 Field record 2187
050 150 Field record 2215. 050 155 Field record 2216. 070 145 Bonner 191 (AAS, CHR, LE, NY, PRE, S-PA), Greene 1313 (AAS, BA, BM, CHR, INACH, LE, MEL, NY, PC, PRE, S-PA, TNS). 070 155 Greene 627 (BA, BM, INACH, MEL, PC, TNS)
075 145 Field record 2210. 080 125 Greene 2740 (AAS, BA, CHR, NY, PRE, TNS). 090 145 Greene 1704 (BM, LE, PC, S-PA, TNS). 095 140 Field record 2199. 095 145 Field record 2192
100 145 Field record 2193. 105 145 Field record 2211. 115 135 Greene 1391 (BA, BM, INACH, MEL, PC, TNS), Greene 3302 (AAS, BA, INACH, NY). 120 130 Greene 2993 (AAS, CHR, LE, NY, PRE, S-PA). 120 135 Greene 3397 (AAS, CHR, LE, PC, PRE), Sladen JB19/23 (BM), Sladen JB19/26 (BM). 120 140 Field record 1070
125 095 Greene 2561 (AAS, BA, INACH, LE, NY). 125 115 Field record 2209. 125 120 Field record 1075. 125 125 Greene 1571 (BM, CHR, PC). 125 135 Field record 1087. 130 110 Field record 1093. 130 115 J. Smith M14 (AAS, INACH, MEL, TNS), J. Smith M31 (AAS, MEL, S-PA). 130 120 Bonner 281 (BM, CHR, MEL, PRE, S-PA), Greene 200 (AAS, BA, LE, PC), Greene 527 (AAS, BA, BM, CHR, INACH, LE, MEL, NY, PC, PRE, S-PA, TNS), Greene 2074 (BA, BM, CHR, INACH, LE, S-PA, TNS), Greene 3520 (AAS, MEL, NY, PC), Greene 3584 (BM, LE, NY, PRE), Sladen JB18/1 (BM, NY, TNS), J. Smith M1b (AAS, INACH, MEL, PC, PRE, TNS), J. Smith M39 (AAS, CHR, MEL, S-PA), J. Smith M44 (BM, S-PA), J. Smith M54 (AAS), J. Smith M55 (AAS, BA), J. Smith M138 (BM, CHR, LE, NY). 130 125 Bonner 237 (BM), Bonner 275 (BM), Greene 107 (AAS, BA, CHR, LE, MEL, NY, PC, PRE), Greene 1936 (BM, CHR, INACH,

S-PA, TNS), Greene 2915 (BA, BM, LE, MEL, PC), Holdgate 403 (AAS), Sladen JB26/3 (BM), J. Smith M53 (AAS, NY). 130 130 Field record 1377. 130 135 Field record 1381. 135 110 Field record 1386. 135 115 Field record 1397. 135 120 Field record 1407. 140 110 Clarke and Greene CG437 (AAS, BA, PC, S-PA). 140 115 Field record 2218. 140 120 Greene 550 (BM, CHR, MEL, NY), Greene 933 (BM, INACH, S-PA, TNS), Greene 1045 (AAS, CHR, MEL, PRE). 145 070 Greene 2806 (AAS, BA, PC, PRE). 145 110 Greene 882 (BM, CHR, LE, MEL, PRE). 145 115 Greene 846 (AAS, INACH, NY, S-PA, TNS). 145 120 Field record 2219

155 095 Greene 2138 (AAS, BA, INACH, TNS), Greene 2166 (AAS), Greene 2408 (BM, CHR, LE, NY, PRE, S-PA). 160 060 Greene 2850 (AAS, INACH, S-PA, TNS). 160 095 Will 9 (HBG, 3 specimens; M, lectotype). 165 090 Field record 1429. 170 065 Field record 1435. 170 090 Field record 1439

175 065 Field record 1441

Inadequately localized

Rinnsal am Haus D. Süd-Georgien, 31.x.1882, Will 9 (HBG); Whalerbay, Süd-Georgien, 30.xi.1882, Will 9 (HBG); Whalerbay, Süd-Georgien, 30.xi.1882, Will s.n. (M); Alt. 30 ft. East side of Moraine Fjord, Cumberland Bay, 28.i.1957, Bonner 257 (BM); Damp hills, on scree, alt. 100 ft. Bird Island, 5.xii.1957, Bonner 229 (AAS); King Haakon Bay, leg. A.B. Dickinson, 15.x.1964, Longton 807 (AAS, BM, NY, PC, S-PA)