BRITISH ANTARCTIC SURVEY
SCIENTIFIC REPORTS
No. 64

ANTARCTIC MOSS FLORA

I. THE GENERA *Andreaea, Pohlia, Polytrichum, Psilopilum* AND *Sarconeurum*

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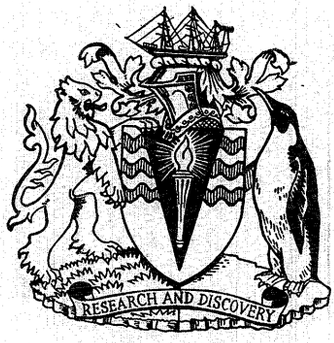
British Antarctic Survey



LONDON: PUBLISHED BY THE BRITISH ANTARCTIC SURVEY: 1970
NATURAL ENVIRONMENT RESEARCH COUNCIL

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(Manuscript received November, 1967)

PREFACE

THE following three botanists assisted the senior author in the preparation of this report, for the periods specified, and are therefore considered associate authors:

Mrs. D. M. Greene, M.Sc.	1960–67
Mr. P. D. Brown, B.A.	1961–64
Miss J. M. Pacey, B.Sc.	1966–67

Most of the work was carried out at Birmingham, but the American Collections were examined at the New York Botanical Garden, while two of the authors (S. W. Greene and D. M. Greene) held Research Fellowships at that Institute provided by the National Science Foundation through its Office of Antarctic Programs. The text figures have been prepared by J. M. Pacey.

ABSTRACT

THIS report, the first of a series dealing with the mosses of the Antarctic botanical zone, i.e. all land south of latitude 60°S. together with the South Sandwich Islands and Bouvetøya, presents an account of all the species of five genera known from within this area. These genera are *Andreaea* represented by three species, one with two varieties, *Pohlia* represented by two species, *Polytrichum* by four species, *Psilopilum* by one species and *Sarconeurum* by two species.

Each taxon is described and illustrated, and maps and tables are provided to show the details of their distribution as known at present. Information on habitats and reproductive behaviour is also included. Keys are provided to species within the genera and notes under each description draw attention to those characters which are most useful for identification. A section is also provided giving information on the location of type specimens, the details of synonyms and other aspects of nomenclature; it also includes details of the earliest record of each taxon within the Antarctic zone.

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CONTENTS

1. INTRODUCTION

THE Antarctic botanical zone, which has been defined (Greene, 1964*a*) as all land south of latitude 60°S. together with South Sandwich Islands and Bouvetøya (Fig. 1), is unique in being the only major area in the world with a flora that is almost wholly cryptogamic. It consists of a large central land mass surrounded by off-shore islands and neighbouring archipelagos, as well as isolated island groups, some of which (e.g. the South Sandwich Islands) are separated from the nearest major land mass by some thousands of miles of ocean. Most of the land is permanently ice-covered and much of it has not been explored botanically, yet the results coming from a study of recent collections suggest that parts, at least, have an unexpectedly rich bryophyte flora. Most exploration to date has been in the vicinity of the Antarctic Peninsula and the islands of the Scotia Ridge, but scattered sites around the periphery of the continent (e.g. the shores of McMurdo Sound in southern Victoria Land, the vicinity of Wilkes Station on the Budd Coast, the Bunger

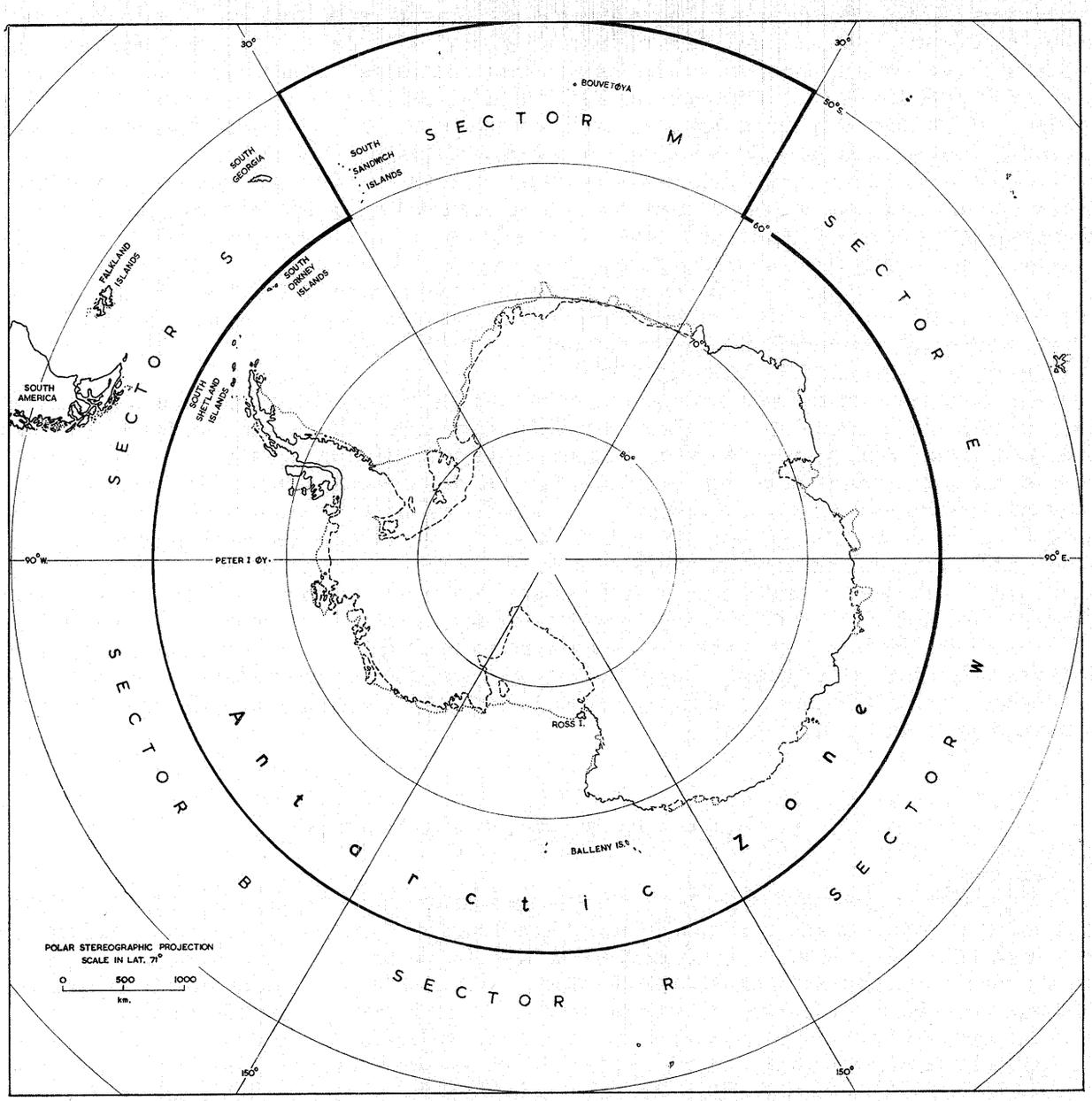

FIGURE 1
The Antarctic botanical zone and its sectors.

Hills and the Haswell Islands on the Queen Mary Coast, and the region of the Ongul Islands, Dronning Maud Land) have also been looked at in some detail. A map showing most of the localities from which plant collections have been made will be found in Greene (1967*a*). The picture emerging is of a very limited continental bryophyte flora consisting of one or two dozen species with a very scattered occurrence except in those rare areas where an adequate supply of melt water is available. In contrast, the flora of the Antarctic Peninsula and the islands of the Scotia Ridge is very much richer bryologically, but here it is noticeable that increasing latitude does not necessarily mean a decrease in the number of species or increasing depauperation of the plants.

Although the earliest known bryophyte collection from within the Antarctic botanical zone was made as long ago as the 1829–30 season from the South Shetland Islands (Eights, 1833; Steere, 1965), it was not until the beginning of the present century, mainly through the work of the noted French bryologist Jules Cardot, that a study of the composition and distribution of this flora was begun. Cardot's most comprehensive work, *La Flore Bryologique des Terres Magellaniques, de la Géorgie du Sud et de l'Antarctide* (Cardot, 1908), was essentially an annotated check list, and it has been, so far, the most important reference work available. Steere (1961) has compiled a check list which has brought together most of the records published since 1908, while later publications reporting additional discoveries by American (Steere, 1965), British (Greene , 1964*b*; Longton, 1966), Japanese (Horikawa and Ando, 1961, 1967) and Russian expeditions (Savicz-Ljubitskaja and Smirnova, 1964) have been summarized by Greene (1968*a*).

Until very recently, apart from a taxonomic literature, little else had been published on the bryophytes of the Antarctic regions, but this deficiency is now being remedied by results which are coming from the new ecological approach. Current work includes description of vegetation (Longton, 1967) and statistical analysis of community structure (Gimingham, 1967), as well as investigations into the control exerted by the water-holding capacity of individuals on their distribution (Gimingham, 1967). Studies are also in progress on the physiology of reproduction of Antarctic mosses (Longton, 1966; Longton and Greene, 1967), and information is beginning to accumulate on the micro-environment in which the plants are growing (Holdgate, 1964; Matsuda, 1964; Rudolph, 1966).

The results which form the basis of the present report, the first of a series, have been compiled primarily from a study of the rich plant collections brought back by recent British Antarctic Survey (formerly Falkland Islands Dependencies Survey) expeditions. However, most of the important material collected by past and present expeditions from other countries has also been available for examination, and is referred to in this work. Table I gives the herbaria holding the collections which have been examined. Initially, it was the intention to work through this material systematically and to present the results in monographic form, but the rapidly changing pattern of Antarctic botanical studies (Greene, 1967*b*) is creating an increasingly urgent demand for the means to identify those plants which are ecologically the most important, and so it has become necessary to adopt a more flexible approach. Moreover, in view of the rate at which new taxa are being reported from within the botanical zone without any corresponding increase in bryological knowledge of neighbouring areas, especially southern South America, it may reasonably be argued that a monographic flora would be premature and that the present synoptic treatment is more appropriate to current needs.

II. ARRANGEMENT OF FLORA

1. *Descriptions*

Descriptions in a synoptic flora differ from those in a monographic treatment mainly in that the latter attempts to provide an even coverage of all salient characters for all the taxa, whereas in the former only certain characters of each taxon are considered. Although the descriptions in the present series are based on the synoptic pattern and concentrate on characters which constitute important diagnostic features, it seemed desirable to make some reference to growth form, leaf stance, leaf arrangement and leaf shape for each species, whether or not these features are of diagnostic value. A glossary of technical terms will be included in a later part. Measurements of stem and leaf dimensions are provided for most taxa in the form of normal size ranges, with the extremes cited in brackets. In all cases length is given before breadth and in the case of leaves, the length of the point is included, unless the contrary is stated.

The provision of accurate measurements based on a uniform sample from each specimen is very time

TABLE I

ABBREVIATIONS USED FOR NAMES OF EXPEDITIONS AND HERBARIA

Abbreviation	*Expedition*
Belg. Ant. Exp.	Belgian Antarctic Expedition, 1897–99
BGLE	British Graham Land Expedition, 1934–37
Brit. Nat. Ant. Exp.	British National Antarctic Expedition, 1901–04
Disc. Invest. or Disc. Exp.	Discovery Investigations (voyages of R.R.S. *Discovery II*), 1931–32, 1933–35, 1935–37
Dr. Mawson's Exp.	Australasian Antarctic Expedition, 1911–14
Exp. Ant. Fr.	French Antarctic Expedition, 1908–10
Exp. Char.	French Antarctic Expedition, 1903–05
FIDS	Falkland Islands Dependencies Survey,* from 1946–51
FIDS Misc.	Falkland Islands Dependencies Survey,* from 1958–61
NBS Ant. Exp.	Norwegian British Swedish Antarctic Expedition, 1949–52
Op. Tab. or Tab.	"Operation Tabarin",† 1944–45
USASE	United States Antarctic Service Expedition, 1940–41

Abbreviation	*Herbarium*
Allis.‡	Private herbarium of K. A. Allison, Dunedin, New Zealand
BA	Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", Instituto Nacional de Investigaciones de las Ciencias Naturales, Buenos Aires, Argentina
BIRM-ANT	British Antarctic Survey Herbarium, Department of Botany, The University, Birmingham
BM	British Museum (Natural History), London
BR	Jardin Botanique de l'Etat, Brussels, Belgium
CHR	Botany Division, Department of Scientific and Industrial Research, Christchurch, New Zealand
COLO	University of Colorado Herbarium, Museum, Boulder, Colorado, U.S.A.
FH	Farlow Library and Herbarium of Cryptogamic Botany, Harvard University, Cambridge, Massachusetts, U.S.A.
IAA	Instituto Antártico Argentino, Buenos Aires, Argentina
LE	Herbarium of the Komarov Botanical Institute, Academy of Sciences of the U.S.S.R., Leningrad
K	The Herbarium and Library, Royal Botanic Gardens, Kew, England
MEL	National Herbarium of Victoria, Royal Botanic Gardens, Melbourne, Australia
NY	The New York Botanical Garden, New York, U.S.A.
PC	Muséum National d'Historie Naturelle, Laboratoire de Cryptogamie, Paris, France
PRE	Botanical Research Institute, National Herbarium, Pretoria, South Africa
SGO	Museo Nacional de Historia Natural, Santiago, Chile
S-PA	Palaeobotanical Department, Swedish Museum of Natural History, Stockholm
TNS	The National Science Museum, Tokyo, Japan
US	U.S. National Museum (Department of Botany), Smithsonian Institution, Washington, D.C.
WELT	The Dominion Museum, Wellington, New Zealand

* Renamed "British Antarctic Survey" in 1962.
† Renamed "Falkland Islands Dependencies Survey" in 1946.
‡ Unofficial contraction of herbarium name.

consuming and so a less demanding method, which nevertheless is thought to give an adequate estimate of variation, was used during the preparation of the present work. This method involved the preparation of frequency histograms for the character being analysed based on five leaf and ten cell measurements per specimen, the specimens being selected at random from the total available. This rate of sampling for each specimen was continued until the outline of the histogram was established and further measurements ceased to affect its form; its accuracy was then tested by "spot" measurements from the remainder of the material. The number of specimens which have to be fully measured depends upon the variability of the character concerned, but it has been found that for leaves and cells width tends to be less variable than length and so requires fewer measurements. This point is well shown by the histograms for leaf length and breadth for *Andreaea gainii* Card. (Fig. 2). These results have been summarized in the description for this species as (0·6–) 0·8–1·2 (–1·3) × 0·2–0·6 mm. It must be admitted that the limits of the normal range are arbitrarily selected, but in practice they are rarely difficult to decide.

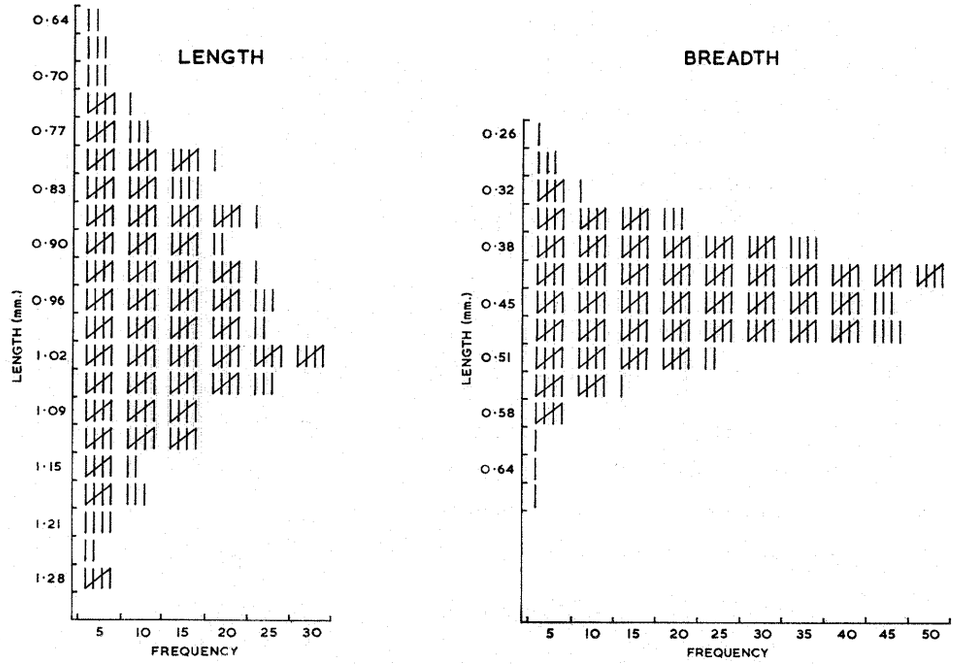

FIGURE 2
Histogram of leaf length and breadth measurements for *Andreaea gainii* Card.

Information available on reproductive behaviour is also given for each species as are data indicating the range of habitats from which a species has been collected.

Distribution data have been assembled first by sector (Fig. 1) and then by island group (e.g. South Orkney Islands) or coastal area (e.g. Danco Coast), the latter including all the off-shore islands. The limits of the coastal areas for the Antarctic Peninsula are indicated in Fig. 3. Because of the scale of the maps and the size of the symbols, some details are obscured which may be important for field work, so distribution tables, topographically arranged, are provided which give a complete list of all the specimens examined. It should be noted in these tables and elsewhere in this report, that it has been necessary to transliterate place-names on specimen labels into the officially accepted English equivalents (see p. 55). However, where unofficial place-names, or names without official English equivalents, have had to be retained, they are given in inverted commas.

It is considered that present distribution patterns indicate little more than the areas where collections have been made, since too little critical field work has been carried out to place much reliance on absences. However, some general patterns are beginning to emerge and these have been discussed elsewhere (Greene, 1967*a*). It should also be noted that the descriptions and other information in the present series are intended to apply to the species only as they occur within the Antarctic botanical zone. Thus the statement "fruit unknown" refers to the condition of the species within the zone and not to the species throughout its

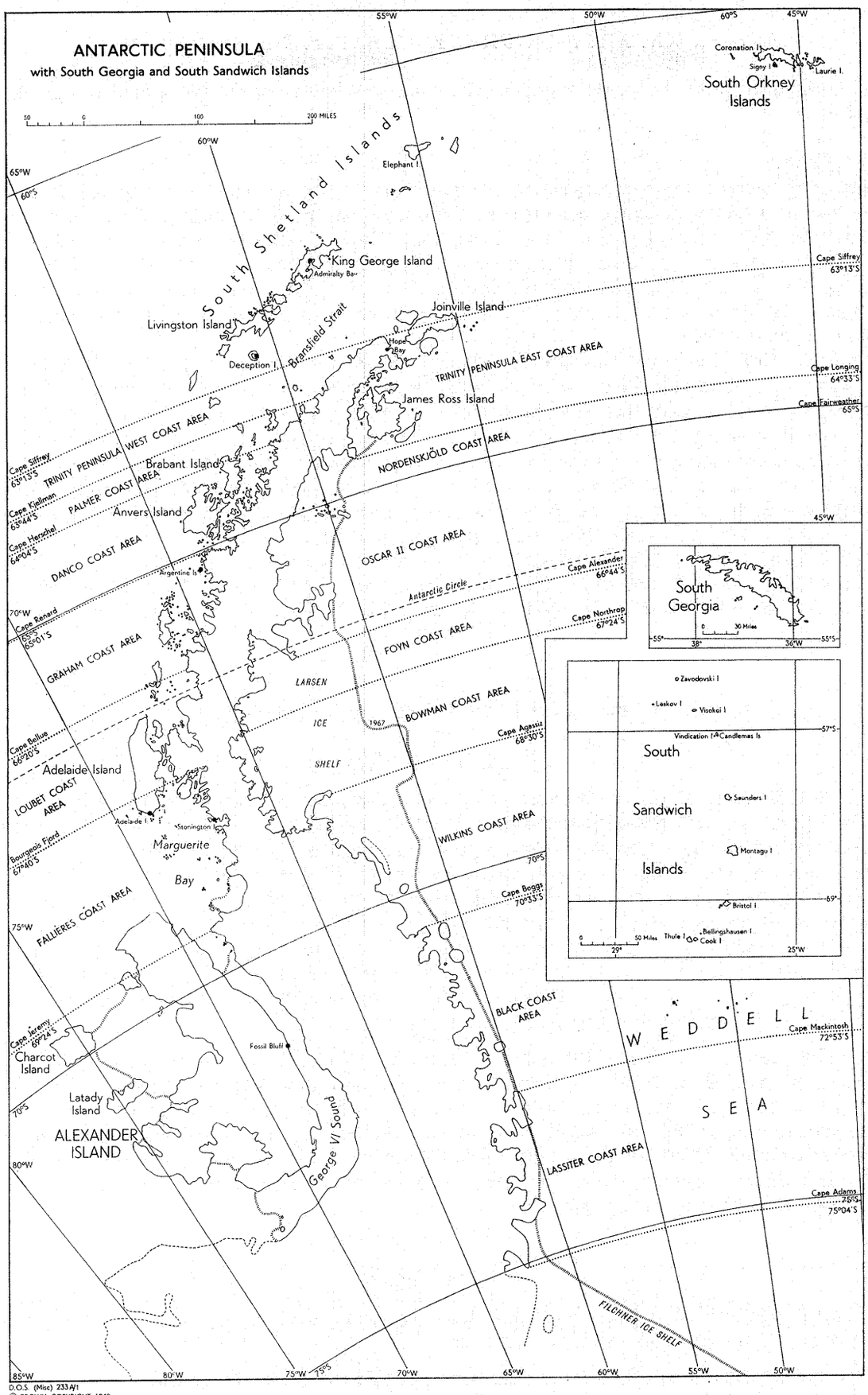

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FIGURE 3
The Antarctic Peninsula and its coasts.

entire geographical range. This treatment simplifies the descriptions considerably and is adequate for a synoptic flora.

2. *Nomenclature*

In view of the present very confused state of Antarctic bryology it is unlikely that any real nomenclatural stability can be attained for some time to come, consequently the immediate aim has been limited to finding names which, under the rules of the International Code of Botanical Nomenclature (Lanjouw and others, 1966), can be legitimately applied to each taxon known from within the zone. Moreover, it has to be remembered that as understanding of species from more northern zones increases, an improved evaluation of taxa from within the Antarctic botanical zone will inevitably lead to some name changes, alterations in status, etc.

The present flora is primarily intended to aid identification and to show the known distribution of species within the Antarctic botanical zone, but some discussion of synonyms, typification and other technical aspects of nomenclature have been included in a separate section following the descriptions. Additional information such as type descriptions of new species and notice of additions to the flora, will be found in a complementary series entitled "Studies in Antarctic Bryology" (Greene, 1968*a* and *b*).

The order in which taxa are being described does not follow any accepted systematic arrangement, consequently in each part descriptions of species, genera and families are presented in alphabetical order. Indeed, any other arrangement would be considered presumptive until such time as monographic revisions and cytological data are available as a basis from which to evaluate inter-relationships of taxa. To facilitate reference, a cumulative index will be found at the end of each of the later parts which will include the names of all taxa treated up to that point in the series. It is hoped to include a key to genera in the final part.

III. SYSTEMATIC ACCOUNT

1. *Andreaea* Hedw.

Mosses of low stature with a cushion or turf growth form, normally brown to black in colour, often tinged with purple or dark green. Stems slender, erect and normally branched, densely leafy throughout, the leaves small, when moist erecto-patent to patent, sometimes becoming squarrose, mostly ovate to ovate-lanceolate or pandurate. Nerve absent or indistinctly defined. Cells variably papillose on back, especially along the nerve line, smooth on ventral surface, the upper small, isodiametric to shortly rectangular, with irregularly, heavily thickened walls, the lower, in centre base, longly to shortly rectangular, having conspicuously and usually irregularly thickened longitudinal walls with little or no thickening on the horizontal walls. Perichaetia terminal, fusiform, with bracts enlarging in fruit; perigonia gemmiform, about equalling the leaves. Capsules ellipsoidal, lacking operculum and dehiscing by longitudinal slits into 4 valves, the latter, remaining joined above and below.

Notes. This genus, a member of the family Andreaeaceae, is represented in the area by three species, all of which are accepted as native. The species agree in being of low stature and slender growth, forming characteristic blackish, loosely adhering cushions or low turfs. By colour alone members of the genus may be readily recognized but specimens of *A. depressinervis* often bear a considerable superficial resemblance to species of *Grimmia*. However, the characteristic thickening of the leaf cells, particularly the basal, will at once distinguish a specimen of *Andreaea* from all other mosses known in the area, as will the unique valvate dehiscence of the capsule, if present.

KEY TO SPECIES

1. Leaves 2 cells thick in centre base, forming an indistinct single nerve .. *A. depressinervis*
   Leaves 1 cell thick in centre base, nerveless 2
2. Leaves mostly pandurate, basal margin normally crenate to weakly toothed .. *A. gainii*
   Leaves not pandurate, basal margin normally entire .. .. *A. regularis*

Andreaea depressinervis Card.

Andreaea depressinervis Card. var. *compacta* Card.
Andreaea depressinervis Card. fo. *robusta* Card.

Plants forming loose to dense, hummocky cushions, or low turfs, (1·0–) 2·0–3·5 (–5·0) cm. tall, less commonly occurring as scattered stems amongst other mosses. *Stems* erect to ascending, usually with many erect branches with leaves densely crowded throughout; when moist the leaves erecto-patent from appressed bases, less commonly with squarrose apices; when dry the leaves erect and tightly, less frequently loosely, appressed, sometimes slightly falcate particularly towards the stem apex. *Leaves* 1·0–1·3 (–1·6) ×0·3–0·7 mm., mostly ovate to ovate-lanceolate, sometimes approaching cordate, less commonly elliptical, tapering gradually to ± abruptly into an acumen, the latter variable in size, broad to slender and usually long, sometimes bluntly pointed; in contour, moderately to strongly concave. *Margin* plane, entire, although often a little irregular in outline. *Nerve* single, bistratose, often indistinct especially in fresh leaves, normally extending high into acumen, below very broad one-quarter to one-third of the width of base. *Cells* above, 9–26×6–16 μm., ± uneven, moderately thickened especially at cell corners; in nerve region at centre base, longly rectangular, often with porose longitudinal walls; the rectangular cells extending on each side beyond the nerve region, towards the margin becoming similar to those of the upper leaf. *Sexual habit* unknown. *Perichaetia* terminal, a little longer than the leaves, bracts broadly ovate to elliptical, rounded at apices, very concave to convolute, nerve present or absent. *Sporophytes* unknown. (Fig. 4.)

Habitat. On surfaces and in crevices of rock outcrops, boulders and stony ground, less frequently on soil or humus, in dry to damp, exposed to sheltered situations. Altitude 0–500 (–1,000) ft. (*c.* 0–150 (–300) m.).

Distribution. (Fig. 5; Table II.)

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Palmer to Fallières Coasts; Antarctic Peninsula east coast, Trinity Peninsula.

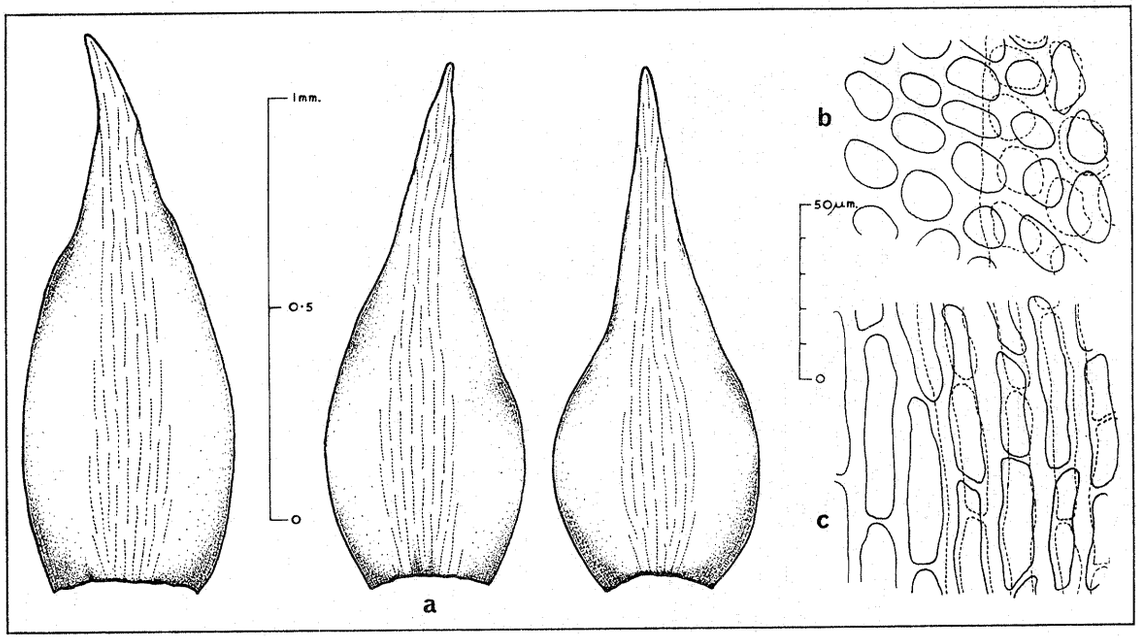

FIGURE 4
Andreaea depressinervis Card.
a. Leaves.
b. Upper cells including those of nerve (stippled).
c. Lower cells including those of nerve (stippled).
Scales: Left hand for leaves, right hand for cells.
Drawings from: Corner 493a (Galindez Island); R. Smith 160 (Matthews Island).

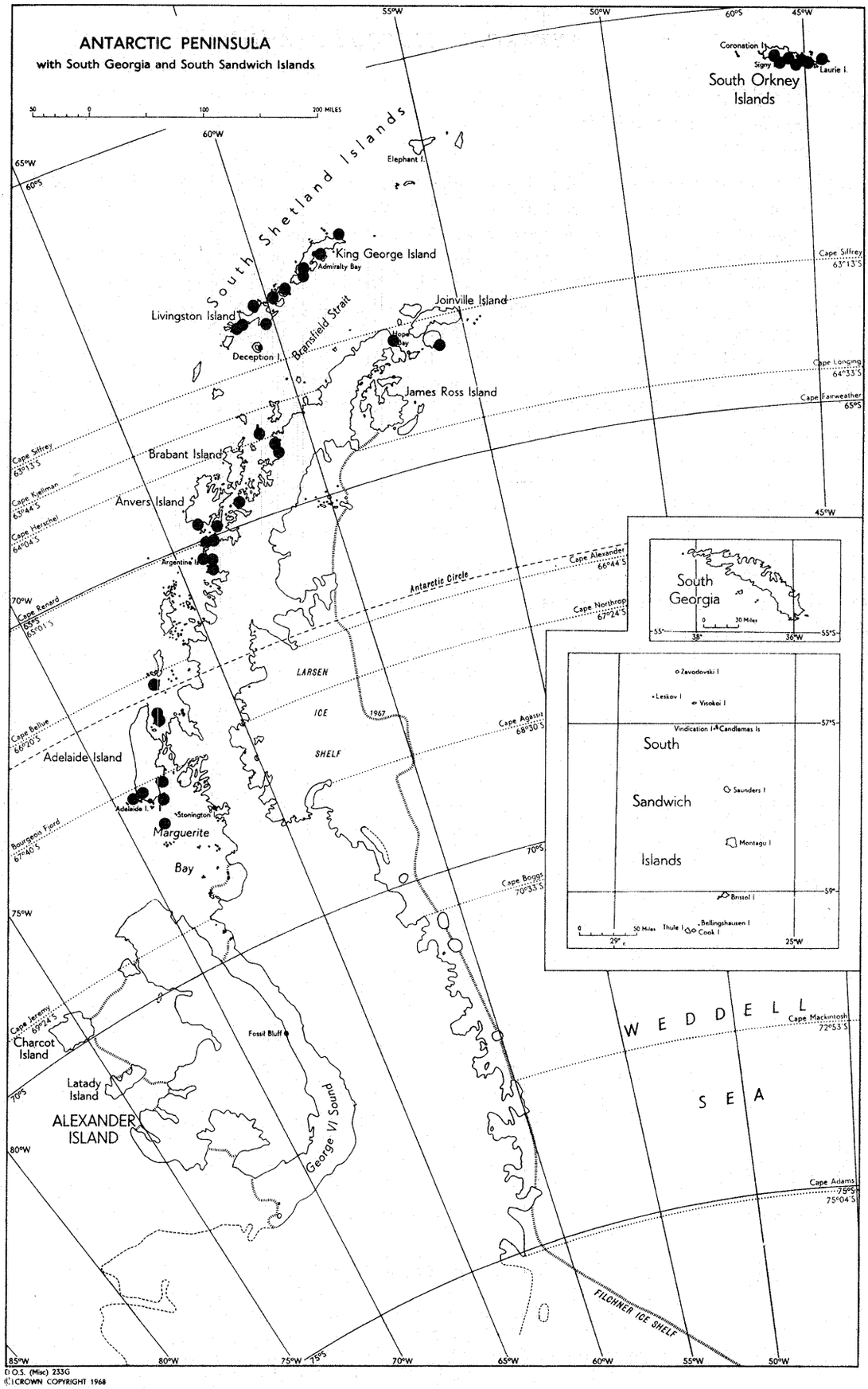

FIGURE 5
The known distribution of *Andreaea depressinervis* Card. within the Antarctic botanical zone.

Notes. The largest and greenest of the species known from the area, *A. depressinervis* may be confidently identified by the bistratose nerve which can be found in all but the youngest apical leaves. The greatest variation is in its stature and leaf shape. Its superficial similarity to some species of *Grimmia* has already been commented on in the *Notes* under the generic description.

One perichaetium, with a single withered archegonium, has been seen, enclosed in convolute bracts, the latter being a little longer but differing in shape from the leaves. Perigonia are unknown.

Andreaea gainii Card.

Plants forming loosely adhering cushions or low turfs (1·0–) 1·5–3·0 (–5·0) cm. tall, sometimes occurring as scattered stems amongst other mosses. *Stems* erect to ascending usually with many erect branches, mostly robust, densely leafy, most stems becoming defoliated below; when moist the leaves patent from appressed bases, the apices sometimes becoming squarrose; when dry the leaves rather rigid, erect, tightly to loosely appressed, sometimes with their apices slightly spreading. *Leaves* (0·6–) 0·8–1·2 (–1·3) × 0·2–0·6 mm., typically weakly to strongly pandurate, widest at or above mid-leaf or ± oblong; broadly tapering from around mid-leaf to an acute to somewhat apiculate apex, sometimes ± acuminate; in contour moderately concave to weakly or strongly ventricose below. *Margin* plane, entire, except at top of base where one or both sides are normally variably crenate to weakly toothed. *Nerve* absent. *Cells* above, 13–26 × 6–18 μm., uneven, heavily thickened especially at cell corners; in centre base rectangular with longitudinal walls normally porose, the horizontal not or only slightly thickened; rectangular cells occupying almost the entire width of the base, towards the margin becoming similar to those of the upper leaf. *Sexual habit* autoecious. *Perichaetia* attaining 2–4 times the length of the leaves, bracts convolute. *Perigonia* terminal or lateral. *Capsules* exserted, 0·5–1·0 mm. above the bracts, valves splitting to about half the length from apex. (Fig. 6.)

var. ***gainii***

Majority of leaves broad, 0·3–0·6 mm., widest at or above mid-leaf, moderately concave above, apex typically acute to shortly and broadly apiculate.

var. ***parallela*** (C. Müll.) S. W. Greene

A. parallela C. Müll.

Majority of leaves narrow, 0·2–0·4 mm., ± oblong below, ventricose above insertion, apex typically abruptly and longly apiculate to ± acuminate.

Habitat. (Both varieties.) On dry to wet, inclined to vertical, surfaces of rocks and boulders of stony ground, screes, outcrops and rock ledges; less commonly on bare ground or humus. Altitude 0–700 (–1,800) ft. (*c.* 0–210 (–550) m.).

Distribution:

var. *gainii.* (Fig. 7; Table III.)

Sector M (30°E.–30°W.): South Sandwich Islands.

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Danco to Fallières Coasts; Antarctic Peninsula east coast, Trinity Peninsula, Foyn Coast.

Sector B (90°W.–150°W.): Eights Coast.

var. *parallela.* (Fig. 8; Table IV.)

Sector M (30°E.–30°W.): South Sandwich Islands.

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Graham Coast.

Sector B (90°W.–150°W.): Eights Coast.

Notes. A. gainii has the most robust stems and branches of the species known from the area. It can be distinguished readily from the remaining species by the presence of pandurate leaves which are usually crenate to weakly toothed at the top of the base. However, care has to be taken with microscopic preparations to ensure that no excessive flattening of the leaves occurs, as under these conditions the leaves appear less pandurate and more ovate or obovate, at times even elliptical. The marginal dentition is variable and stems normally bear a small number of leaves which are entire.

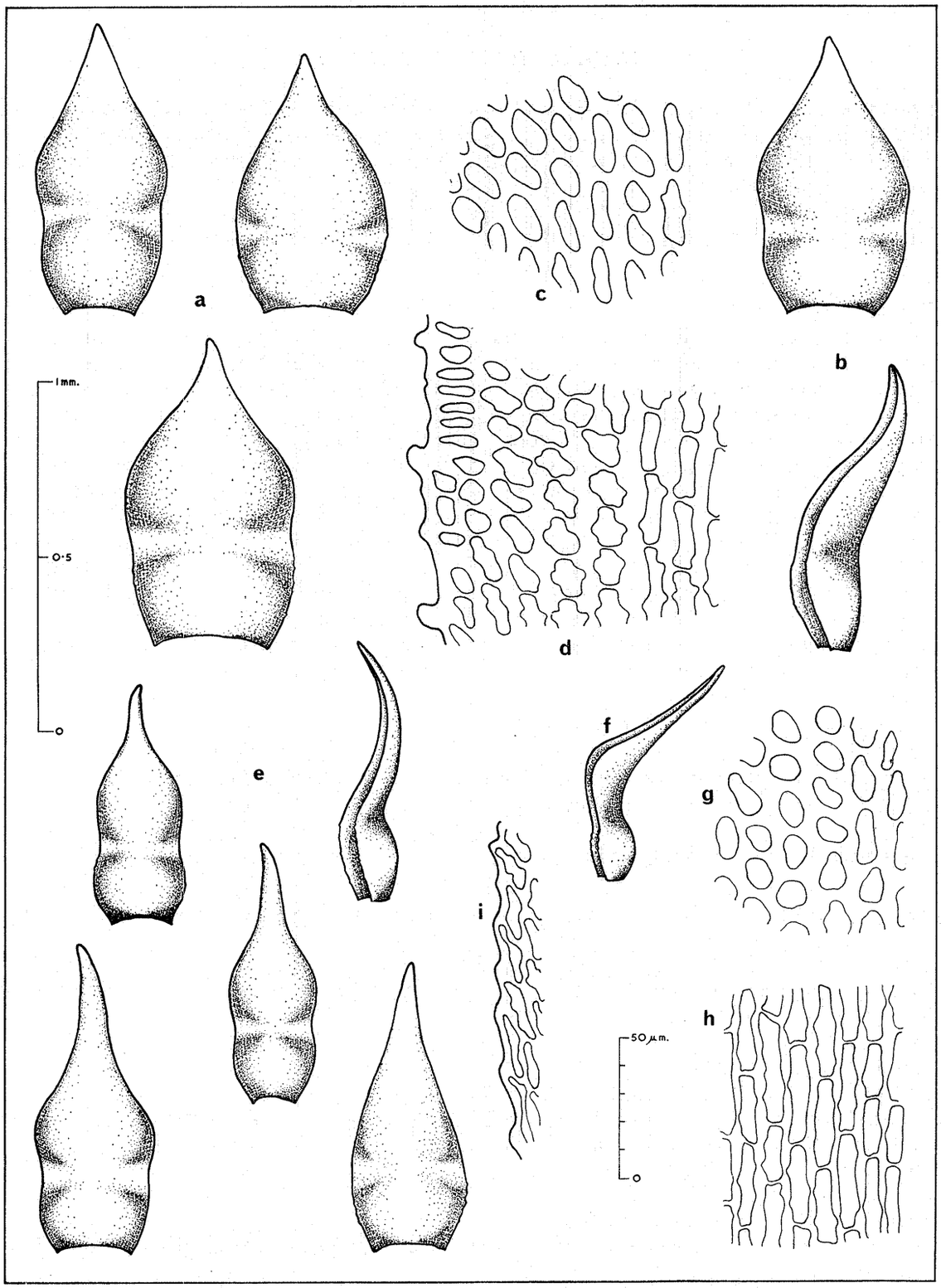

FIGURE 6
Andreaea gainii Card.

var. *gainii*
a, b. Leaves.
c. Upper cells.
d. Lower cells and margin.

var. *parallela* (C. Müll.) S. W. Greene
e, f. Leaves.
g. Upper cells.
h. Lower cells.
i. Lower margin.

Scales: Upper for leaves, lower for cells.
Drawings from: var. *gainii* R. Smith 368 (Signy Island); var. *parallela* Corner 845 (Cape Tuxen); FIDS H609/1 (Coronation Island); Longton 747 (Vindication Island).

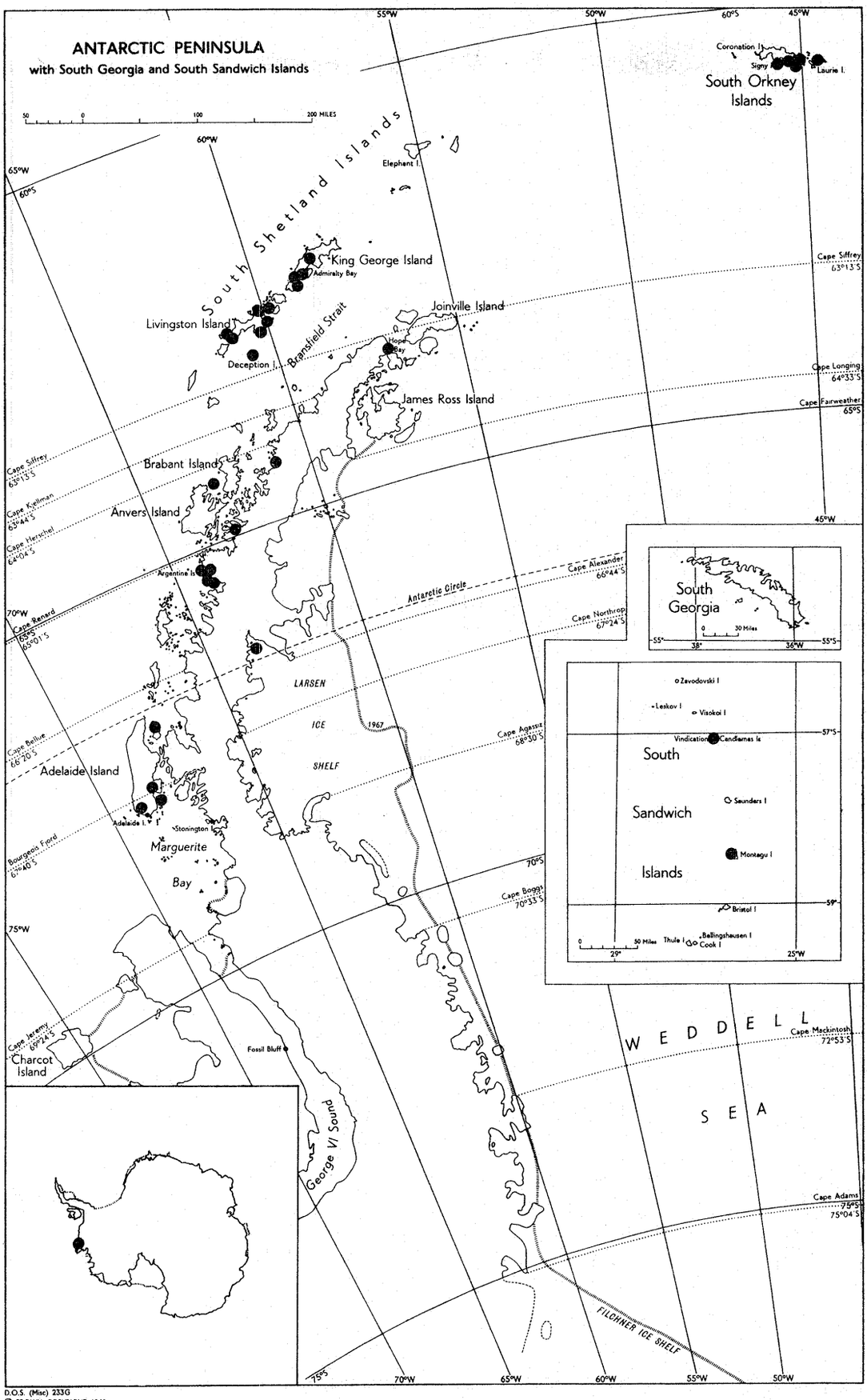

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FIGURE 7
The known distribution of *Andreaea gainii* Card. var. *gainii* within the Antarctic botanical zone.

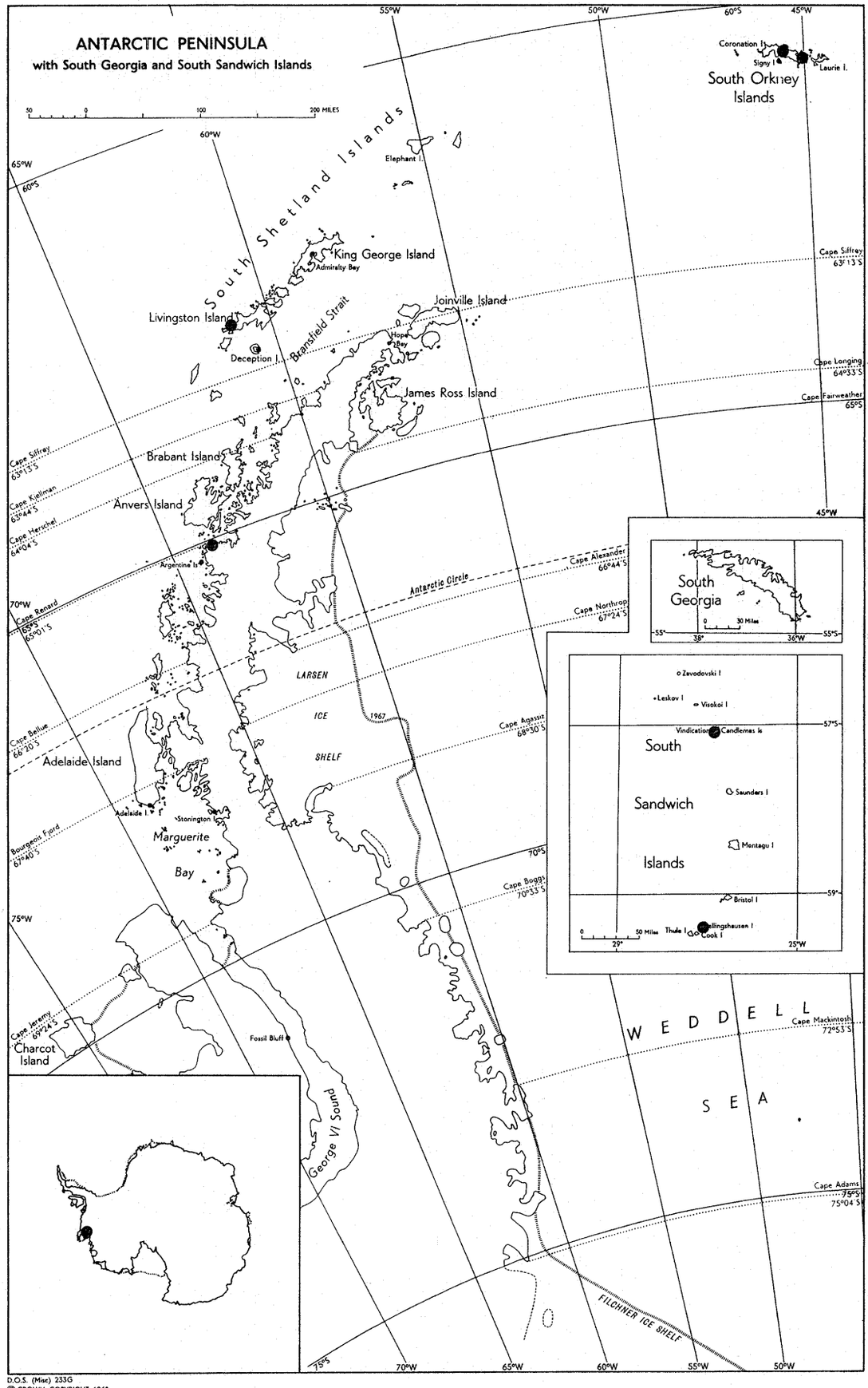


FIGURE 8
The known distribution of *Andreaea gainii* Card. var. *parallela* (C. Müll.) S. W. Greene within the Antarctic botanical zone.

Plants referred to the var. *parallela* differ in a number of characters from the normal form of the species, but some plants occur with features which appear to be intermediate between those of the variety and the typical form, suggesting that the varieties represent the extremes of the variation range. The var. *parallela* also closely resembles South Georgian plants of *Andreaea alpina* Hedw., and may, at times, be difficult to separate (Greene, 1968*b*). Further information is required before a better arrangement of the taxa is possible.

The species is not common in fruit, although infloresences are regularly seen.

Andreaea regularis C. Müll.

Andreaea regularis C. Müll. var. *pycnotyla* (Card.) Card.
Andreaea pycnotyla Card.
Andreaea pygmaea Card.

Plants forming low dense cushions, rarely turfs, 1·0–2·5 (–3·5) cm., sometimes occurring as small groups of stems amongst other mosses. *Stems* erect to ascending, usually with many erect branches, slender with leaves densely crowded throughout; when moist the leaves erecto-patent to patent from appressed bases, the apices sometimes becoming squarrose; when dry the leaves tightly or less frequently loosely appressed, erect or with apices slightly spreading. *Leaves* 0·6–1·1 × 0·2–0·5 mm., narrowly ovate to ovate-lanceolate, tapering gradually to somewhat abruptly into a long narrow, less commonly a short and broad, acumen, often somewhat rounded at base and then more abruptly acuminate, the leaves becoming broader and shorter below the perichaetial bracts; in contour moderately to strongly concave,

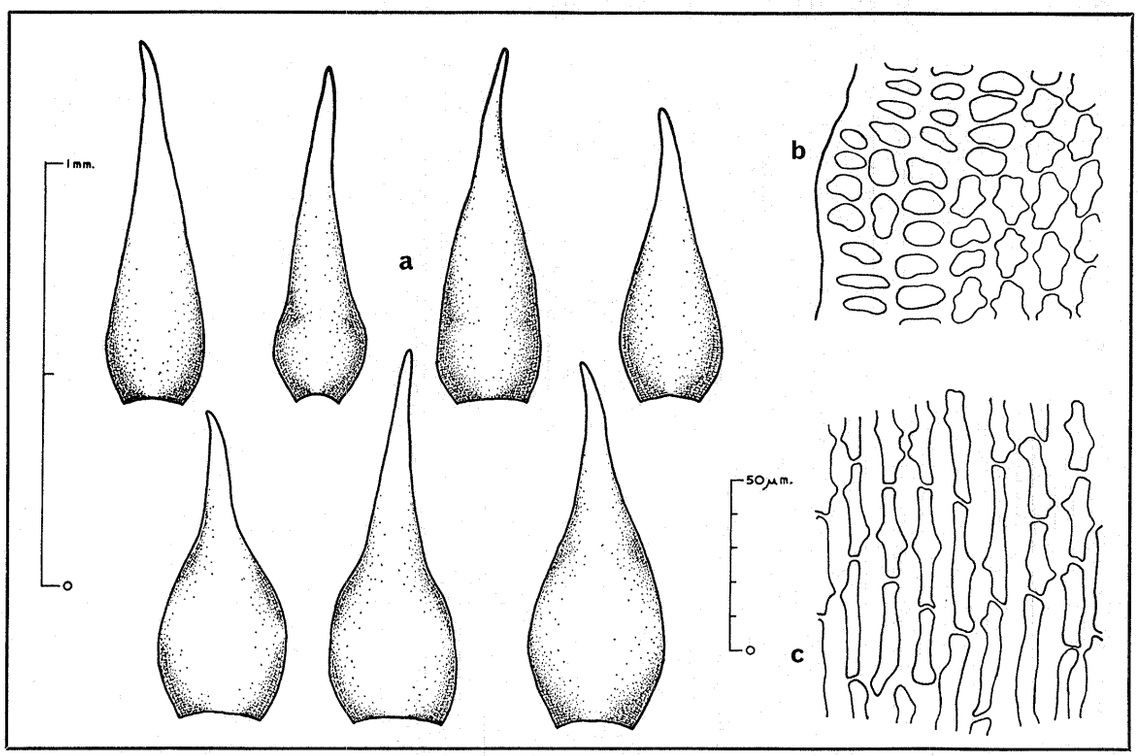


FIGURE 9
Andreaea regularis C. Müll.
a. Leaves.
b. Upper cells.
c. Lower cells.
Scales: Left hand for leaves, right hand for cells.
Drawings from: Archibald 13a (Cape Tuxen); Lindsay 715 (King George Island); R. Smith 369 (Signy Island).

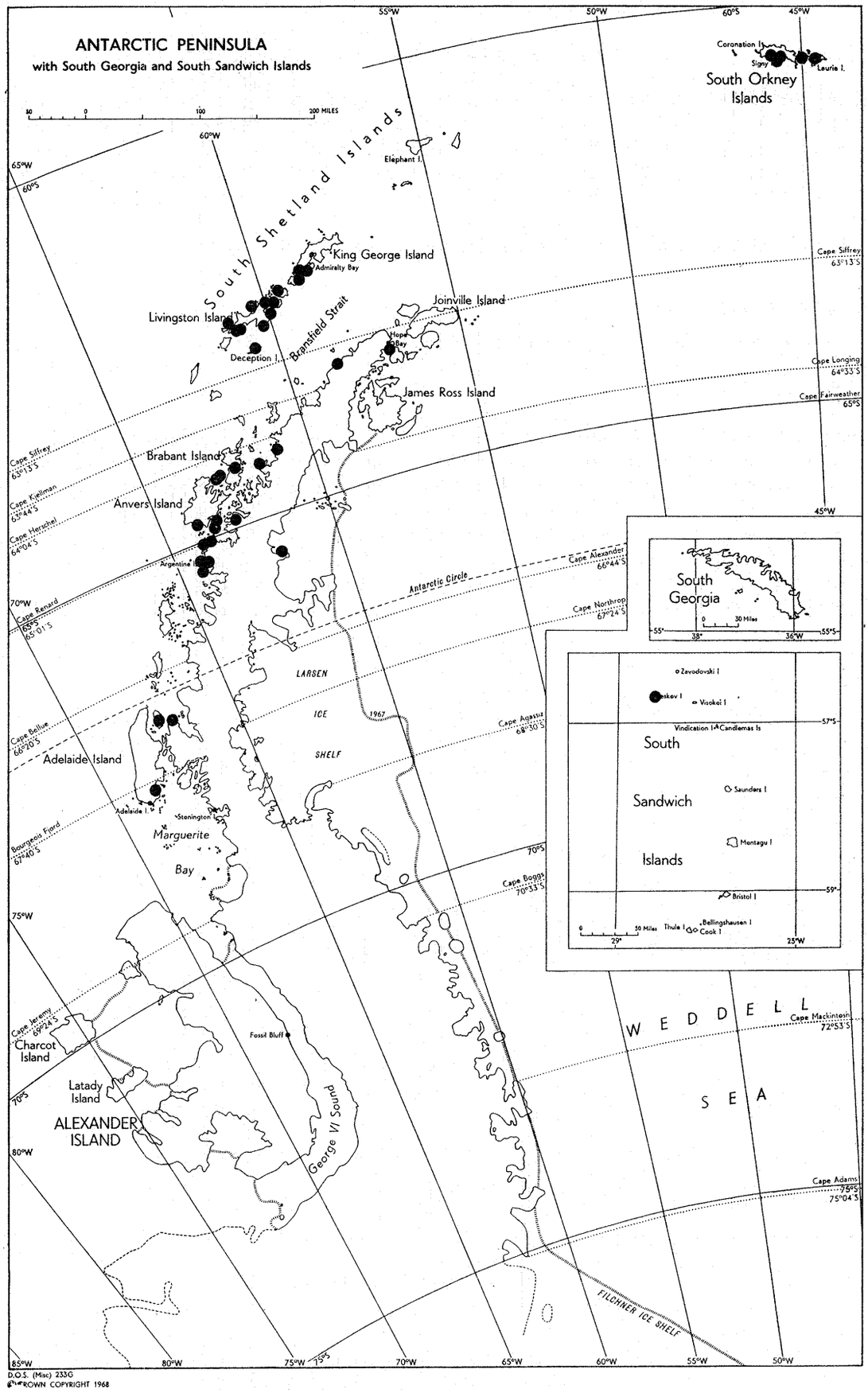


FIGURE 10
The known distribution of *Andreaea regularis* C. Müll. within the Antarctic botanical zone.

often distinctly ventricose in lower part of leaf, sometimes somewhat channelled in acumen. *Margin* plane, entire, or slightly crenate at top of base, sometimes a little irregular in outline. *Nerve* absent. *Cells* above, 11–26×6–14 μm., ± even, moderately to heavily thickened, especially at their corners, sometimes porose; in centre base longly to shortly rectangular, the longitudinal walls mostly porose with the thickening often nearly equalling the width of the lumen, being heaviest at the cell corners, horizontal walls slender, unthickened; the rectangular cells occupying half to almost the entire width of the base, towards the margins becoming similar to those of the upper leaf. *Sexual habit* autoecious. *Perichaetia* attaining 2–4 times the length of the leaves. *Perigonia* terminal or lateral. *Capsules* exserted only slightly above the bracts, valves splitting to about three-quarters of the length from apex. (Fig. 9.)

Habitat. On surfaces and in crevices of rocks, less commonly on ground between stones and boulders, often exposed. Altitude 0–750 (–1,350) ft. (*c.* 0–225 (–410) m.).

Distribution. (Fig. 10; Table V.)

Sector M (30°E.–30°W.): South Sandwich Islands.

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Trinity Peninsula, Danco to Fallières Coasts; Antarctic Peninsula east coast, Trinity Peninsula, Oscar II Coast.

Notes. A. regularis forms the smallest cushions of the species of *Andreaea* known from the area, and although very variable in its leaf shape and size, it should not present any serious problems in identification. It may be distinguished readily from *A. depressinervis* by the lack of bistratose cells in the centre of the leaf base while the ovate to ovate-lanceolate leaves with narrow acumen are immediately distinct from the pandurate leaves of *A. gainii*. Mature fruit is rarely seen although inflorescences are frequent.

2. *Pohlia* Hedw.

Small to medium sized turf forming mosses, pale to dark, green to yellow green, young leaves sometimes with a distinctive, bluish sheen. Stems erect, unbranched or with a few erect branches, densely leafy for most of their length or comose. Leaves typically ovate, shortly decurrent, tapering to an acute or slightly apiculate apex, margin plane, variably crenate to weakly toothed above, nerve single, strong, at least one-quarter of the width of insertion, tapering above, ceasing in or below point. Cells smooth, regularly or irregularly hexagonal, elongating below or little altered. Sexual habit monoecious or dioecious. Inflorescences terminal, the bracts lanceolate or triangular lanceolate with nerve and margin similar to leaves, the outer bracts of ± equal size to leaves, increasing in length towards the centre so that the inner bracts project well above the leaf apices. Capsule cernuous to pendulous, clavate to pyriform, the neck short and tapering into the top of the seta.

Notes. The genus *Pohlia* belongs to the family Bryaceae and is represented in the area by two species both of which are accepted as native. However, as many species of *Pohlia* can be positively identified only by fruiting characters, it is possible that others are present and have not been recognized due to their failure to produce capsules.

P. cruda and *P. nutans* are unlikely to be confused with species of any other genus except *Bryum*, from which they may usually be distinguished by the combination of the tapering nerve ceasing in or below the point and the development of marginal teeth below the apex. The enlarged bracts with dentate apices, lacking an excurrent hairpoint, are also distinctive.

Key to Species

Leaf insertion narrow, half or less of width of leaf, nerve red to reddish brown, cells usually with a sigmoid curve, in length mostly 80·0–120·0 μm. .. .. .. *P. cruda*

Leaf insertion broad, three-quarters or more of width of leaf, nerve dark green to brownish, cells lacking a sigmoid curve, in length mostly 34·5–69·0 μm. .. .. *P. nutans*

Pohlia cruda (Hedw.) Lindb.
var. ***imbricata*** (Card.) Bartr.

Webera cruda Sch. var. *imbricata* Card.

Plants forming dense turfs, 1·0–5·0 cm. high, also occurring as scattered shoots amongst other mosses, stem apices and young shoots often pale green with a characteristic bluish sheen. *Stems* erect, simple, densely leafy and ± julaceous for about half their length, rhizoids sparse but extending up amongst the leaves in older shoots; when moist the leaves closely appressed and imbricate; when dry the leaves slightly shrunken, many with 1–2 shallow grooves on back, otherwise little altered. *Leaves* (1·2–) 1·5–2·3 (–2·6) ×(0·6–) 0·8–1·2 (–1·4) mm., ovate, less commonly elliptical or cordate, from a narrow insertion, the latter about half or less width of leaf, shortly decurrent, gradually tapering to an acute or weakly apiculate apex; in contour V-shaped, often ± keeled. *Margin* plane, from about mid-leaf to apex, variably crenate to weakly toothed. *Nerve* single, strong, about one-quarter to one-third of width of insertion, gradually tapering towards apex, ending in or just below the point, red to reddish brown, especially in base. *Cells* above (60·0–) 80·0–120·0 (–163·0) ×11·5–18·5 μm., even, longly and irregularly hexagonal with somewhat rounded ends and usually with a sigmoid curve, mostly uniformly thin-walled, little altered below, the

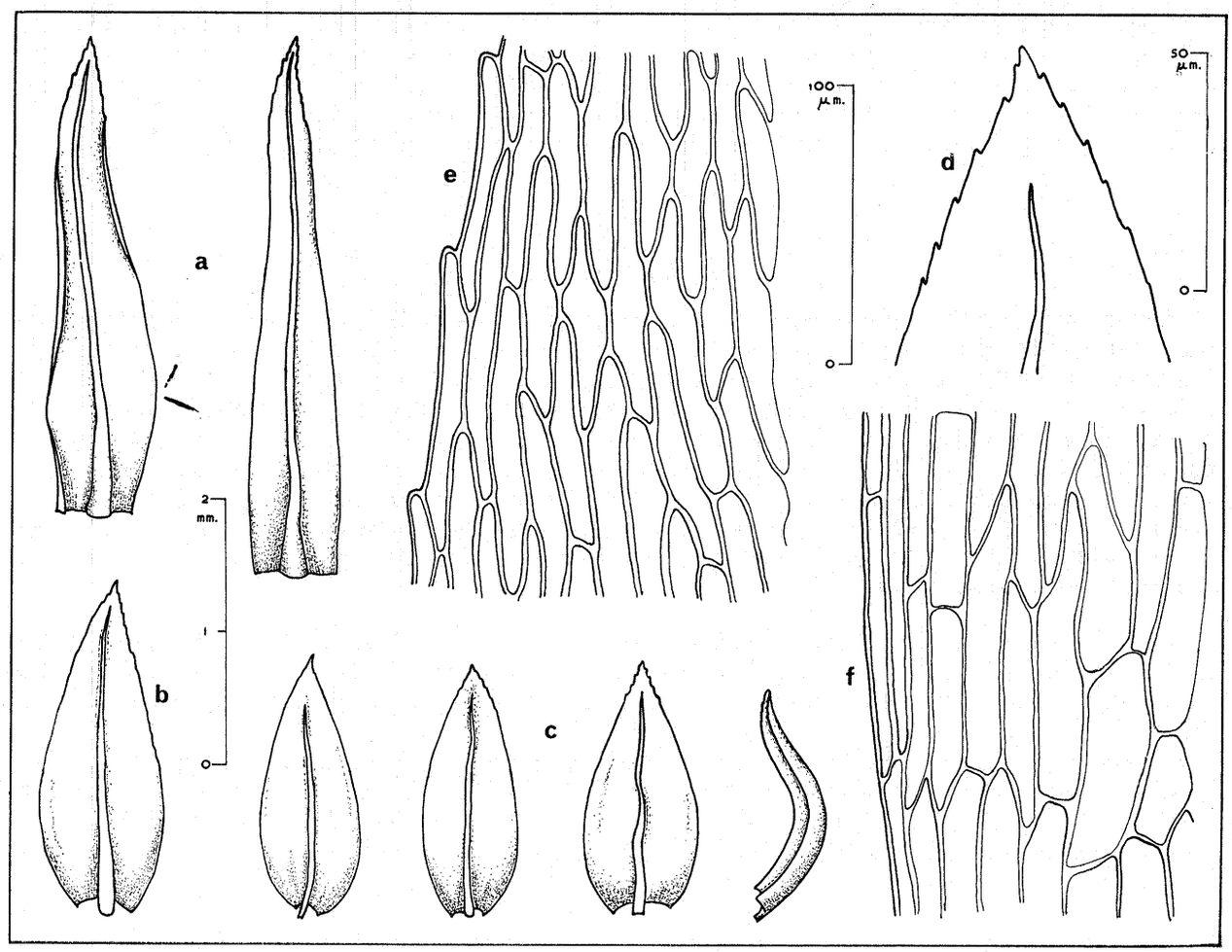


FIGURE 11
Pohlia cruda (Hedw.) Lindb. var. *imbricata* (Card.) Bartr.
a, b. Bracts. c. Leaves. d. Leaf apex. e. Upper cells and margin. f. Lower cells and margin.
Scales: Left hand for bracts and leaves, median for cells, right hand for apex.
Drawings from: Corner 748 (The Barchans); Killingbeck 177 (Pfaff Island); Longton 1246 (Galindez Island); R. Smith 235a (Powell Island).

decurrence tapering, of 1–3 long, rectangular cells. *Sexual habit* dioecious, very rarely synoecious. *Inflorescences* with female bracts erect and male ± spreading. *Seta* 1·0–1·3 cm., flexuose. *Capsule* cernuous, slightly arcuate, clavate, the neck short and tapering gradually into the top of the seta. (Fig. 11.)

Habitat. On mainly dry, sometimes wet, gravelly or bare soil, stony ground, or on humus, in damp sheltered rock crevices and under rock overhangs. Altitude 0–200 (–2,500) ft. (*c.* 0–60 (–750) m.).

Distribution. (Fig. 12; Table VI.)

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Palmer to Fallières Coasts; George VI Sound; Antarctic Peninsula east coast, Foyn and Wilkins Coasts.

Notes. The julaceous stems, when tinged with the characteristic bluish sheen of the young leaves, and the prominent reddish nerves, render *P. cruda* a striking moss which is unlikely to be confused with any other species. It is remarkably constant in leaf and cell shape, the greatest variation being in robustness.

Female inflorescences are not uncommon, but male plants and fruit are only known from a single specimen from Galindez Island.

The Antarctic plants are referred to the var. *imbricata* because of their regular, julaceous leaf arrangement, but it should be noted that one or two plants have been seen which were not or little julaceous. Arctic plants from Jan Mayen and Spitzbergen, which have been examined, show a comparable but less extreme leaf arrangement, and it may be that in this species the julaceous form is best adapted to the rigours of a polar environment. On present knowledge, it seems better to continue to refer all the Antarctic material to the variety until the relationships of these polar forms are better understood.

Pohlia nutans (Hedw.) Lindb.

Webera nutans Hedw.

Webera racovitzae Card.

Plants forming compact turfs (0·5–) 1·0–2·5 (–7·0) cm. high, often occurring singly or in small groups amongst other mosses. *Stems* erect, simple or with 1–3 erect branches, either with the leaves crowded towards the apex, forming comose shoots with rhizoids confined to their bases, or with the leaves more loosely arranged over almost the full length of the stem and with often abundant rhizoids extending high amongst the leaves almost to the base of the current year's growth; when moist the leaves erect or appressed, often closely imbricate; when dry the leaves somewhat shrunken and flexuose, the comal group often forming a loose spiral. *Leaves* (0·8–) 1·1–1·7 (–2·5)×(0·3–) 0·5–0·9 (–1·1) mm., often increasing in length towards the stem apex, ovate to narrowly ovate, sometimes ± oblong or weakly triangular; from a broad insertion, the latter about three-quarters or more of width of leaf, shortly decurrent; gradually tapering to an acute or weakly apiculate apex; in contour V-shaped, often strongly so and keeled. *Margin* plane, less commonly weakly revolute on one side, ± entire or variably crenate to weakly toothed from about mid-leaf to apex. *Nerve* single, strong, about one-quarter of width of insertion, gradually tapering towards apex, ending in or just below the point, often with a bend or twist about mid-leaf, dark green to brownish, rarely reddish. *Cells* above (27·6–) 34·5–69·0 (–80·5)×11·5–18·5 (–23·0) μm., uneven, usually irregularly hexagonal, thin to moderately thick walled, becoming rhomboid in mid-leaf, to shortly rectangular below; the decurrence tapering, of 1–6 short to long, rectangular cells. *Sexual habit* paroecious, sometimes unisexual, very rarely synoecious. *Inflorescence* terminal, bracts conspicuously longer than leaves. *Seta* (0·6–) 0·8–1·5 (–2·0) cm., straight to flexuose. *Capsule* cernuous to pendulous, straight to arcuate, clavate to pyriform, sometimes ± gibbous, the neck short and tapering gradually to moderately abruptly into the top of the seta. (Fig. 13.)

Habitat. In moist or wet, less commonly dry, sheltered or exposed, crevices of rocks and between boulders, on stony ground, rock ledges and outcrops, on ash and volcanic slopes, around fumaroles, on humus and intermixed with other mosses, mainly species of *Polytrichum* and *Dicranum*. Altitude 0–800 (–3,500) ft. (*c.* 0–240 (–1,050) m.).

Distribution. (Fig. 14; Table VII.)

Sector M (30°E.–30°W.): South Sandwich Islands.

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Trinity Peninsula to Fallières Coasts; George VI Sound; Antarctic Peninsula east coast, Trinity Peninsula, Oscar II, Foyn and Wilkins Coasts.

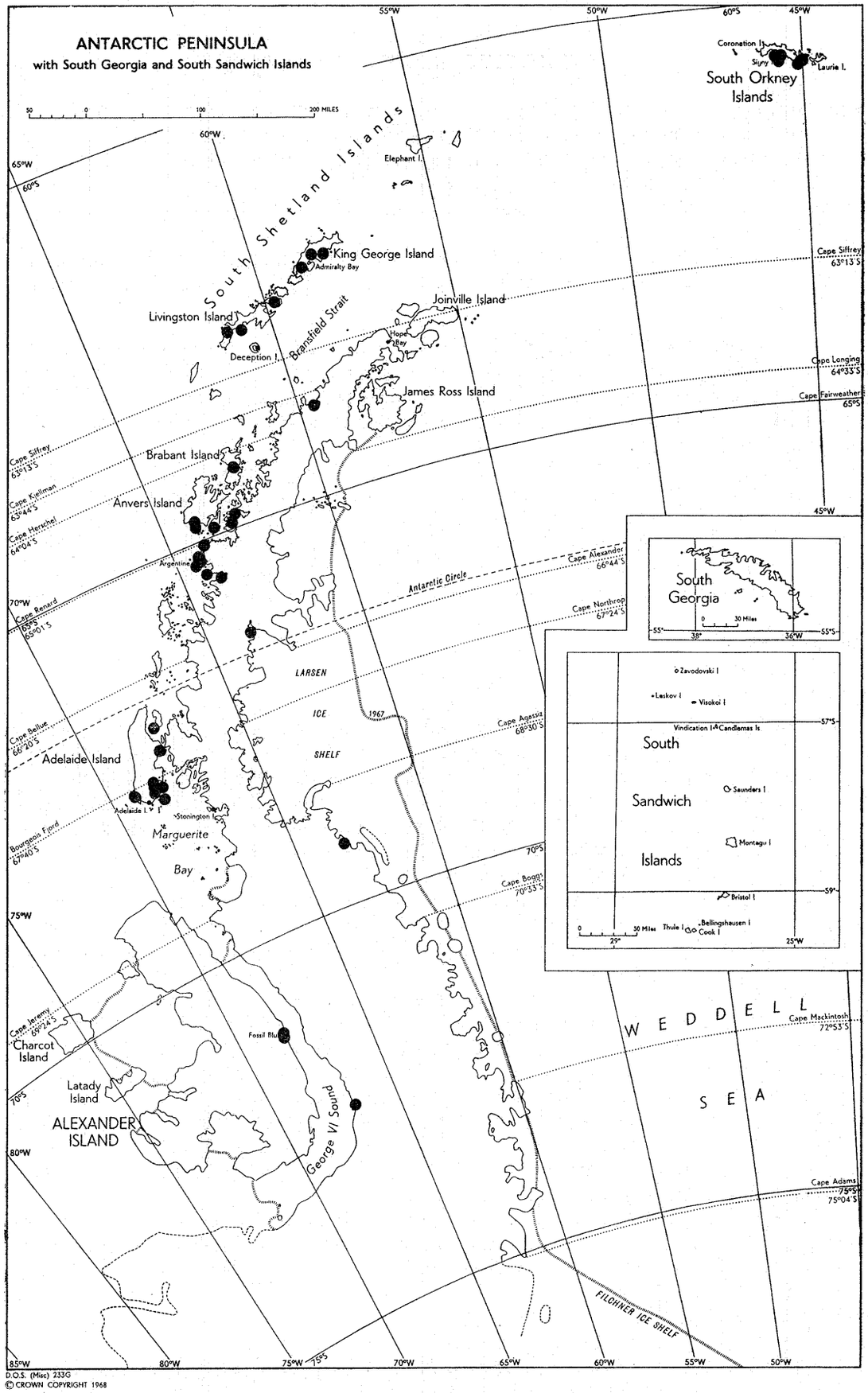


FIGURE 12
The known distribution of *Pohlia cruda* (Hedw.) Lindb. var. *imbricata* (Card.) Bartr. within the Antarctic botanical zone.

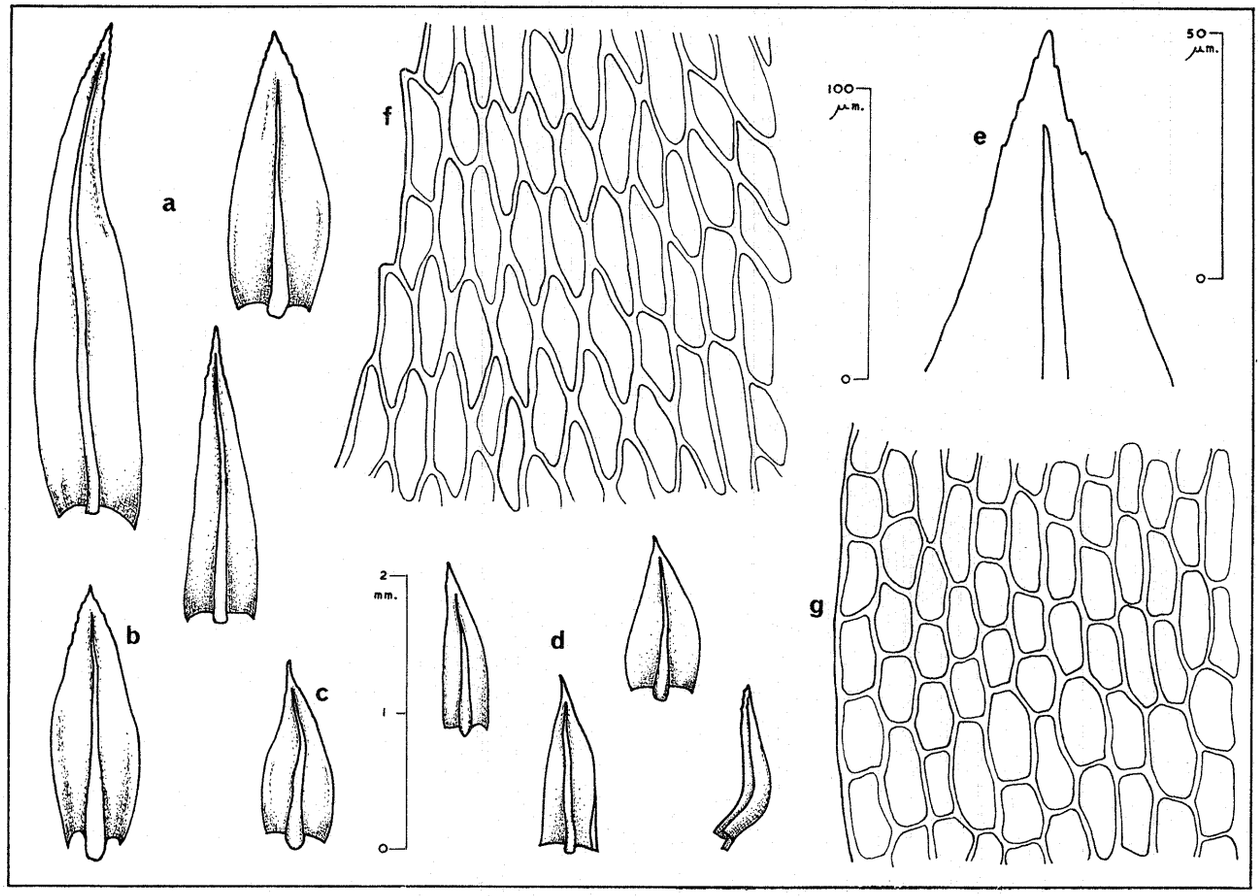


FIGURE 13
Pohlia nutans (Hedw.) Lindb.
a, b. Bracts. f. Upper cells and margin.
c, d. Leaves. g. Lower cells and margin.
e. Leaf apex.
Scales: Left hand for bracts and leaves, median for cells, right hand for apex.
Drawings from: Cameron and Kennett 52 (Beneden Head); Corner 392 (Litchfield Island); Kennett 34 (Starbuck Glacier).

Sector B (90°W.–150°W.): Ellsworth Land, Thurston Island.
Sector R (150°W.–150°E.): Victoria Land, Edisto Inlet; Pennell Coast.

Notes. P. nutans is a very variable species particularly in its dimensions and growth form, the Antarctic plants presenting a continuous range of forms exhibiting no obvious correlations which would allow a satisfactory subdivision. It may well be, as noted under the generic description, that other sterile species of *Pohlia* are being confused with *P. nutans*, and it might be supposed that the cell dimensions given above support this possibility. However, it should be pointed out that the larger cells, i.e. those up to 23 µm. wide, occurred as scattered individuals amongst normal sized *P. nutans* cells, and that in no case were plants seen with all the cells outside the normal width range.

The present species may be distinguished readily from *P. cruda* by its leaf shape and cell dimensions, and from species of *Bryum* by the toothed apical margin of the leaf combined with the nerve ceasing in or below the point. The apex of the bracts is also quite unlike those of any species of *Bryum*.

Inflorescences are normally present but capsules are not common, fruiting specimens being known from the South Sandwich Islands, and from scattered localities from Anvers Island to Marguerite Bay.

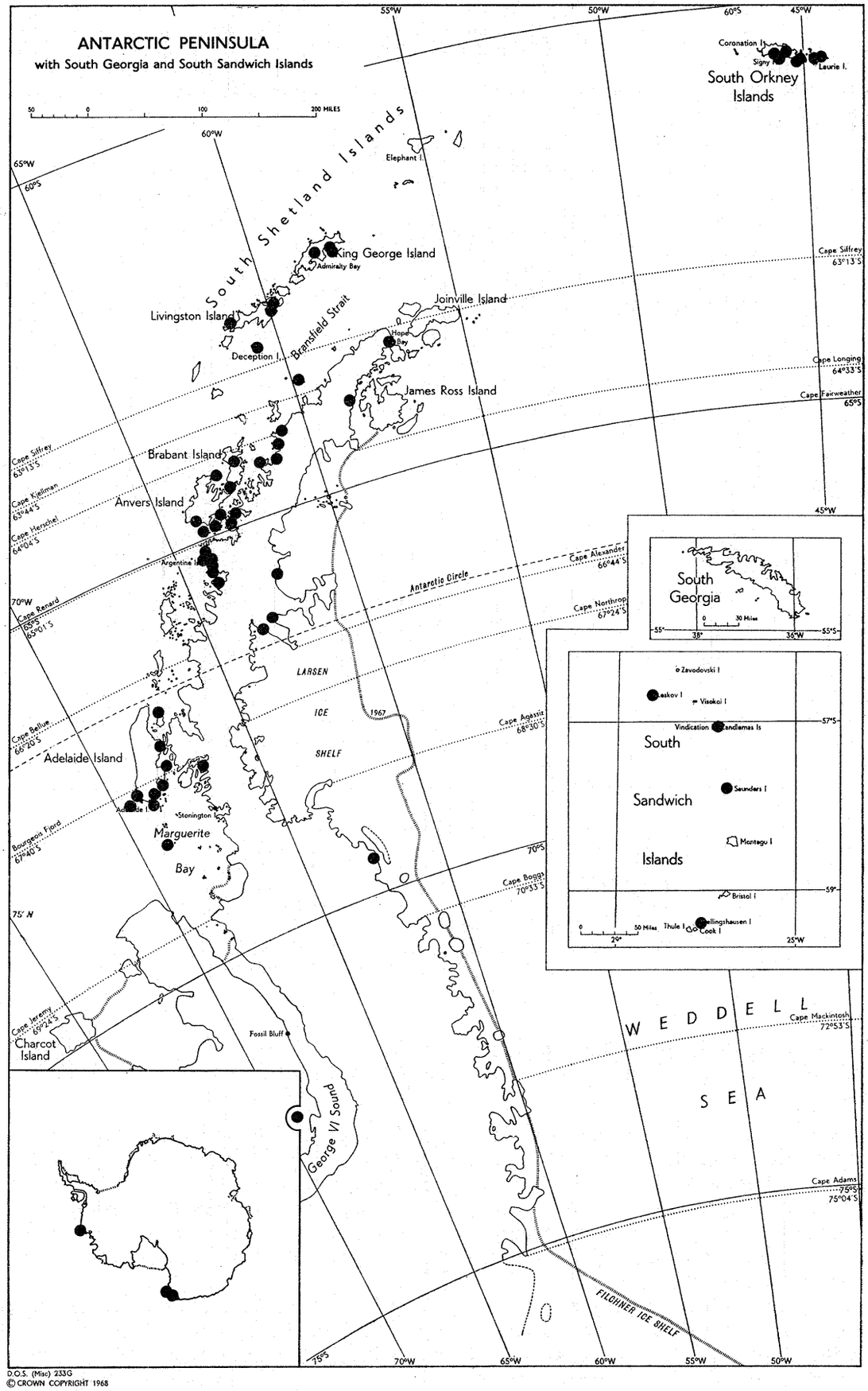


FIGURE 14
The known distribution of *Pohlia nutans* (Hedw.) Lindb. within the Antarctic botanical zone.

3. *Polytrichum* Hedw.

Robust, turf forming mosses with a distinctive opaque green or yellow green colour. Stems erect, unbranched or with few erect branches, densely leafy for most of their length, often with a dense felt of rhizoids. Leaves large, rigid, with distinct broad sheathing bases and narrow lanceolate limbs, nerve single, strong, reaching to apex or beyond, very wide and forming most of the limb, covered on its upper surface by non-segmented lamellae, which are straight in surface view and have differentiated border cells bearing either papillae or thickened projections, leaf margin of limb incurved or involute over nerve. Cells smooth, in limb isodiametric to shortly rectangular, in sheath shortly to longly rectangular. Sexual habit dioecious, inflorescences terminal. Perichaetia undifferentiated, the bracts similar to leaves and slightly enlarged in fruit, perigonia discoid, bracts comparable to leaves but with reduced limbs, usually incurved when dry. Capsules cubical and angled in transverse section, or subglobose to cylindrical and round in section, operculate, peristomate, the teeth short and non-hygroscopic, connected at apices by an epiphragm. Calyptra hairy.

Notes. This genus, belonging to the family Polytrichaceae, is represented in the area by 4 species all of which are accepted as native. The leaves, divided into a narrow limb and a broad sheathing basal portion, distinguish plants of the present genus from all other mosses in the area except species of *Bartramia*, which, however, lack the characteristic lamellate nerve of the Polytrichaceae. The only other species with which confusion could arise is *Psilopilum antarcticum*, since it also has a broad lamellate nerve. However, in *Psilopilum* the lamellae, in side view are segmentated (see *Notes* p. 35) and so contrast with the non-segmentated lamellae of *Polytrichum*, i.e. in microscopic preparations *Polytrichum* lamellae seem to form continuous plates of cells, whereas in *Psilopilum* they are divided into small units. Moreover, the *Psilopilum* leaf is not divided into a distinct basal sheath and a narrow upper limb, as in *Polytrichum*.

For satisfactory determination of some species the border cells of the lamellae, i.e. the row of cells furthest from the line of attachment, have to be examined in side view. Owing to much variation in the development of the papillae and the projections on these cells, comparisons should only be made from lamellae taken from around the mid-limb region. However, in those species with projections on the border cells, in any stem, and often in a single leaf, a complete range may be seen from undifferentiated border cells through those with variably developed projections and amount of thickening up to the largest and most thickened that occur, and it is the varying proportion of these types rather than the existence of one type exclusive to a particular taxon which allows the definition of forms characteristic of each species. It may be noted that, in general, the projections are less well developed and the least thickened in *P. piliferum* and most regularly developed and heavily thickened in *P. juniperinum*. *P. alpestre* is somewhat intermediate, although more like *P. piliferum* than *P. juniperinum*.

Key to Species

1. Leaf margin toothed, variably incurved but not involute over nerve; border cells of lamellae papillose but lacking projections .. .. *P. alpinum*
   Leaf margin entire, involute over nerve; border cells of lamellae smooth, the majority with projections 2
2. Basal cells of leaf sheath short and broad, their length to breadth usually less than 5 : 1; hairpoint abruptly produced from leaf, 0·6–1·0 mm. or more long, flexuose *P. piliferum*
   Basal cells of leaf sheath long and narrow, length to breadth usually more than 5 : 1; hairpoint ± gradually produced from leaf, short, usually less than 0·5 mm., rigid 3
3. Turfs very compact due to dense matting of abundant white rhizoids extending high among the leaves; projection on majority of border cells ± uneven in height, about half of width of cell, in side view giving a wide, deep sinus between projections .. .. *P. alpestre*
   Turfs loose with little cohesion due to absence of abundant white rhizoids extending high among the leaves; projections on majority of border cells ± even in height, almost full width of cell in side view, giving a narrow, shallow sinus between projections .. .. *P. juniperinum*

Polytrichum alpestre Hoppe

Polytrichum strictum Banks var. *alpestre* (Hoppe) Rabenh.
Polytrichum strictum Banks

Plants forming compact, often extensive turfs, tightly matted by rhizoids, (2·0–) 5·0–10·0 (–16·0) cm. high, often intermixed with other bryophytes. *Stems* erect, unbranched, or with few erect branches, densely leafy for most of their length, rhizoids abundant forming a dense whitish tomentum, the latter extending high amongst the leaves to within (0·5–) 1·0–3·0 cm. of the stem apex; when moist the leaves erect to erecto-patent, from appressed bases; when dry the leaves erect to closely appressed. *Leaves* 2·5–4·5 (–6·2) × (in limb) 0·4–0·6 mm., from a broad sheathing base, abruptly narrowing to a linear to lanceolate limb, above tapering into a short, stout, normally toothed hairpoint, the latter up to 0·5 mm. long, rarely more. *Margin* of limb rather irregular, entire or irregularly crenulate, the sides widely involute

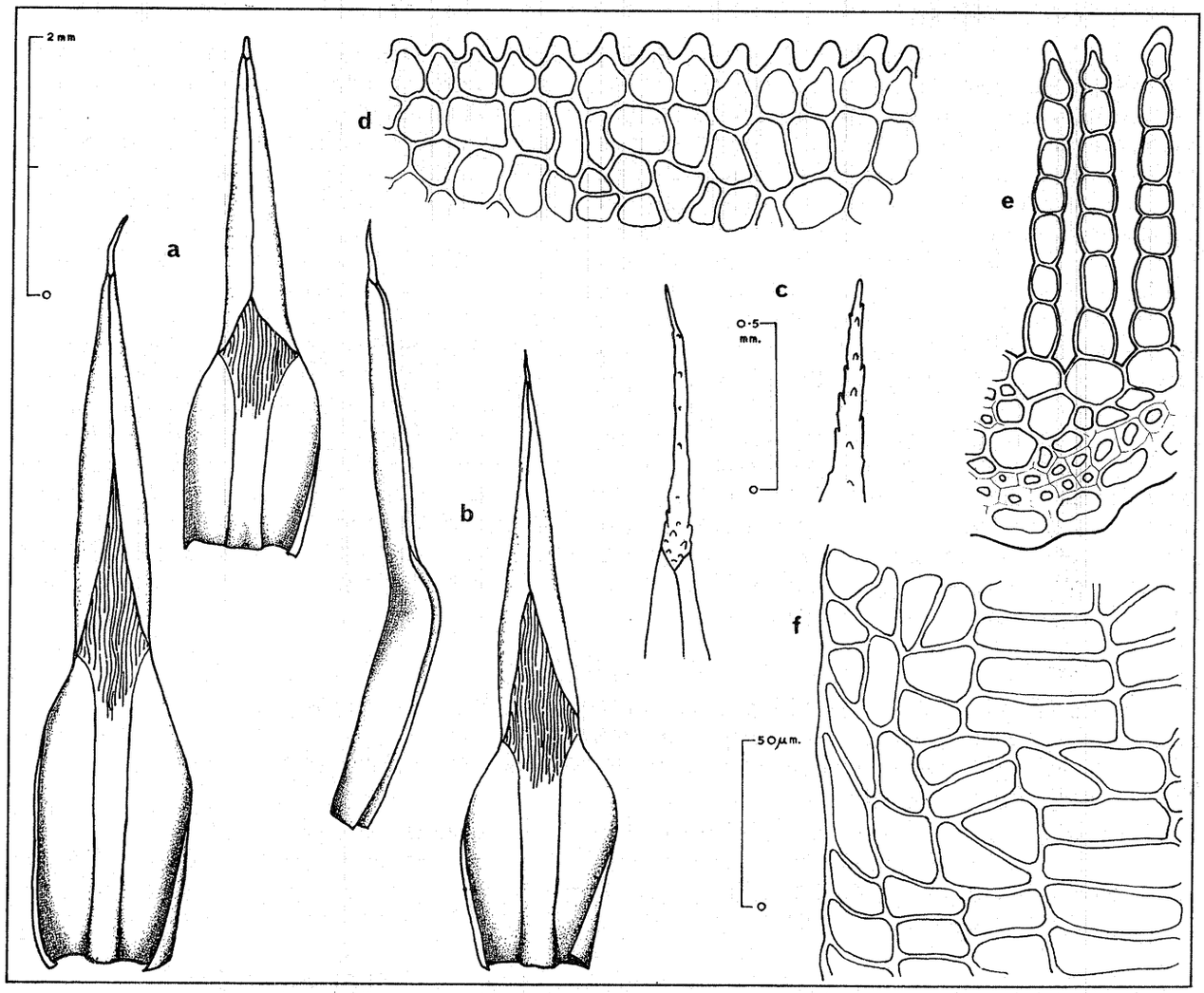


FIGURE 15
Polytrichum alpestre Hoppe
a, b. Leaves.
c. Apices.
d. Lamella, side view.
e. Lamellae, end view on nerve.
f. Upper cells and margin.
Scales: Upper for leaves, median for apices, lower for cells and lamellae.
Drawings from: BGLE 1074 (Green Island); BGLE 1053 (Uruguay Island); Taylor 326 (Mount Flora).

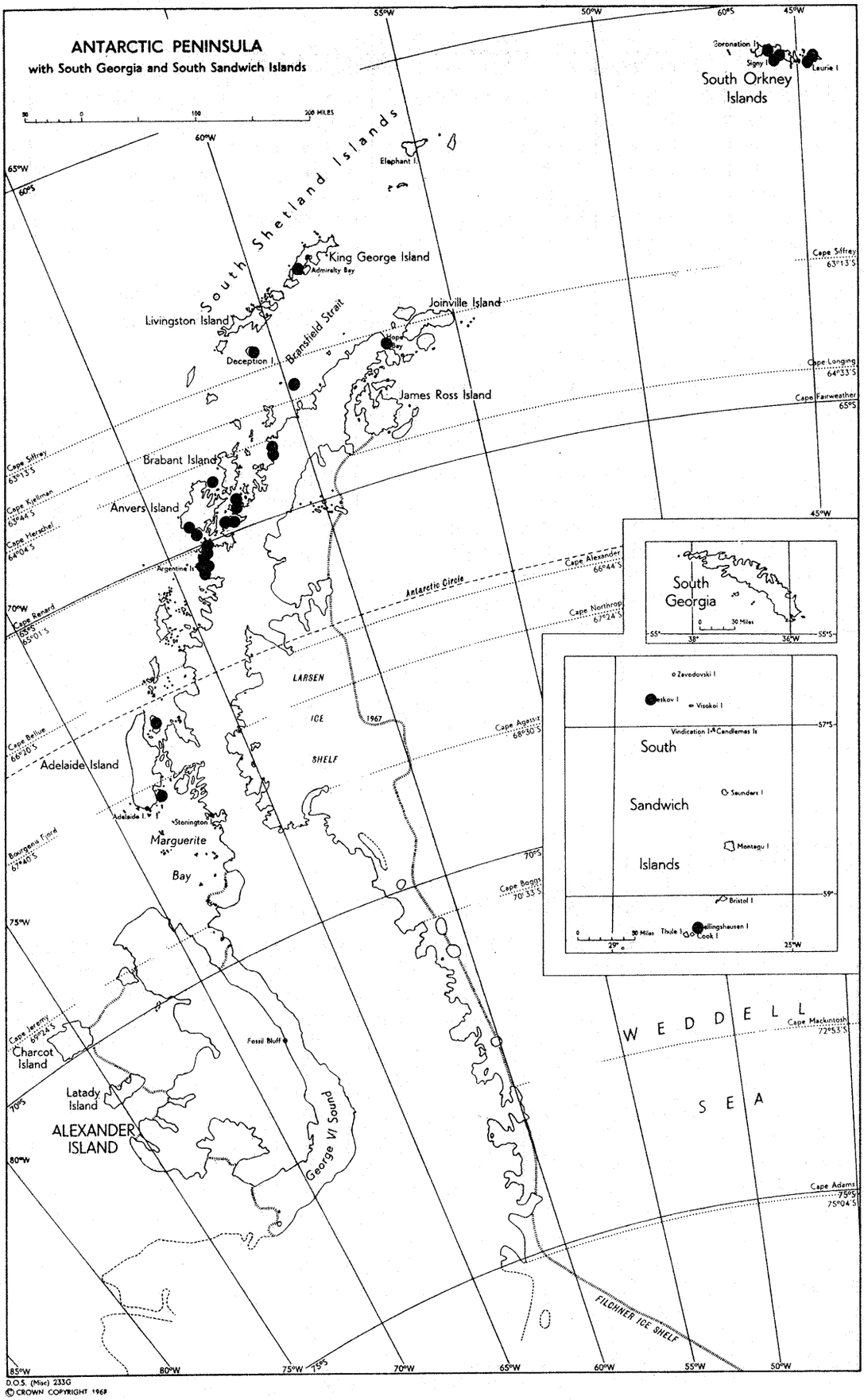


FIGURE 16
The known distribution of *Polytrichum alpestre* Hoppe within the Antarctic botanical zone.

and covering nerve, below tapering gradually into top of sheath. *Nerve* reaching to hairpoint, apparently occupying entire width of limb; border cells of lamellae in side view, smooth, typically each with a high, rounded, regular or irregular, vertical or slightly sloping projection, the latter about half the width of the cell, resulting in a deep wide sinus between projections. *Cells* above (25–) 30–45 (–53) × 10–15 μm., rectangular, arranged with their long axes at right angles to margin, incrassate, in base of sheath narrow, rectangular, thin-walled, the length to breadth at least 5 : 1. *Sexual habit* and *inflorescence* as described for genus. *Seta* erect, straight, 0·5–0·8 cm. *Capsules* erect to slightly inclined, cubical, angled in transverse section, apophysis distinct. (Fig. 15.)

Habitat. On rocky or stony ground and in rock crevices, on moist, usually sheltered, slopes or rock outcrops, also around fumaroles, sometimes forming extensive banks over deep humus. Altitude 0–400 (–1,000) ft. (*c.* 0–120 (–300) m.).

Distribution. (Fig. 16; Table VIII.)

Sector M (30°E.–30°W.): South Sandwich Islands.

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Trinity Peninsula, Danco to Fallières Coasts; Antarctic Peninsula east coast, Trinity Peninsula.

Notes. In its typical state, *P. alpestre* is readily identifiable by the compact turfs formed by the tightly matted rhizoidal felt of the stems. Depauperate or young plants with the tomentum little developed are likely to be confused with *P. juniperinum* from which they may be best distinguished by the features of the border cells of the lamellae. Bleaching of the hairpoint occurs at times and when extensive, particularly if the hairpoints are long, confusion might arise with *P. piliferum*. However, the short, rather than long basal cells of the sheath and the abrupt rather than gradual junction of the involute portion of the limb with the top of the leaf sheath will satisfactorily distinguish *P. piliferum* from *P. alpestre*.

P. alpestre is very variable in size and the degree of compactness of the turfs: the variation in the border cells has already been described in the *Notes* under the genus.

Most specimens are sterile and inflorescences are only occasionally seen. Capsules are known only from a single specimen from Anvers Island, off the Danco Coast: they were collapsed and damaged, and it is uncertain if any spores were formed.

Polytrichum alpinum Hedw.

Pogonatum alpinum (Hedw.) Roehl.

Pogonatum alpinum (Hedw.) Roehl. var. *brevifolium* (R. Br.) Brid.

Pogonatum alpinum (Hedw.) Roehl. var. *brevifolium* (R. Br.) Brid. fo. *elata* Card.

Plants forming loose to dense turfs, (1·0–) 2·0–6·0 (–13·0) cm. high, sometimes occurring as scattered stems amongst other mosses. *Stems* erect, unbranched or with 1–4 erect branches from near base, robust, densely leafy, although most stems become defoliated below, rhizoids few or absent; when moist the leaves erect to erecto-patent from appressed bases; when dry the leaves erect to weakly falcate, often most strongly falcate at stem apex, closely appressed. *Leaves* 4·0–10·0 × (in limb) (0·5–) 0·6–0·7 (–0·8) mm., from a broad sheathing base abruptly narrowing to a lanceolate to linear lanceolate limb which tapers gradually to a stout toothed point. *Margin* of limb variably toothed from about mid-leaf to point, the sides incurved but not involute over the nerve except partially when dry. *Nerve* reaching to point, occupying almost entire width of limb; border cells of lamellae in side view papillose but lacking projections. *Cells* above, 10–15 (–25) × (10–) 15–25 μm., uneven, shortly broader than long to irregularly isodiametric, somewhat thickened; in base of sheath, narrow, rectangular, thin-walled. *Sexual habit* and *inflorescence* as for genus. *Seta* erect, flexuose, 1·3–1·8 cm. *Capsules* erect to inclined, subglobose to shortly arcuate-cylindrical, rounded in transverse section, rugose when old. (Fig. 17.)

Habitat. On rocky or stony ground, sometimes in crevices of rocks, on ash and volcanic debris, around fumaroles, less commonly on soil or humus, in dry to moist, exposed to sheltered, flat to sloping situations. Altitude 0–1,000 (–2,500) ft. (*c.* 0–300 (–750) m.).

Distribution. (Fig. 18; Table IX.)

Sector M (30°E.–30°W.): South Sandwich Islands.

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Palmer to Fallières Coasts.

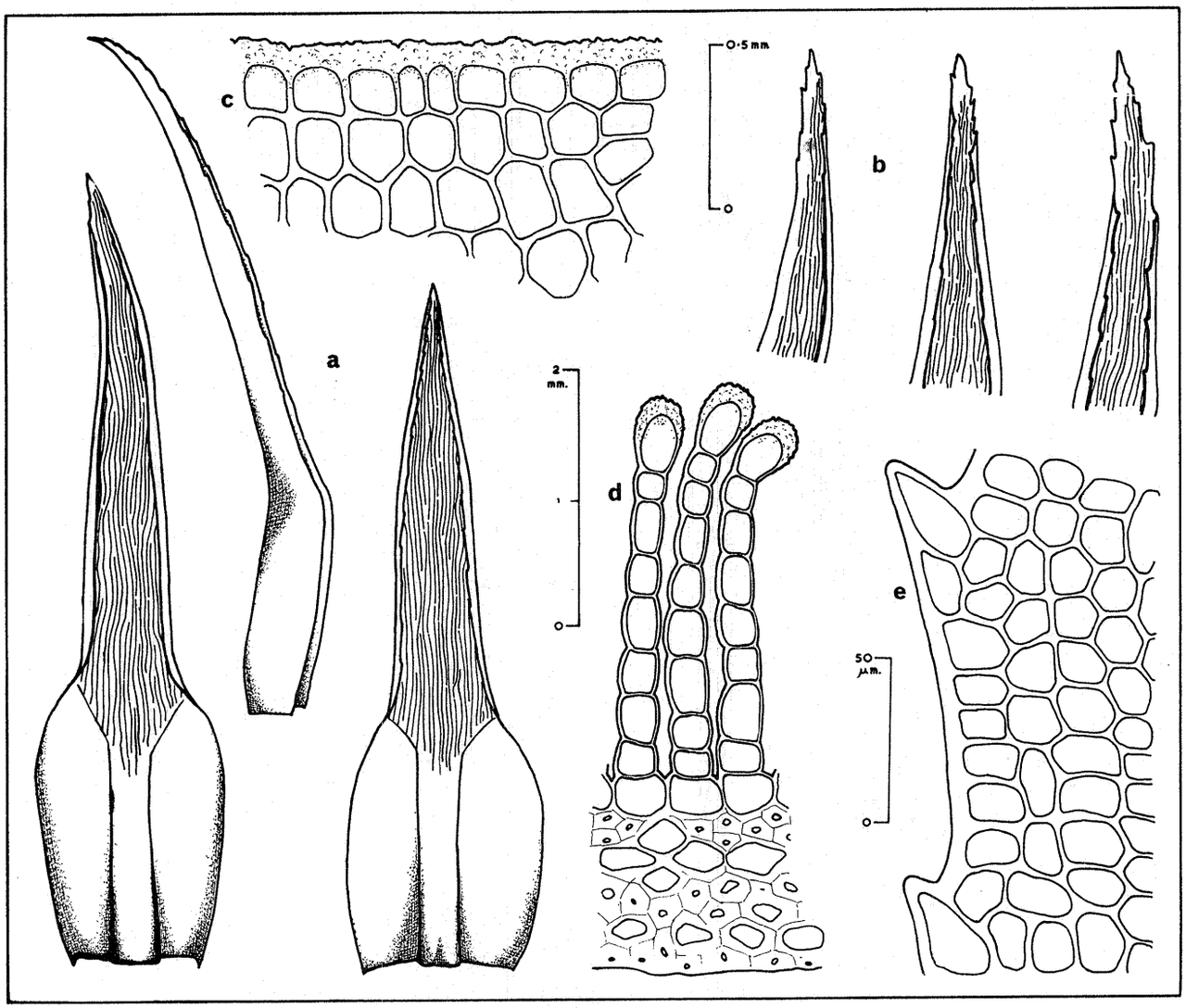
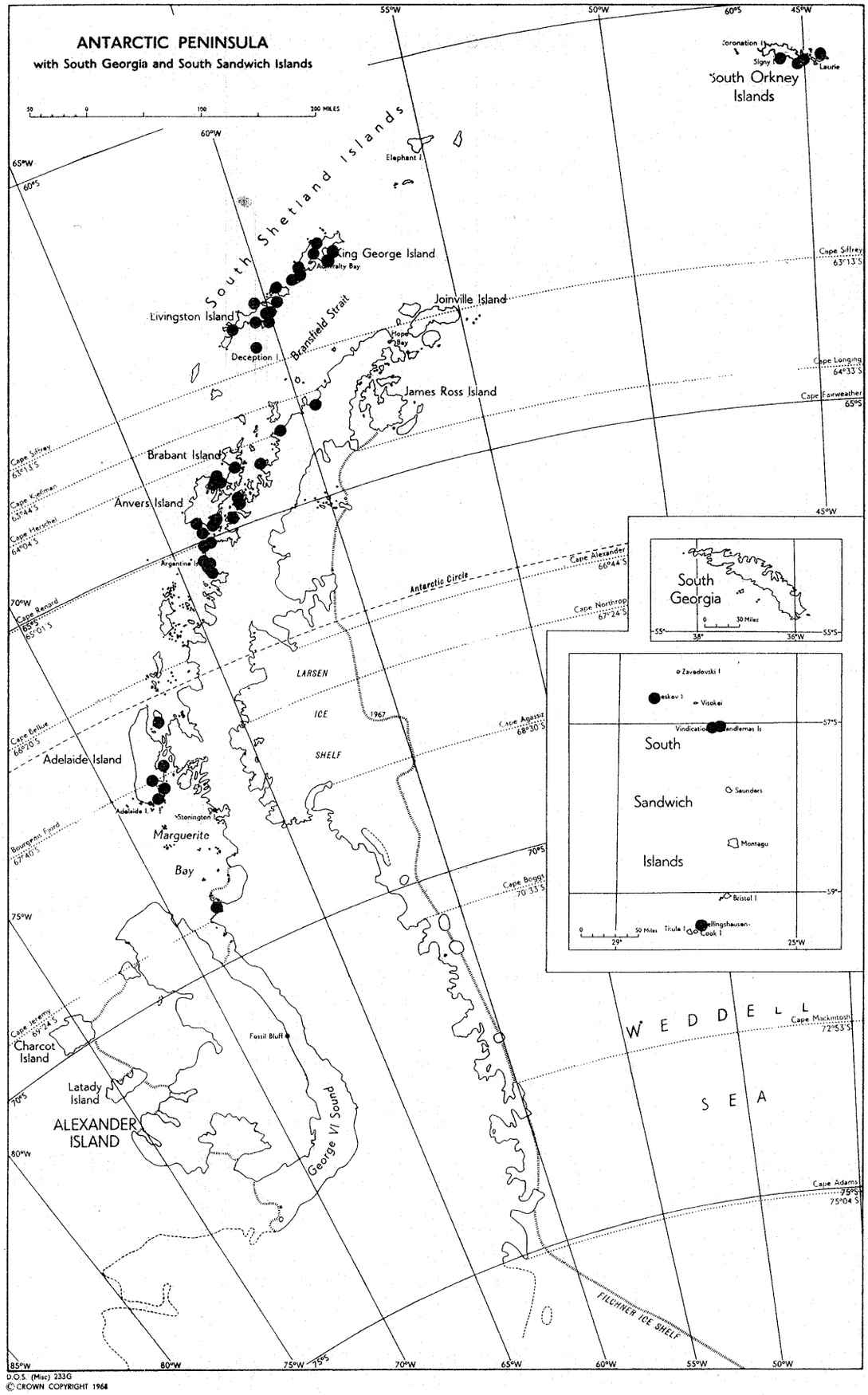


FIGURE 17
Polytrichum alpinum Hedw.
a. Leaves.
b. Apices.
c. Lamella, side view.
d. Lamellae, end view on nerve.
e. Upper cells and margin.
Scales: Upper for apices, median for leaves, lower for cells and lamellae.
Drawings from: FIDS H620/13 (Signy Island); Lindsay 45a (Livingston Island).

Notes. Polytrichum alpinum is unlikely to be confused with any other moss known from the area, as it is the only member of the genus with toothed leaves and papillose border cells to the lamellae; the remaining species have smooth border cells with projections, and entire leaves with broadly involute sides.

In the size and compactness of turf, the extent of branching and in the size and dentition of the leaves, *P. alpinum* is continuously variable. Tall robust forms usually have long leaves with well-developed teeth from about mid-leaf to apex, but these are connected by a continuous morphological series of intergrading forms to small, depauperate plants with short leaves and the dentition reduced to a few blunt teeth near the leaf apex.

Most specimens are sterile, inflorescences being seen very rarely, while capsules are only known from the South Sandwich Islands (Leskov Island), the South Orkney Islands (Lynch Island and Signy Island; personal communication from C. H. Gimingham), and the South Shetland Islands (Livingston and Deception



D.O.S. (Misc) 233G

FIGURE 18
The known distribution of *Polytrichum alpinum* Hedw. within the Antarctic botanical zone.

Islands). The majority of capsules were immature and mishapen but dehisced capsules of normal appearance have been seen on Deception Island.

Polytrichum juniperinum Hedw.

Polytrichum subpiliferum Card.

Plants forming loose turfs or gregarious, 2·0–6·0 (–10·0) cm. high. *Stems* erect and usually unbranched, robust, densely leafy, except towards the base where abundant rhizoids form a tomentum, the latter only rarely extending into the lower part of the leafy region; when moist the leaves erect to erecto-patent from appressed bases; when dry the leaves mostly erect and appressed, sometimes a little falcate, rarely almost

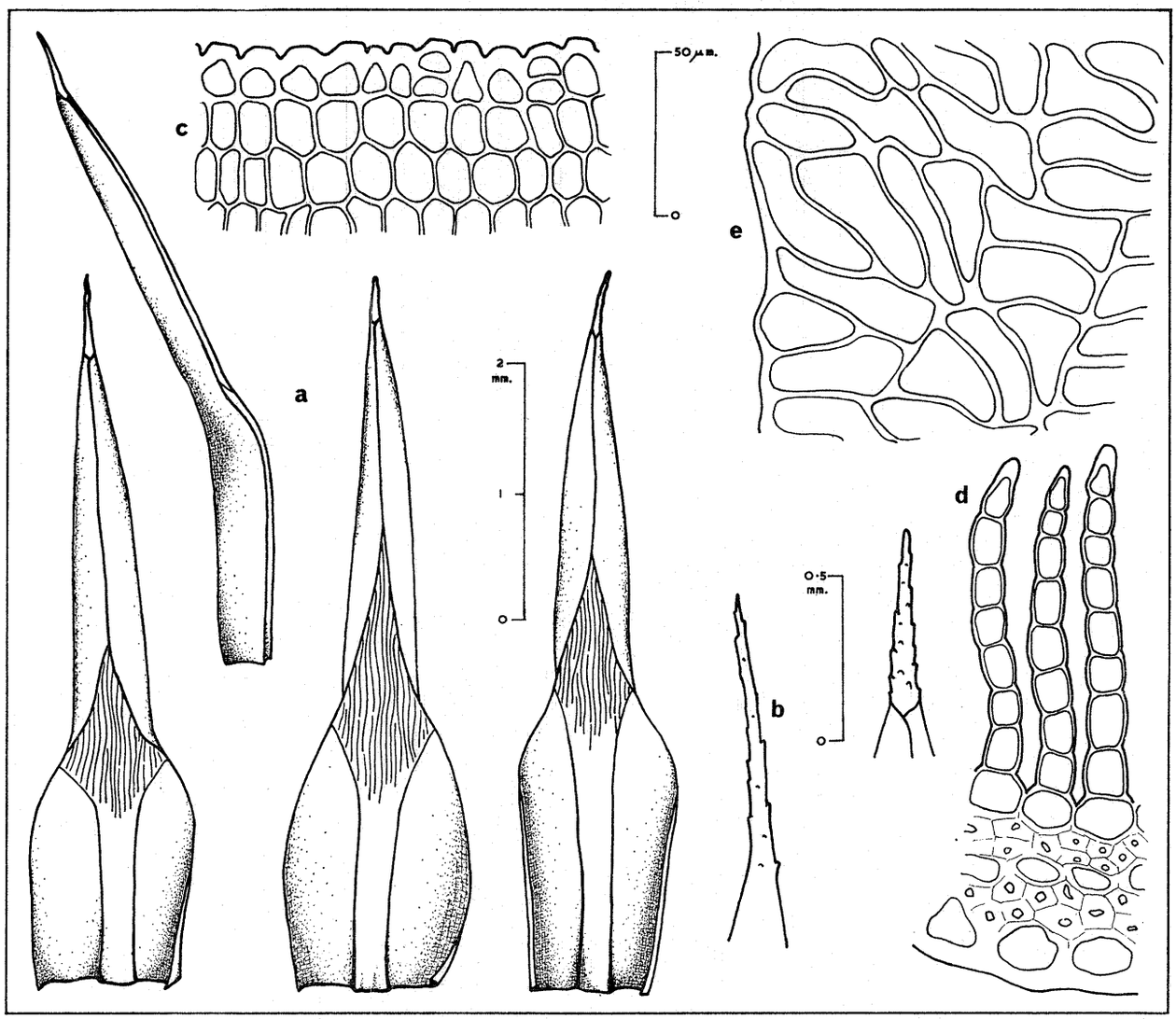


FIGURE 19

Polytrichum juniperinum Hedw.

a. Leaves.
b. Apices.
c. Lamella, side view.
d. Lamellae, end view on nerve.
e. Upper cells and margin.

Scales: Upper for cells, median for leaves, lower for apices.

Drawings from: Bennett s.n. (Deception Island); BGLE 1516 (Bourgeois Fjord); Longton 1115 (Signy Island).

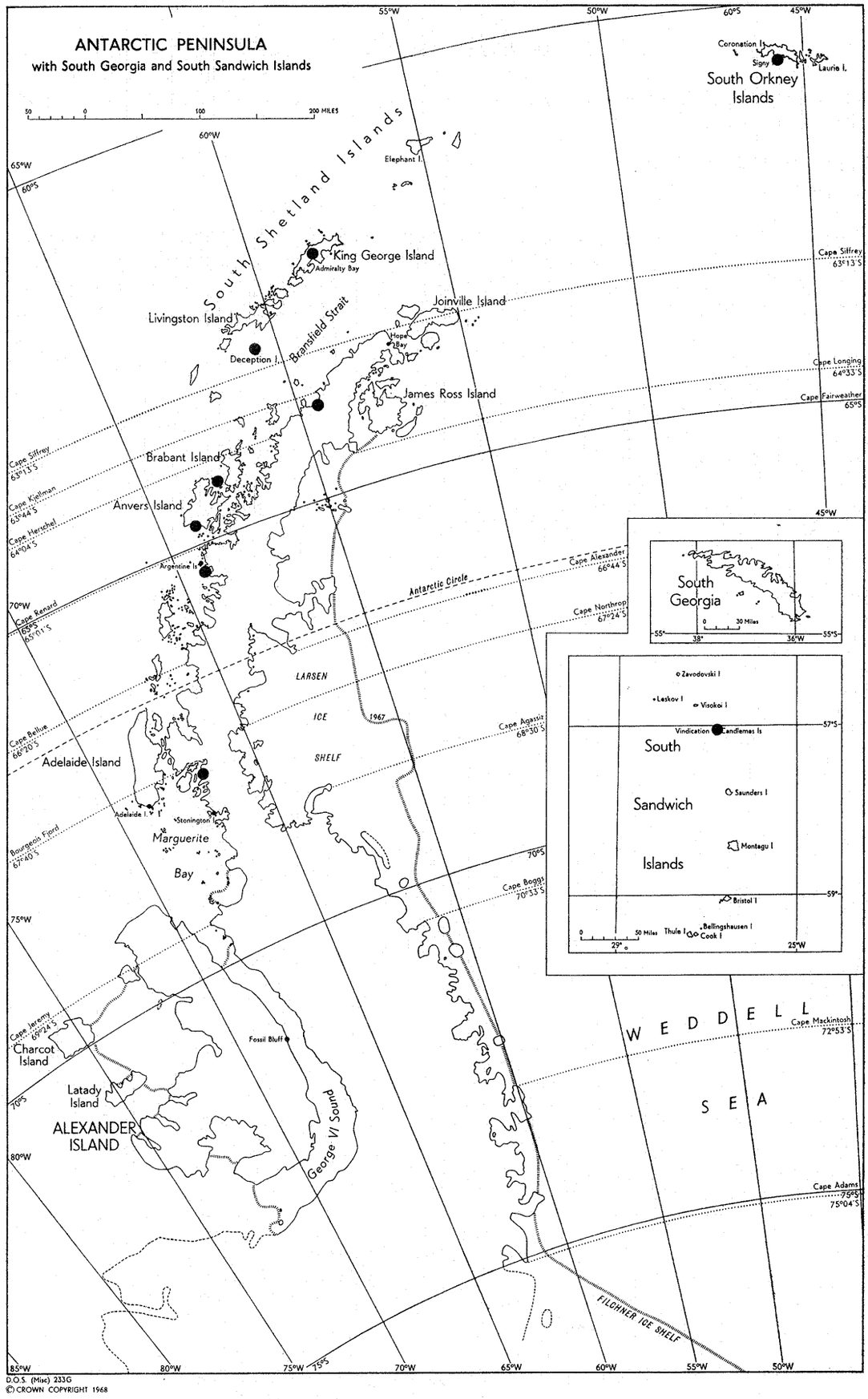


FIGURE 20

The known distribution of *Polytrichum juniperinum* Hedw. within the Antarctic botanical zone.

squarrose, weakly to moderately recurved. *Leaves* 4·0–5·6 (–6·5) × (in limb) 0·5–0·8 mm., from a sheathing base, abruptly narrowing to a lanceolate limb which is often slightly waisted at junction with base, above gradually tapering into a short, stout, toothed, hairpoint. *Margin* of limb entire or irregularly crenulate, the sides widely involute and covering nerve, below tapering gradually into top of sheath. *Nerve* reaching to hairpoint, apparently occupying entire width of limb; border cells of lamellae, in side view smooth, typically each with a low ± flat-topped vertical projection, the latter almost or wholly the full width of the cell, resulting in a shallow, narrow sinus between projections. *Cells* above, 40–60 (–80) × 10–15 μm. rectangular, arranged with their long axes at right angles to the margin, thickened; in base of sheath narrow, rectangular, thin-walled, the length to breadth at least 5 : 1. *Sexual habit* unconfirmed, presumed dioecious. *Perichaetia* not recorded. *Perigonia* as described for genus. *Sporophytes* not known. (Fig. 19.)

Habitat. On dry ash or cinders, on stony slopes and rock ledges, also in flushes and near fumaroles. Altitude 0–250 ft. (*c.* 0–75 m.).

Distribution. (Fig. 20; Table X.)

Sector M (30°E.–30°W.): South Sandwich Islands.

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Palmer to Graham and Fallières Coasts.

Notes. Polytrichum juniperinum is unlikely to be confused with any other species of the genus except *P. alpestre* from which it is usually distinguished by its loose turf, lacking the dense white tomentum so characteristic of that species. *P. juniperinum* may also be identified by the characteristic shape of the majority of the border cells of the lamellae, but it should be noted that, although in a minority, border cells characteristic of *P. alpestre* also occur.

Apart from size, and the particulars of the border cells given in the *Notes* under the genus, it is not very variable in its characters.

Male plants are, so far, known from a single specimen from Signy Island.

Polytrichum piliferum Hedw.

Polytrichum antarcticum Card.

Plants forming loose turfs or gregarious, 1·0–4·0 (–6·0) cm. high. *Stems* erect and normally unbranched, moderately robust, leaves crowded towards the apex forming a comose shoot or more loosely arranged and extending over much of the stem, usually very reduced to absent towards the base where rhizoids may be abundant; rhizoids not forming an extensive tomentum and only rarely extending into the leafy region; when moist the leaves erect to erecto-patent from appressed bases; when dry the leaves erect and closely appressed. *Leaves* 2·0–3·5 (–4·0) mm. (excluding hairpoint) × (in limb) 0·5–0·7 mm., from a broad, mostly short, sheathing base, abruptly narrowing to a linear to lanceolate limb, above tapering ± abruptly into a stout, flexuose hairpoint, 0·6–1·2 mm. long, hairpoint hyaline for most of its length but often red at base, rough all over, having stout cylindrical papillae below, and slender teeth above. *Margin* of limb irregular, but regularly crenate, the sides widely involute and covering nerve; below tapering rather suddenly into top of sheath. *Nerve* reaching to hairpoint, apparently occupying entire width of limb; border cells of lamellae, in side view smooth, typically each with an irregularly rounded vertical or slightly sloping projection, the latter about half the width of the cell, resulting in a wide sinus between projections. *Cells* above (35–) 45–60 (–75) × (10–) 15–25 μm., shortly rectangular, arranged with their long axes at right angles to margin, thickened; in base of sheath shortly rectangular to quadrate, thin-walled, less than 5 : 1 length to breadth. *Sexual habit* and *inflorescence* as described for genus. *Sporophytes* unknown. (Fig. 21.)

Habitat. On normally dry, often exposed, rocky or stony ground of scree slopes or rock ledges, also on ash and around fumaroles. Altitude 0–750 (–2,000) ft. (*c.* 0–225 (–600) m.).

Distribution. (Fig. 22; Table XI.)

Sector M (30°E.–30°W.): South Sandwich Islands.

Sector S (30°W.–90°W.): South Shetland Islands; Antarctic Peninsula west coast, Palmer to Graham Coasts; Antarctic Peninsula east coast, Foyn Coast.

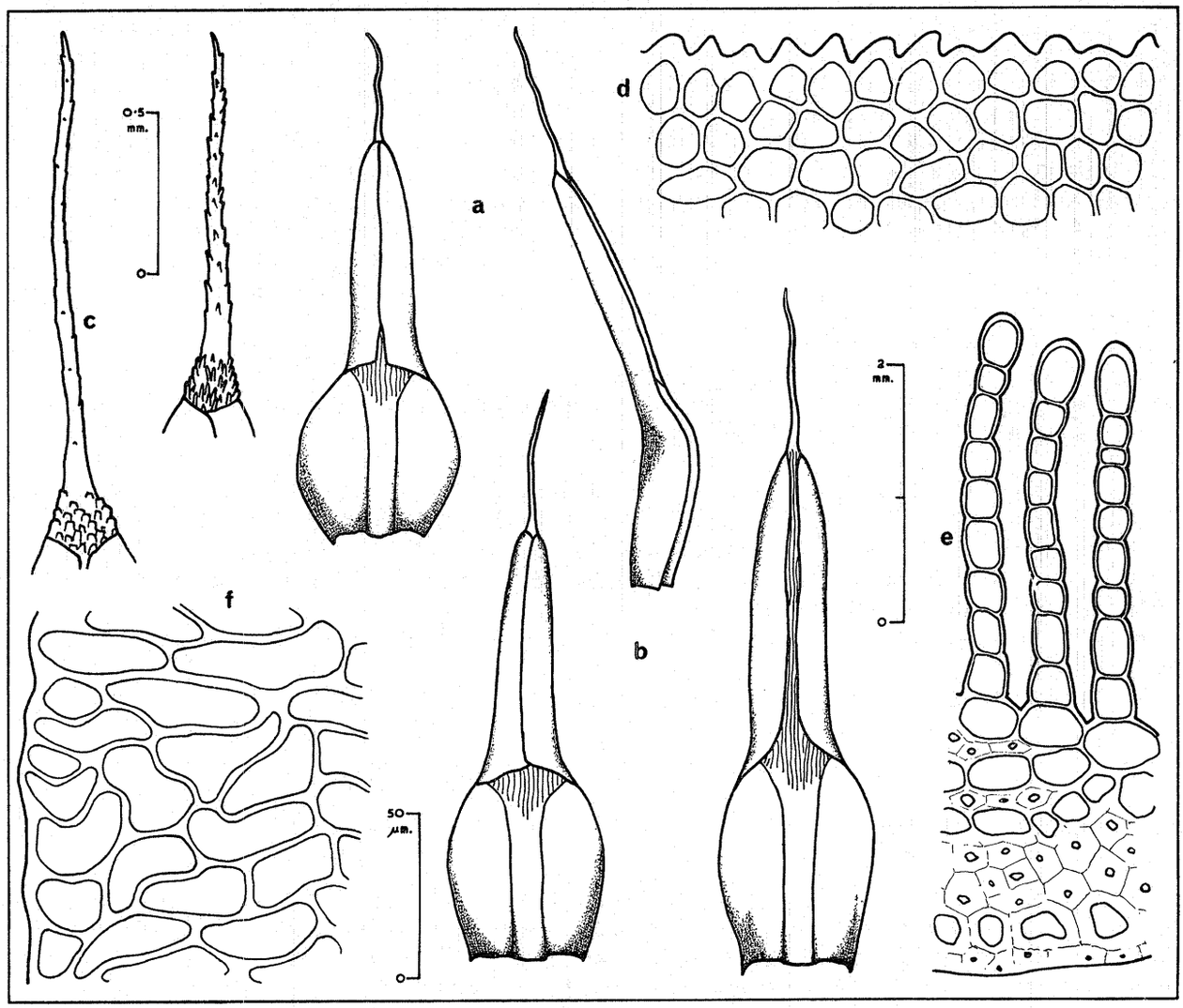


FIGURE 21

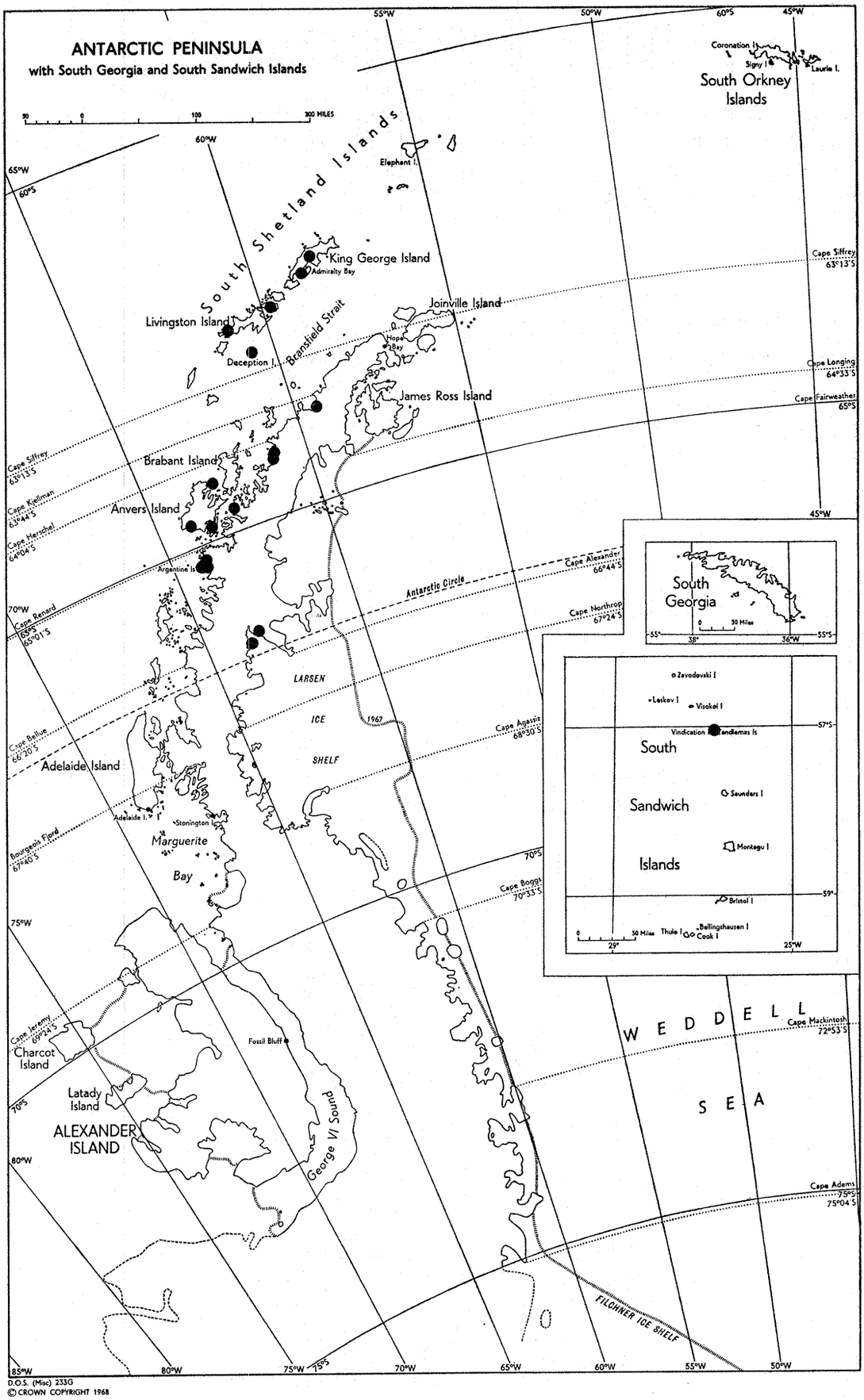
Polytrichum piliferum Hedw.

a, b. Leaves.
c. Apices.
d. Lamella, side view.
e. Lamellae, end view on nerve.
f. Upper cells and margin.
Scales: Upper for apices, median for leaves, lower for cells and lamellae.
Drawings from: Bennett s.n. (King George Island); Corner 688 (Mount Demaria); Tindal 24 (Cabinet Inlet).

Notes. Polytrichum piliferum presents no difficulty in identification since the long, flexuose, hyaline hairpoint abruptly produced from the leaf apex is quite unlike the short, stout point found in *P. juniperinum* and *P. alpestre*, the only two species with which it might be confused. However, the present species is further distinguished by the shortly rectangular to quadrate cells forming the base of the leaf sheaths in contrast to the long, narrow, rectangular cells of *P. juniperinum* and *P. alpestre*.

Although variable in stature and leaf dimensions, as well as in the form of the border cells as discussed in the *Notes* under the genus, *P. piliferum* shows little significant variation in its other characters.

Male plants appear to be more frequent than female plants, the latter being, so far, only known from a single locality at Spring Point on the Danco Coast.



D.O.S. (Misc) 233G

FIGURE 22
The known distribution of *Polytrichum piliferum* Hedw. within the Antarctic botanical zone.

4. *Psilopilum* Brid.

Moderately robust, turf-forming mosses with a dull green to yellow-green colour. Stems erect and normally unbranched, leafy for most of their length. Leaves large, oblong, rather rigid, not divided into morphologically distinct basal and limb regions. Nerve single, strong, bearing segmented lamellae on its upper surface, the border cells undifferentiated. Cells smooth, ± isodiametric to shortly rectangular. Sexual habit not confirmed, presumed dioecious, perigonia terminal, discoid. Remainder not known.

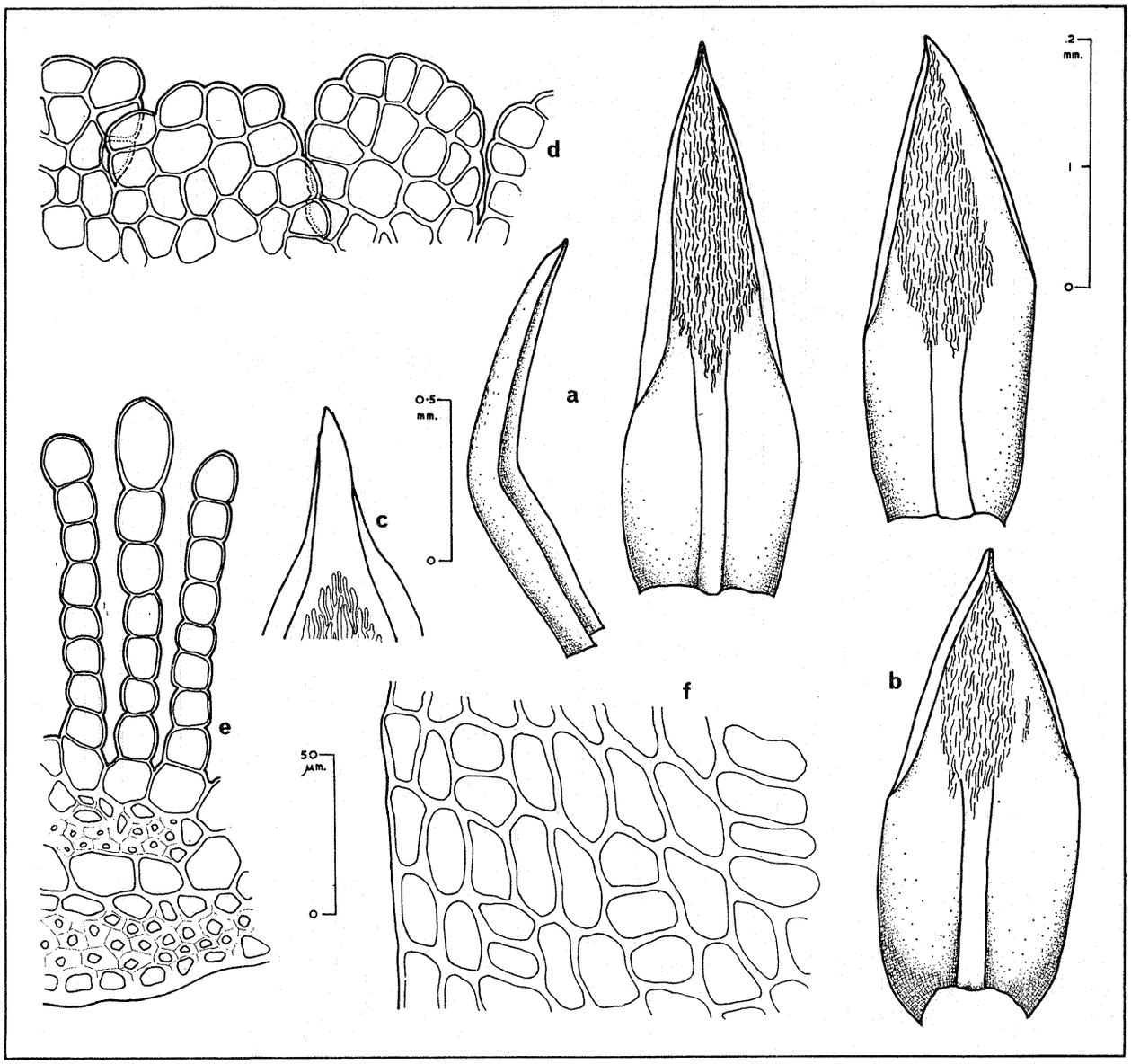


FIGURE 23
Psilopilum antarcticum (C. Müll.) Par.
a, b. Leaves.
c. Apex.
d. Lamella, side view.
e. Lamellae, end view on nerve.
f. Upper cells with margin.
Scales: Upper for leaves, median for apex, lower for cells and lamellae.
Drawings from: Holdgate 829a (Bellingshausen Island); Longton 782 (Candlemas Island); Longton 1088 (Signy Island).

Notes. This genus, represented in the area by a single species, *P. antarcticum*, is a member of the family Polytrichaceae. It may readily be recognized by the presence of segmented lamellae on the upper surface of the nerve, i.e. the lamellae in side view are periodically divided, almost to base, into a number of segments which are held together by a narrow continuous basal portion. Although very similar in appearance to species of *Polytrichum* no confusion should arise since all the species of that genus have unsegmented lamellae and limbed leaves, the leaf of *P. antarcticum* not having the upper portion distinctly narrower than the base.

Psilopilum antarcticum (C. Müll.) Par.

Catharinea antarctica C. Müll.

Plants forming moderately compact turfs, 1·0–3·0 cm. high, often occurring as scattered stems amongst other mosses. *Stems* erect and usually simple, leafy for most of their length or with leaves grouped towards the apex forming a comal shoot, rhizoids confined to base of stem; when moist the leaves erecto-patent to patent; when dry somewhat shrunken and incurved especially towards the stem apices. *Leaves* (2·8–) 3·0–4·0 (–4·3)×0·9–1·4 (–1·8) mm., oblong from a broad, amplexicaul base, tapering gradually from or above mid-leaf to an acute, mucronate apex; in contour strongly concave with the sides upturned to weakly incurved, particularly towards the apex which is rendered ± cucullate. *Margin* plane and entire, often slightly irregular towards apex. *Nerve* broad, approximately one-quarter width of leaf, excurrent in a short mucro, sometimes ceasing in or just below the point, lamellate and flanked on each side in upper part of leaf by a 2-cell thick portion of blade which also bears lamellae; lamellae wavy in surface view, in side view with a continuous basal portion 2–3 cells high and an upper segmented portion 5–9 cells wide; border cells smooth and undifferentiated. *Cells* above, 11·5–18·5 (–25·3)×11·5–18·5 (–25·3) μm., uneven, mostly ± isodiametric, sometimes shortly rectangular, normally incrassate; in base quadrate to shortly rectangular, thin-walled, the length to breadth 1–3 : 1. Remainder as described for genus. (Fig. 23.)

Habitat. On dry ash slopes, on flushed ground and in moist areas around fumaroles. Altitude 0–400 (–600) ft. (*c.* 0–120 (–180) m.).

Distribution. (Fig. 24; Table XII.)

Sector M (30°E.–30°W.): South Sandwich Islands.

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands.

Notes. As indicated in the *Notes* under the genus, *P. antarcticum* is only likely to be mistaken for a species of *Polytrichum* but may be readily recognized by its lamellate nerve bearing segmented lamellae as well as by the absence of limbed leaves.

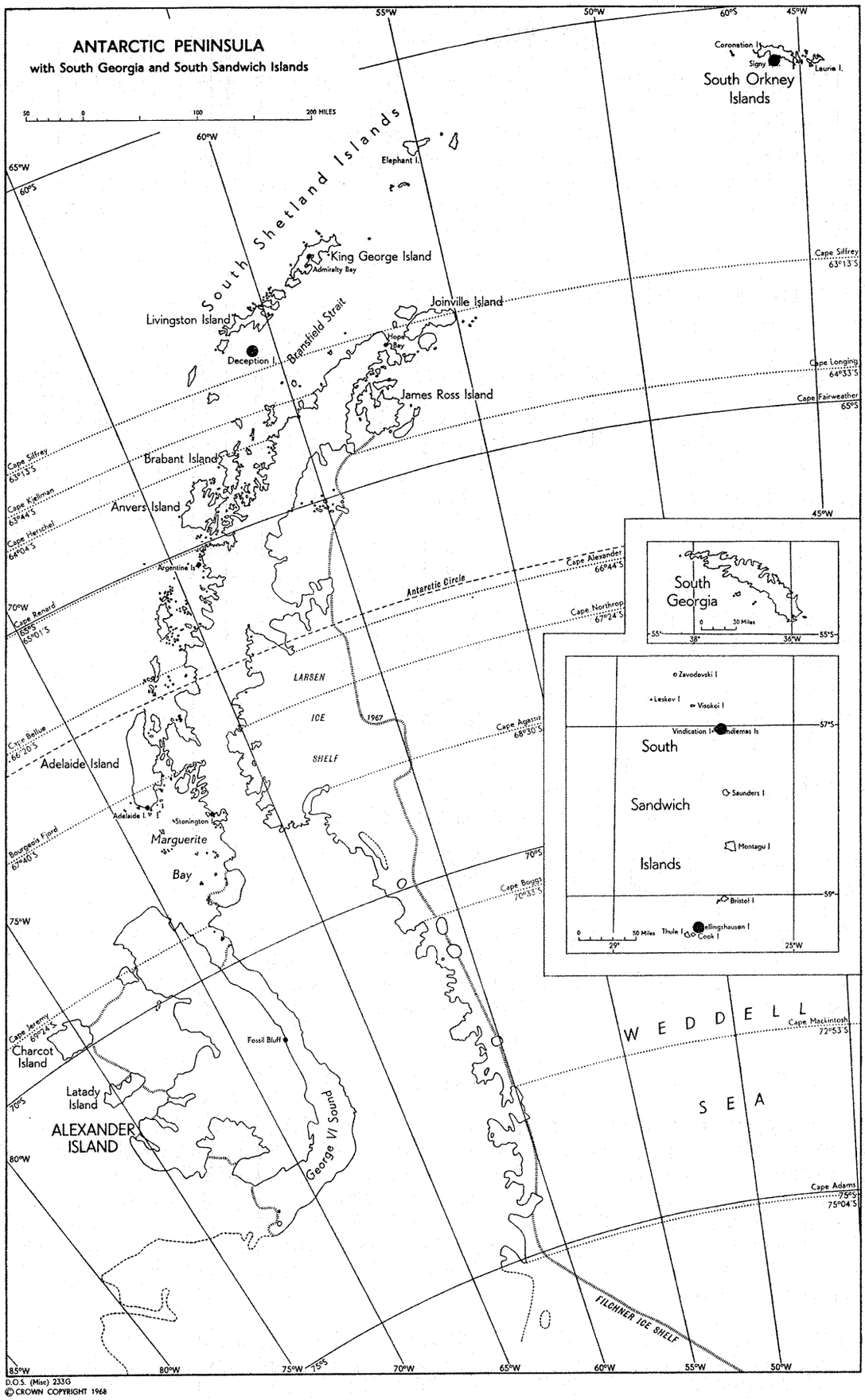
Some variability occurs in the arrangement of the nerve at the leaf apex and in the acuteness of the apex itself, as well as in the general stature of the plants. Moreover, some leaves bear small flange-like outgrowths on the dorsal surface of the nerve but these may not be present in every specimen.

Most specimens are sterile, male plants being only occasionally seen.

5. *Sarconeurum* Bryhn

Medium to small cushion or turf-forming mosses, in colour dark green to yellow or brownish green above, brown to red below. Stems slender, erect, simple or with a few erect branches, densely leafy throughout, matted below due to a dense felt of rhizoids. Leaves small to medium in size, ovate to elliptical, gradually or abruptly narrowed to a fragile and readily falling, long, slender, channelled apex which is solid and multistratose for a variable distance below the differentiated tip. Nerve single, strong, vanishing in subula. Cells heavily papillose due to an abundance of knob- or crescent-shaped papillae, mostly isodiametric above, rectangular in base. Sexual habit uncertain. Perichaetia terminal; perigonia terminal or lateral. Sporophytes unknown.

Notes. This genus, belonging to the family Pottiaceae is, so far as is known, endemic to the Antarctic botanical zone where it is represented by two species. Plants of these species may be readily distinguished from all other Antarctic mosses by the form of their leaf apices.



D.O.S. (Misc) 233G

FIGURE 24
The known distribution of *Psilopilum antarcticum* (C. Müll.) Par. within the Antarctic botanical zone.

KEY TO SPECIES

Apex solid for more than one-quarter of its length; the junction between the upper chlorophyllose and basal hyaline leaf cells gradual, not sharply defined.. *S. glaciale*

Apex solid for less than one-quarter of its length; the junction between the upper chlorophyllose and basal hyaline leaf cells abrupt.. .. .. .. *S. tortelloides*

Sarconeurum glaciale (C. Müll.) Card. et Bryhn

Didymodon ? *glacialis* Hook. f. & Wils.
Sarconeurum antarcticum Bryhn

Plants forming dense, irregular-sized cushions or low turfs 1·0–2·0 (–3·0) cm. high. *Stems* erect or ascending, usually with a few erect branches, densely leafy throughout; rhizoids abundant and extending high amongst the leaves, matting below; when moist the leaves patent to strongly squarrose; when dry the leaves somewhat shrunken, the upper loosely to tightly appressed with their apices incurved and the nerve often prominent and shining, the lower variably appressed to widely spreading. *Leaves* 1·0–2·0 (–2·7)×0·2–0·6 mm., very fragile and mostly incomplete except those of the comal group, from an ovate to elliptical, sometimes ± oblong, appressed base, abruptly contracted near or above mid-length into an elongated subula; the subula channelled except for a solid, cylindrical, multistratose region

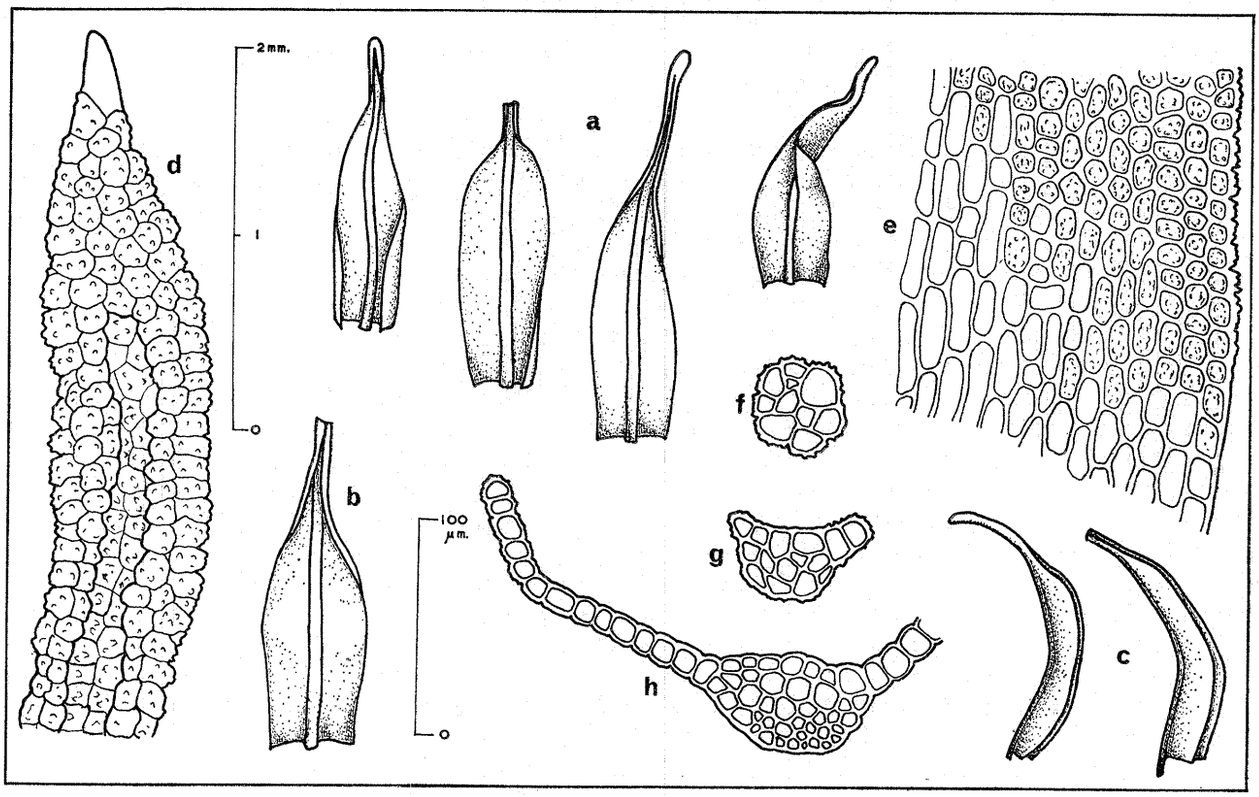


FIGURE 25
Sarconeurum glaciale (C. Müll.) Card. et Bryhn
a, b, c. Leaves. f. Transverse section through leaf apex.
d. Apex. g. Transverse section near mid-leaf.
e. Basal cells. h. Transverse section through base of leaf.
Scales: Upper for leaves, lower for apex, cells and sections.
Drawings from: Steere and Greene 65/56 (Ross Island); Steere and Greene 65/32 (Ross Island).

more than one-quarter of its length situated immediately below the tip, of ± even width throughout or expanding in the solid region thus rendering it clavate. *Margin* plane or reflexed, entire. *Nerve* single, strong, prominent on back below, vanishing in lower part of subula. *Cells* above, 11·5–20·5 (–27·6)× 11·5–20·5 (–27·6) μm., ± even, mostly isodiametric, quadrate to rounded quadrate, not or little incrassate, heavily papillose and obscure because of abundance of knob- or crescent-shaped papillae, less commonly clear; in solid region of subula very obscure, isodiametric, arranged in 3–4 layers, in tip differentiated, smooth, narrow, elongated, pellucid; in base gradually changing from isodiametric and chlorophyllose to rectangular and hyaline, along an ill-defined line at ± the same level throughout or lower at the leaf margin than at the nerve. *Sexual habit* uncertain. *Perichaetia* terminal, bracts similar to the leaves, paraphyses simple. *Perigonia* terminal or lateral, gemmiform, bracts differing little from the leaves, paraphyses clavate. *Sporophytes* unknown. (Fig. 25.)

Habitat. In dry, sometimes wet, exposed or sheltered, rock faces and crevices of ledges and outcrops, also on silt, sand, volcanic cinders and rock detritus, rarely on humus, sometimes in vicinity of nesting birds. Altitude 10–900 (–3,900) ft. (*c.* 3–90 (–990) m.).

Distribution. (Figs. 26 and 27; Table XIII.)

Sector M (30°E.–30°W.): Dronning Maud Land, Princess Astrid Coast, "Ekberget", Tottanfjella.

Sector S (30°W.–90°W.): South Orkney Islands; South Shetland Islands; Antarctic Peninsula west coast, Graham, Loubet and Fallières Coasts; Antarctic Peninsula east coast, Trinity Peninsula, Wilkins Coast.

Sector B (90°W.–150°W.): Marie Byrd Land, Ford Ranges.

Sector R (150°W.–150°E.): King Edward VII Land, Rockefeller Mountains; Transantarctic Mountains; Victoria Land, Ross Island to "Newnes Land".

Sector W (150°E.–90°E.): Wilkes Land, Budd Coast, Knox Coast; Queen Mary Coast.

Sector E (90°E.–30°E.): Ingrid Christensen Coast.

Notes. Sarconeurum glaciale may be distinguished readily from all other Antarctic mosses, except the next species, by the distinctive form of its leaf apex, which, in spite of its fragile nature is usually present on some leaves of the comal group. The matting of the stems by the abundant rhizoids is also very characteristic. The cushions or turfs are often heavily overgrown by lichens.

S. glaciale is variable in stature and size of leaf, plants from the Antarctic Peninsula and off-lying islands being larger than most of the specimens seen from continental Antarctica. However, it should be noted that the broken state of most mature leaves makes leaf dimensions difficult to assess, and the lengths given in the description apply mainly to those situated in or near the comal group.

Although widespread, with female plants being known from numerous, scattered localities throughout its range, male plants are known only with certainty from Lagotellerie Island, in Marguerite Bay. Savicz-Ljubitskaja and Smirnova (1961) consider *S. glaciale* to be "pseudo-monoecious" and reported the presence of dwarf male plants in material from the Queen Mary Coast and the Knox Coast. However, this condition was not observed in any material examined during the course of the present work which included the material from the Queen Mary and Knox Coasts.

A few other localities for *S. glaciale* have been reported in the literature in addition to the localities given in Figs. 26 and 27 and Table XIII; they have not been included as it has not been possible to examine the specimens. However, it should be noted that the correctness of their identification is not in question. Thus, Savicz-Ljubitskaja and Smirnova (1961) listed the moss as occurring in the Oygarden Group of islands (Sector E, at 66°58′S., 57°25′E.) while Cardot (1910) reported the species from Cape Irizar in South Victoria Land (Sector R, at 75°33′S., 162°57′E.) and from Cape Royds and Cape Barne on Ross Island (Sector R, at 77°33′S., 166°09′E. and 77°35′S., 166°13′E., respectively).

Sarconeurum tortelloides S. W. Greene

Plants forming low, dense turfs, 0·5–1·0 cm. high. *Stems* erect, simple or with a few erect branches, densely leafy throughout, rhizoids abundant and extending high amongst the leaves, matting below; when moist the leaves mostly erect to erecto-patent, some more widely spreading; when dry the leaves loosely to tightly appressed, the upper incurved in the comal group with nerve prominent and shining. *Leaves* 2·4–5·2×0·5–0·7 mm., very fragile and mostly incomplete except in the comal group, from a narrowly ovate to elliptical base, with a slight but abrupt constriction near mid-leaf interrupting the gradual

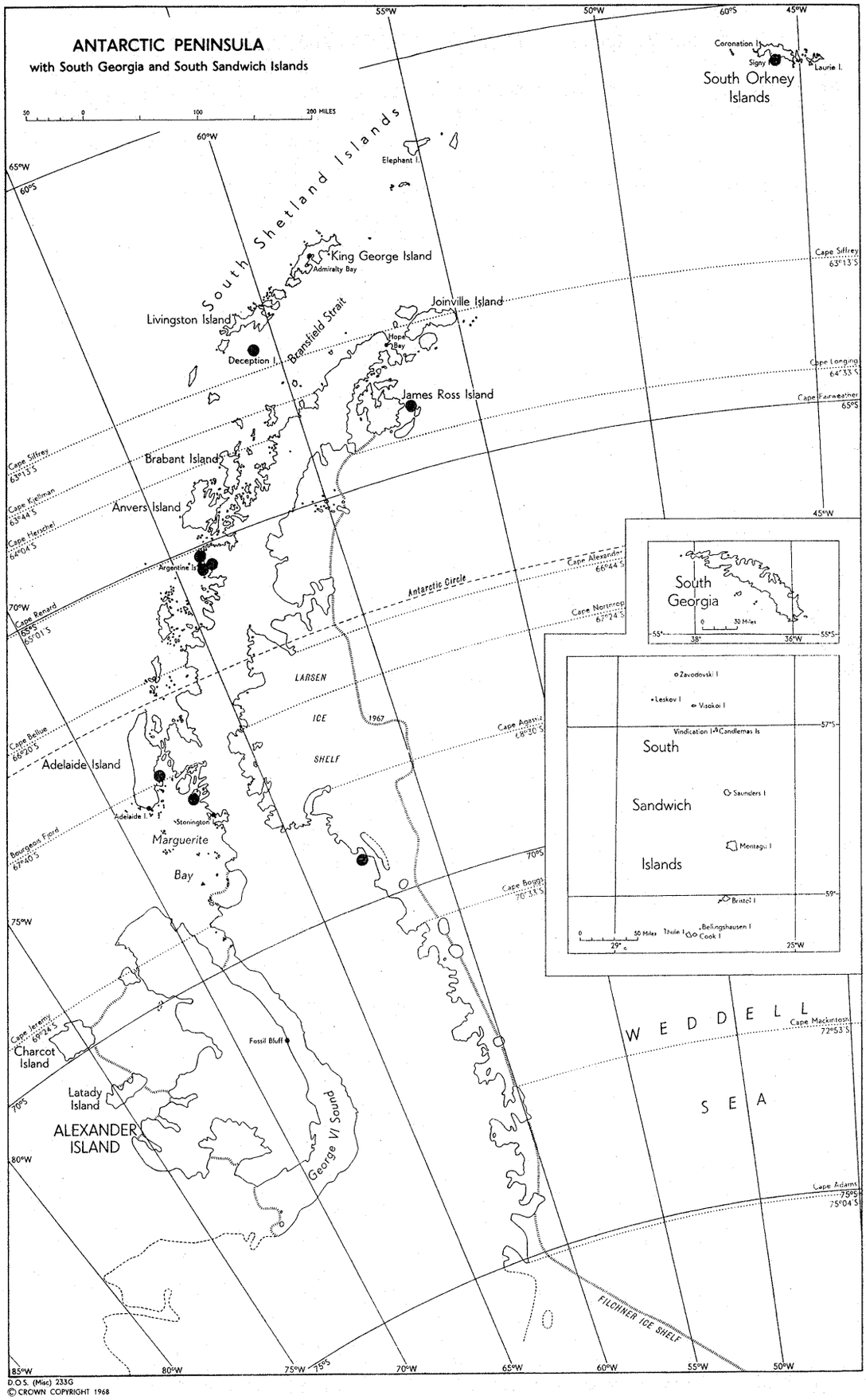


FIGURE 26

The known distribution of *Sarconeurum glaciale* (C. Müll.) Card. et Bryhn within the Antarctic Peninsula part of the Antarctic botanical zone.

taper to the elongated narrow apex; the apex channelled except for a solid, cylindrical, multistratose region less than one-quarter of its length, situated immediately below the tip, decreasing in width throughout. *Margin* plane, entire although appearing crenulate from projecting papillae. *Nerve* single, strong, vanishing in lower part of apex. *Cells* above, 6·8–18·0×6·8–18·0μm., $\pm$ even, mostly isodiametric, quadrate to rounded quadrate, not or little incrassate, normally heavily papillose and obscure due to an abundance of knob-shaped papillae; in solid region of apex very obscure, isodiametric, arranged in 2–3 layers, in the tip differentiated, smooth, narrow, elongated, pellucid; in base abruptly changing from isodiametric

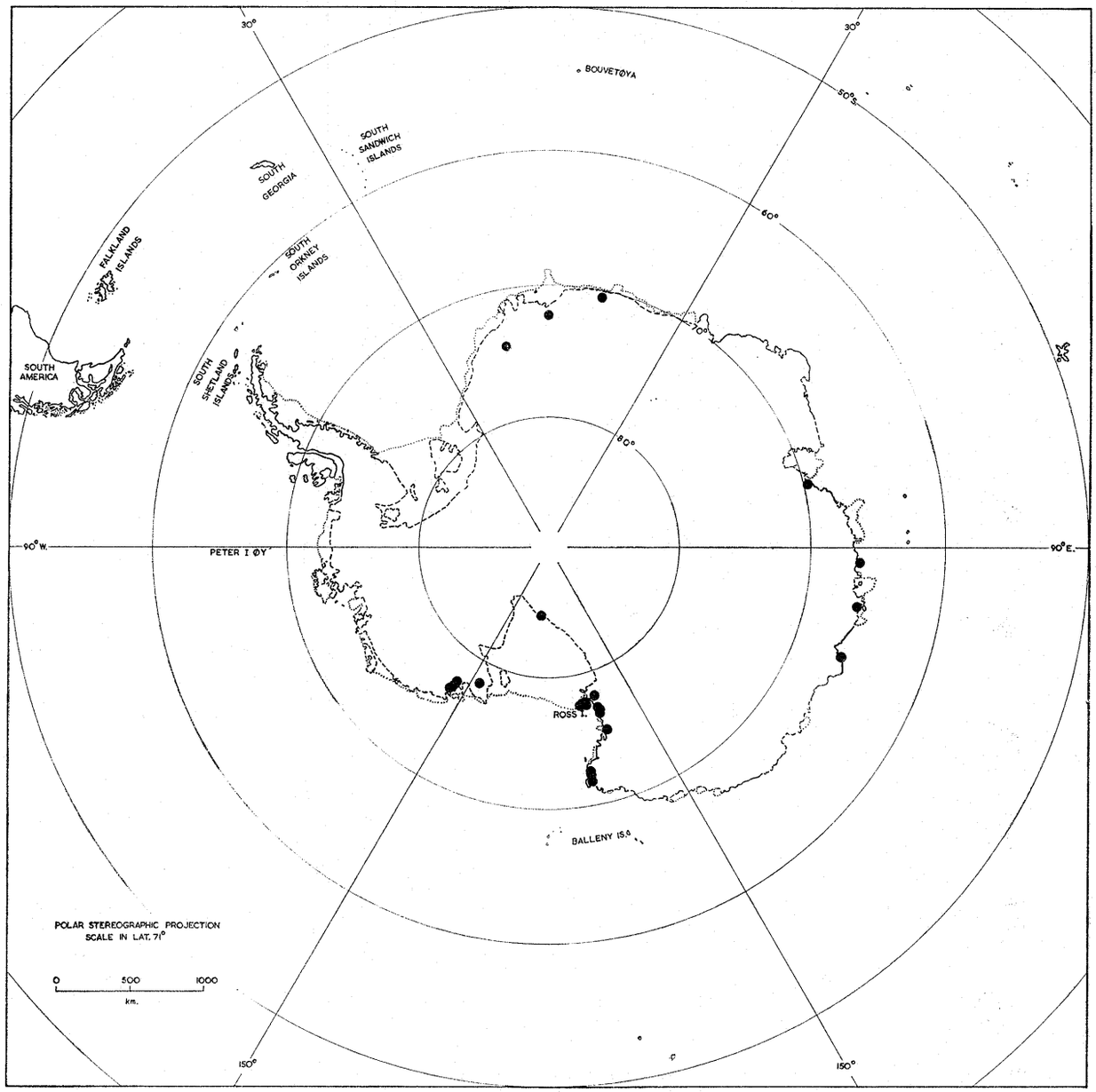


FIGURE 27

The known distribution of *Sarconeurum glaciale* (C. Müll.) Card. et Bryhn within the continental part of the Antarctic botanical zone.

and chlorophyllose to rectangular and hyaline along a line consistently higher at leaf margin than at nerve. Remainder unknown. (Fig. 28.) A latin diagnosis is provided on p. 54.

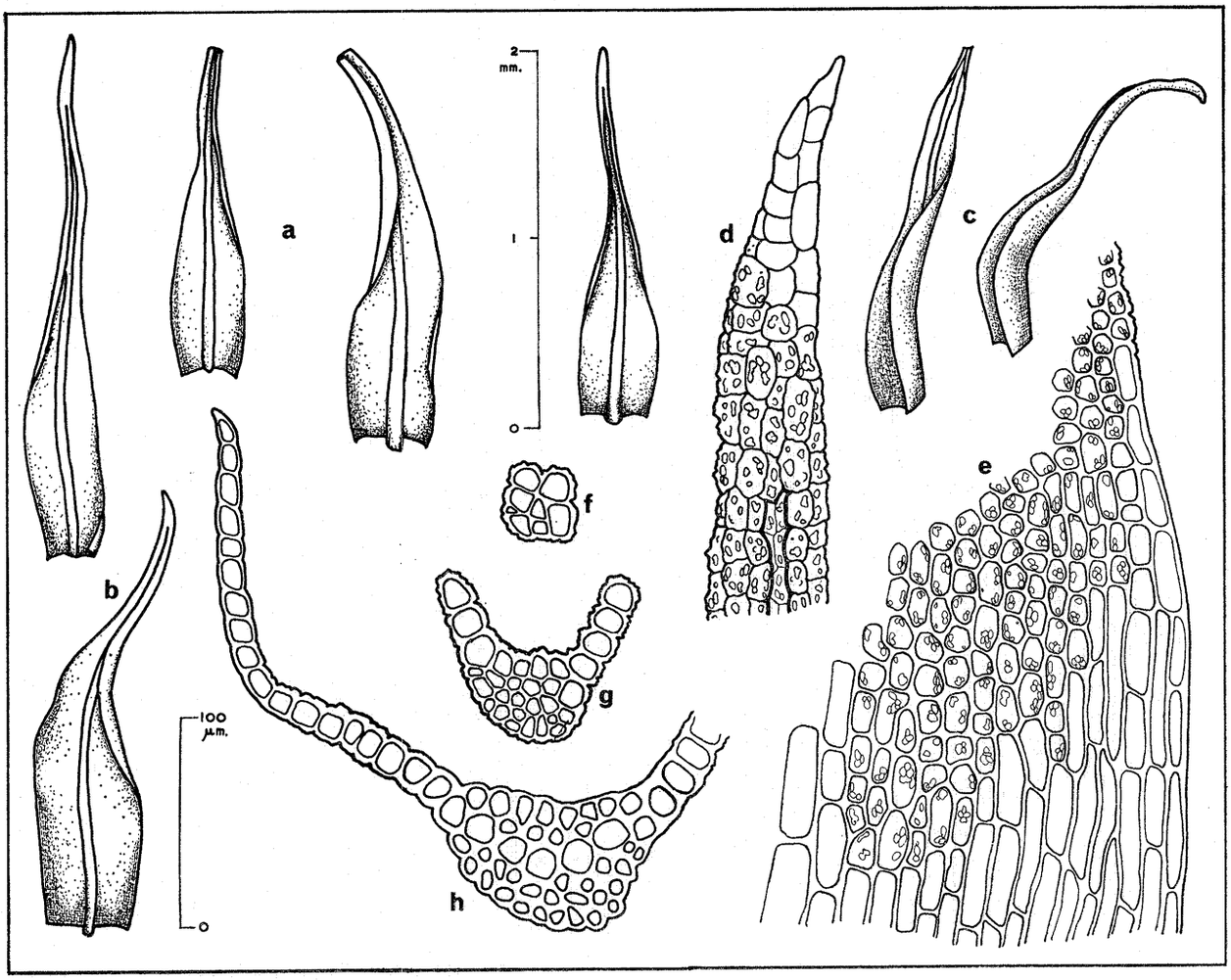


FIGURE 28
Sarconeurum tortelloides S. W. Greene
a, b, c. Leaves. f. Transverse section through leaf apex.
d. Apex. g. Transverse section near mid-leaf.
e. Basal cells. h. Transverse section through base of leaf.
Scales: Upper for leaves, lower for apex, cells and sections.
Drawings from: Taylor 509b (Fossil Bluff, Alexander Island);
Taylor 529 (Eros Glacier, Alexander Island).

Habitat. In moist rock crevices and between boulders. Altitude 400–1,100 ft. (*c.* 120–330 m.).
Distribution. (Fig. 29; Table XIV.)
Sector S (30°W.–90°W.): Antarctic Peninsula west coast, George VI Sound; Antarctic Peninsula east coast, Nordenskjöld and Wilkins Coasts.

Notes. The abrupt transition along an oblique line from the chlorophyllose to hyaline cells in the leaf base is the most obvious distinction from the last species. Like *S. glaciale*, most of the leaf apices are normally missing but the characteristic, solid, multistratose, cylindrical region, with differentiated cells forming the tip, can usually be seen on young leaves of the comal group.

S. tortelloides appears to show little variation.

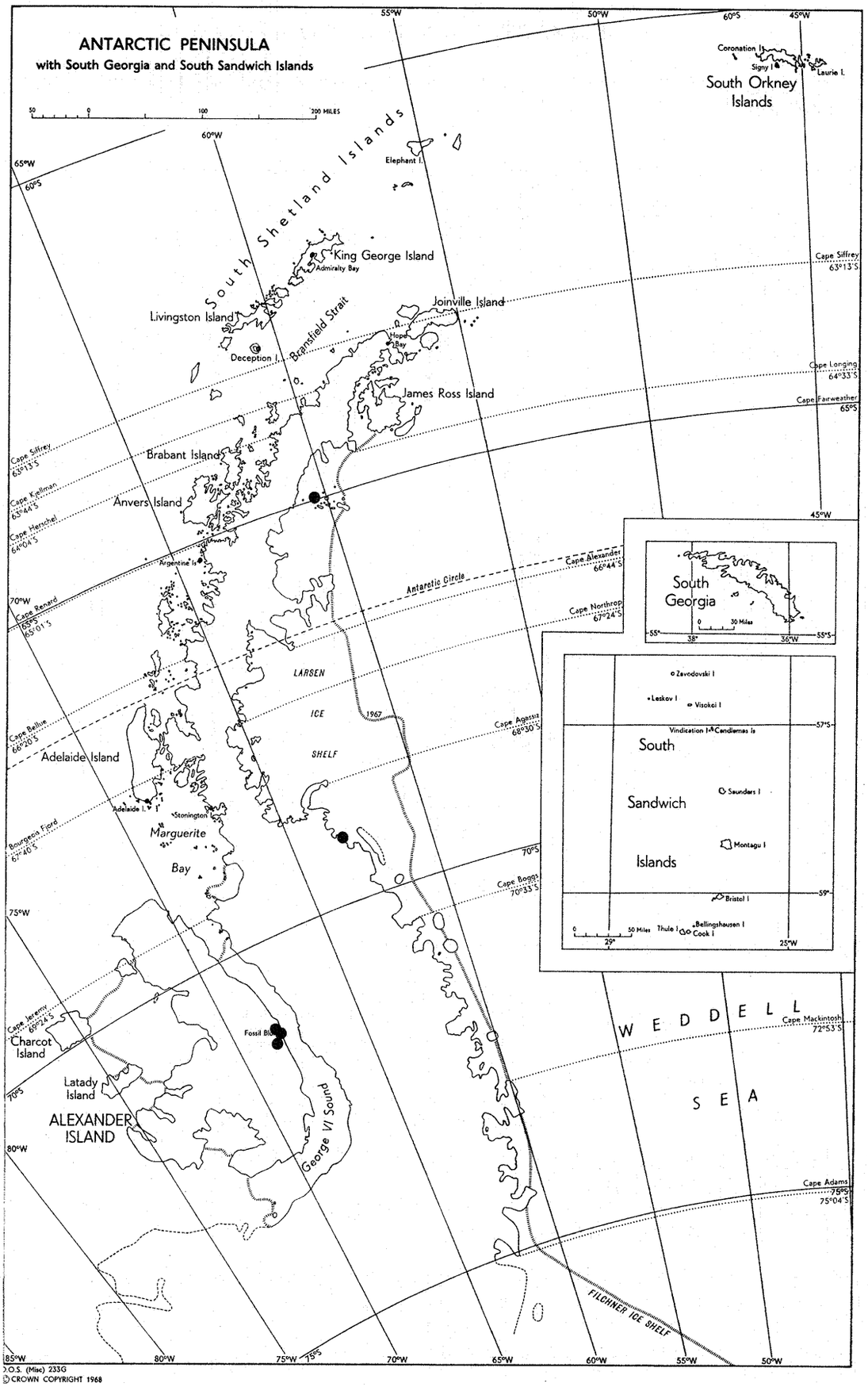


FIGURE 29

The known distribution of *Sarconeurum tortelloides* S. W. Greene within the Antarctic botanical zone.

IV. HISTORY AND SYNONYMY

1. *Andreaea* Hedw.

Andreaea depressinervis Card.

This species was erected by Cardot (1901) for two collections (Racovitza 239 and 240c) obtained on Cuverville Island ("île de Cavelier de Cuverville"*) during the Belgian Antarctic Expedition of 1897–99. Specimens of both collections are preserved at Brussels (BR), but only one of them (Racovitza 239) is present in Cardot's herbarium at Paris (PC). The original labels of the three specimens are identical, and bear the following information:

> Herb. J. Cardot
> Mousses du voyage de la Belgica 239 (or 240c)
> *Andreaea depressinervis* Card. *sp. nov.*
> Canal de la Belgica: XIIème débarquement, sur
> les corniches de la falaise.
> Leg. Racovitza 2 février 1898.

Although there is no doubt that these are the specimens on which Cardot based his species, since the numbers agree with those quoted by him (Cardot, 1901), it should be noted that the collecting details he published are somewhat different:

> Détroit de Gerlache
> XIIème débarquement, île de Cavelier de Cuverville,
> sur les corniches de la falaise.
> No. 239 et 240c 2 février 1898.

The earliest published reference to this species is to be found in a preliminary note on the mosses collected during the Belgian Antarctic Expedition (Cardot, 1900) where the species was listed as new to science and its main features enumerated, but no latin diagnosis or illustration was provided. A latin diagnosis was included in the full account of the mosses of this expedition (Cardot, 1901), when its distinctness from the remaining species in the genus was emphasized.

No fruit was present on any of the specimens but archegonia were observed in the Brussels specimen of Racovitza 239. The bracts were more or less similar in size to the leaves but differed markedly in being more concave with a rounded rather than a pointed apex; the nerve was occasionally absent.

Andreaea depressinervis var. *compacta* Card. = ***A. depressinervis*** Card.

A single specimen of this taxon is present in Cardot's herbarium at Paris (PC). Although the number on the specimen (Racovitza 477) agrees with that cited under the description (Cardot, 1901) its collecting details are rather different from those published. The details on the specimen are:

> Herb. J. Cardot
> Voyage de la Belgica No. 477
> *Andreaea depressinervis* Card. var. *compacta* Card.
> Canal de Gerlache: XXème débarquement, rochers, alt. 50 m.
> Leg. Racovitza 12 févr. 1898

whereas the published details (Cardot, 1901) are:

> Détroit de Gerlache: XXème débarquement, Terre de Danco, à l'entrée du chenal de Lemaire, sur des roches isolées au milieu d'un glacier, à 50 mètres au-dessus du niveau de la mer.
> (No. 477; 12 février 1898)

The gathering is small and although intermixed with *Andreaea gainii* is in no way unusual, hence *A. depressinervis* var. *compacta* has been abandoned as a separate taxon and reduced to synonymy under *A. depressinervis* Card. (Greene, 1968*b*).

Andreaea depressinervis Card. fo. *robusta* Card. = ***A. depressinervis*** Card.

This taxon was erected by Cardot for material collected by Skottsberg (Nos. 430, 431) during the Swedish South Polar Expedition of 1901–03, and was first reported by Cardot (1906) in a preliminary

* Unofficial place-names are given in inverted commas.

account of Skottsberg's collection. However, this report lacked a latin diagnosis or an illustration, the former not being provided until two years later (Cardot, 1908).

A specimen of Skottsberg 430 is preserved in Cardot's herbarium at Paris (PC) but there is a duplicate in Stockholm (S-PA). The details on the Paris specimen are as follows:

Herb. J. Cardot
Svenska Sydpolarexped. 1901–03. No. 430
Andreaea depressinervis Card. f. *robusta* Card.
Terre Louis Philippe: point Béatrice.
Leg. C. Skottsberg 29.11.1902

The specimen in Stockholm bears a label with the following details:

Svenska Sydpolarexpeditionen 1901–03 N : R 430
Terre Louis Philippe: débarquement *b*.
Leg. C. Skottsberg 29.11.1902

The details on these labels differ somewhat from those published:

Région de Graham: terre Louis-Philippe
Point Béatrice
Skottsberg 430

Material of Skottsberg 431 is preserved in Stockholm and a duplicate is present in Buenos Aires (BA), (Herb. No. 909). The Stockholm specimen bears the following details on its label:

Terre Louis Philippe
Débarquement *c*
Leg. Skottsberg 1.12.1902
Andreaea depressinervis Card. f. *robusta* Card.

The Buenos Aires specimen has an identical label except that the collector is cited as C. Skottsberg. It should be noted that the collecting details cited by Cardot (1908) were somewhat different:

Région de Graham: terre Louis-Philippe
île de Mousses, Skottsberg 431

The specimen in Cardot's herbarium consists of a single colony of well grown, but by no means unduly large, plants which fall within the range of variation of the species. Accordingly *A. depressinervis* f. *robusta* Card. has been reduced to the rank of a synonym of *A. depressinervis* Card. (Greene, 1968*b*).

Andreaea gainii Card.

This species was described by Cardot (1911) as new to science on the basis of material collected by Gain (No. 209) during the Second French Antarctic Expedition of 1908–10.

A single specimen of Gain 209 is preserved in Cardot's herbarium at Paris (PC) but what are clearly duplicates are present in the Herbaria of the New York Botanical Garden (NY) and the British Museum (Nat. Hist.) (BM). The label on the Paris specimen is as follows:

Herb. J. Cardot
209. *Andreaea gainii* Card. sp. nova
Terre de Graham: cap Tuxen, rochers.
2ème expéd. Charcot.
Leg. Gain 8.1.1909

while the label on the New York specimen reads:

Herb. J. Cardot Rec'd 11.17.'11.
Rev. Bryol. 1911,126 (e specim. origin.)
Terre de Graham: Cap Tuxen.
Leg. Gain, 1909. n.209. Type

The label on the British Museum specimen resembles most closely that of the Paris specimen:

209. *Andreaea gainii* Card. sp. nova
Terre de Graham: cap Tuxen, rochers.
8.1.1909
Expd. Antarct. française 1908–1910
Muséum d'Histoire Naturelle Laboratoire de Cryptogamie

The details on the labels agree in all essential facts with the information published by Cardot (1911) although in the latter account the habitat is described as "sur les rochers" rather than "rochers" as on the specimen labels.

In his account of this species, Cardot makes no mention of the typical weak to strongly pandurate leaves which are one of its distinctive features, but he does comment on another distinctive feature—the fact that the leaf margin above the base is rarely entire, being usually crenate to weakly toothed. All of the specimens clearly exhibit weak panduration of the leaves with one or both margins above the base being crenate to weakly toothed, but as is normal for the species, some leaves have both margins entire. The three specimens bear abundant perichaetia with the typical elongated bracts, as well as some battered capsules. The sexual habit of the Paris specimen is clearly autoecious and not dioecious as stated by Cardot.

Andreaea gainii var. ***parallela*** (C. Müll.) S. W. Greene

This combination (Greene, 1968*b*) is based on *A. parallela* C. Müll., a species first described by C. Müller (1883) for material collected by Naumann in December 1874 from Kerguelen during the German expedition of 1874–76 in S.M.S. *Gazelle*. Part of the material is preserved at Utrecht (U) and its label bears the following information:

Botanisch Museum Utrecht No. 62426
29 Apr. 1922
Herb. Acad. Rheno-Trai.
Andreaea parallela C. Müll. n.sp.
Kerguelen 1874

While there is no reason to doubt that this is part of the original gathering, it should be noted that fuller collecting details were later provided by Müller (1889):

Andreaea parallela C. Müll.
Ins. Kerguelen, Foundry branch,
in rupibus siccis 12.74

What is clearly a duplicate of the Utrecht material is preserved in the British Museum (Nat. Hist.) (BM), and bears the following on its label:

Herb. Émil Bescherelle: 1900
Kerguelen Dec. 1874
Dr. Fr. Naumann
Andreaea parallela C. Müll.
Herb. C. Müll.

From his account of the plant it appears that Müller regarded the numerous parallel branches bearing small leaves which are patent below and densely imbricate above, as the main characters of this species. However, many leaves are pandurate, with distinct crenation of the margin at the top of the base, as well as areolation similar to *A. gainii*. Moreover, as plants occur in the vicinity of the Antarctic Peninsula which appear to link the two types, the most satisfactory treatment appeared to be to reduce *A. parallela* to the standing of a variety of the more widely spread taxon *A. gainii* (Greene, 1968*b*). The Kerguelen specimens are slightly more robust than the specimens from the vicinity of the Antarctic Peninsula.

Andreaea pycnotyla Card. = ***A. regularis*** C. Müll.

Cardot (1901) described this species as new to science for two collections (Racovitza 267a and 270a) made on the Danco Coast at the entrance to the Lemaire Channel. Specimens of both collections are

preserved at Brussels (BR), but only one of them (Racovitza 270a) is also represented in Cardot's herbarium at Paris (PC). The original labels of the three specimens are identical each having the following information:

> Herb. J. Cardot
> Mousses du voyage de la Belgica. 267a (or 270a)
> *Andreaea pycnotyla* Card. sp. nova
> Canal de la Belgica: XXème débarquement, sur des
> rochers isolées au milieu d'un glacier. Alt. 50 m.
> Leg. Racovitza 12 févr. 1898

However, the details published by Cardot (1901) are somewhat different:

> Détroit de Gerlache: XXème débarquement, Terre de Danco, a l'entrée du chenal de Lemaire, sur des roches isolées au milieu d'un glacier, à 50 métres au-dessus du niveau de la mer.
> (Nos. 267a et 270a; 12 février 1898)

The earliest published reference to this species is to be found in a preliminary note on the mosses collected during the Belgian Antarctic Expedition (Cardot, 1900) where it is listed as new to science but no latin diagnosis or illustration was provided. However, its characters were enumerated and its relationship to other species of *Andreaea* discussed. Later, when reporting *A. regularis* C. Müll. as new to the Antarctic zone, Cardot (1906) expressed the opinion that *A. pycnotyla* Card. should be made a variety of *A. regularis*, a new combination which Cardot made later after examining the type of Müller's species (Cardot, 1908).

From an examination of the specimens in Brussels and Paris it seems that Racovitza's material falls within the limits of variation of *A. regularis*, and that it does not merit separate taxonomic recognition. Accordingly, *A. pycnotyla* Card. has been made a synonym of *A. regularis* C. Müll. (Greene, 1968*b*).

Andreaea pygmaea Card. = ***A. regularis*** C. Müll.

This species was erected by Cardot (1901) for material collected by Racovitza on Brabant Island during the Belgian Antarctic Expedition of 1897–99. Material from this collection is preserved in Brussels (BR) and bears the following label:

> Herb. J. Cardot
> Mousses du voyage de la Belgica. 252d.
> *Andreaea pygmaea* Card. sp. nova.
> Canal de la Belgica: Xème débarquement, sur des roches
> complétement entourées de glaces. Alt. 350 m.
> Leg. Racovitza 30 janvr. 1898

These details differ from those published by Cardot (1901) but without any doubt the latter refer to the specimen preserved at Brussels. The published details are as follows:

> Détroit de Gerlache: Xème débarquement, île Brabant.
> sur des roches complétement entourées de glaces,
> à 350 métres au dessus du niveau de la mer.
> (No. 252d; 30 janvier 1898)

The species had been mentioned previously in a preliminary account of the mosses of the Belgian Antarctic Expedition (Cardot, 1900) but without a latin diagnosis or illustration. The features of this species, as enumerated by Cardot (1901), fall within the normal range of variation of *A. regularis* C. Müll. and so there appear to be no grounds for giving Racovitza's specimen independent nomenclatural status. Accordingly *A. pygmaea* Card. has been relegated to synonymy under *A. regularis* C. Müll. (Greene, 1968*b*).

Andreaea regularis C. Müll.

A. regularis C. Müll. was described by Müller (1890) as a species new to science from material collected by Will during the German International Polar Year (1882–83) Expedition to Royal Bay, South Georgia. Two of Will's specimens are preserved at Munich (M) and they bear the following labels:

498. *Andreaea regularis* C. Müll. n.sp.
Ostseite des Vexirberges.
Sud-Georg. 17/II/83. Orig. Müll. W.

499. *Andreaea regularis* C. Müller n.sp.
Fündort: E. Seite des Krokisius-berges.
Süd-Georgien 17/II/83. Will

A specimen at Hamburg (HBG) which is clearly a duplicate of No. 498 at Munich, is labelled as follows:

26703 *Andreaea regularis* C. Müll. n.sp.
Austro-Georgia, Ostseite des Vexirberges,
17/II/83. Südpolarexpedition

There is also a specimen in Stockholm (S-PA) which, from the details on the label, appears to be another duplicate of No. 498 at Munich:

Museum botanicum Berolinense
Andreaea regularis C. Müll.
Austro-Georgia Vexirberg
17 Febr. 1883.
Herb. J. Cardot

It should be noted that the collecting data published by Müller (1890) were less detailed and agree most closely with the information on specimen No. 498 at Munich:

Austro-Georgia, Ostseite des Vexirberges.
17 Februar 1883

According to Müller the species is characterized by its minute, perfectly regular, very rarely slightly ventricose acuminate leaves with acute apices. However, the Munich specimen exhibits no particular regularity in the leaf arrangement nor in the leaf dimensions which are quite variable. The leaves, which are nerveless, vary from ovate-lanceolate to lanceolate, sometimes having some leaves ± oblong, while the acumen is variable in length and may be gradually to somewhat abruptly produced. Occasional crenations are visible on some leaf margins a short distance above the insertion. Fruit is present and the elongate convolute bracts greatly exceed the length of the leaves. The Hamburg specimen is similar to No. 498 at Munich, but no capsules were observed although enlarged perichaetia were present.

This species was first reported from within the Antarctic botanical zone by Cardot (1906) from material collected by Skottsberg during the Swedish South Polar Expedition of 1901–03. However, as *A. pygmaea* is now regarded as synonymous with *A. regularis*, the earliest specimen known from within the botanical zone is the type material of *A. pygmaea* collected by Racovitza in January 1898 on Brabant Island.

Andreaea regularis C. Müll. var. *pycnotyla* (Card.) Card. = ***A. regularis*** C. Müll.

Comments on the history of this variety have been included in the discussion on *A. pycnotyla* above.

2. *Pohlia* Hedw.

Pohlia cruda (Hedw.) Lindb.

All the material from within the Antarctic botanical zone has been referred to the var. *imbricata* (Card.) Bartr., a variety described as new to science by Cardot (1901) for material collected by Racovitza during the Belgian Antarctic Expedition of 1897–99. When described, the present species was placed in the genus *Webera* so the variety was first published as *Webera cruda* var. *imbricata*.

All of Racovitza's material (3 specimens) is represented in Cardot's herbarium at Paris (PC) and the specimen labels bear the following details:

Voyage de la Belgica 233a.
Webera cruda Sch. var. *imbricata* Card. var. *nova*.
Canal de Gerlache: XIème débarquement, sur les
corniches de la falaise, dans les endroites détrempés.
Leg. Racovitza 1 février 1898

Voyage de la Belgica 252c.
Webera cruda Sch. var. *imbricata* Card. *forma rabougrie*
Canal de Gerlache: Xème débarquement sur des rochers entourées du glaces. Alt. 350 m.
Leg. Racovitza 30 janv. 1898.
Herb. J. Cardot

Voyage de la Belgica 270c
Webera cruda Sch. var. *imbricata* Card. var. *nova*
Canal de Gerlache XXème débarquement, sur des rochers isolées au milieu d'un glacier, alt. 50 m.
Leg. Racovitza 12 février 1898
Herb. J. Cardot

Duplicates of each of the above 3 specimens are preserved in Brussels (BR) while a duplicate of Racovitza 233a is also present in Stockholm (S-PA). The specimen labels of the Brussels material, apart from minor alterations, agree in all essential facts with those in Paris except that each has the locality described as "Canal de la Belgica" instead of "Canal de Gerlache". The Stockholm specimen is more briefly labelled as follows:

Webera cruda Sch. var. *imbricata* Card.
Détroit de Gerlache: XIème débarquement
Leg. Racovitza 1 févr. 1898.
Herb. J. Cardot
P. Dusens moss herbarium

The earliest published reference to this variety is to be found in a preliminary note on the mosses collected during the Belgian Antarctic Expedition (Cardot, 1900), where the variety was listed as new to science, but no latin diagnosis or illustration was provided although its main characters were enumerated. A latin diagnosis was provided when the full account of the mosses of this expedition was published (Cardot, 1901). When the information with a specimen is compared with the following details provided by Cardot (1901), it is apparent that the full locality was not cited on the specimen labels:

233a. Détroit de Gerlache: XIème débarquement, Terre de Danco, cap Van Beneden, sur les corniches de la falaise dans les endroits détrempés.
1 février 1898

252c. Détroit de Gerlache: Xème débarquement, île Brabant, sur des roches complétement entourées de glace, à 350 métres au-dessus du niveau de la mer (forme rabougrie): sterile
30 janvier 1898

270c. Détroit de Gerlache: XXème débarquement, Terre de Danco, a l'entrée du chenal de Lemaire sur des roches isolées au milieu d'un glacier, à 50 métres au-dessus du niveau de la mer; sterile
12 février 1898

The specimens all agree in having julaceous stems with imbricate leaves and so differ strikingly from the normal form of this species as it is encountered in the Northern Hemisphere. Moreover, as noted on p. 19, this habit is almost uniformly exhibited by all the Antarctic material referred to this species.

Cardot (1901) noted that he found at the apices of some of the stems of Racovitza 233a "jeunes fleurs qui paraissent ne contenir que des anthéridies". In the Paris specimen bearing this number, archegonia alone were seen: indeed, although female plants appear widespread in the vicinity of the Antarctic Peninsula, male plants have only once been observed (p. 19).

Pohlia nutans (Hedw.) Lindb.

P. nutans is widespread in the Northern Hemisphere, and was first reported (as *Webera nutans* Hedw.) from within the Antarctic botanical zone by Cardot (1901) from material collected by Racovitza (No. 473) at Beneden Head ("cap Van Beneden") on 1 February 1898 during the Belgian Antarctic Expedition of 1897–99.

At the same time, Cardot assigned other material here placed under *Pohlia nutans* to a new species, *Webera racovitzae* Card. The first published reference to this species will be found in the preliminary account of the mosses collected during the Belgian Antarctic Expedition of 1897–99 (Cardot, 1900), where its features were mentioned, but neither latin diagnosis nor illustration were provided. This deficiency was remedied in the full account of the mosses of this expedition (Cardot, 1901), and the 2 specimens on which the species was founded are preserved in Cardot's herbarium at Paris (PC) with a duplicate of each at Brussels (BR) and Stockholm (S-PA). The collecting details of the Paris specimens are as follows:

Voyage de la Belgica 244.
Webera Racovitzae Card. sp. nova
Canal de Gerlache: XIIème débarquement,
sur une corniche de la falaise, autour des
touffes de graminées.
Leg. Racovitza 2 févr. 1898.
Herb. J. Cardot

Voyage de la Belgica 252a.
Webera Racovitzae Card. sp. nova
Canal de Gerlache: Xème débarquement,
sur des rochers complètement entourées de glaces.
Alt. 350 m.
Leg. Racovitza 30 janvier 1898.
Herb. J. Cardot

The labels of the Brussels specimens, apart from minor changes, agree in all essential facts with those in Paris except that each has the locality described as "Canal de la Belgica" instead of "Canal de Gerlache".

The labels of the Stockholm specimens bear less information:

Herb. J. Cardot
Webera Racovitzae Card.
Détroit de Gerlache: XIIème débarquement
Leg. Racovitza 2 févr. 1898 No. 244
Herbarium Forstr. Dr. Georg Roth 1842–1915

Herb. J. Cardot
Webera Racovitzae Card. (e specim origin)
Antarctide: détroit de Gerlache, île Brabant, rochers.
Leg. Racovitza 1898 n. 252a

It should be noted that Racovitza 244 is divided into two separate packets, each bearing identical labels.

When compared with the published details (Cardot, 1901) it can be seen that certain discrepancies exist:

244 Détroit de Gerlache: XIIème débarquement,
île de Cavelier de Cuverville, autour des touffes de
graminées (*Aira antarctica*), sur une corniche de
la falaise. 2 février 1898

252a. Détroit de Gerlache: Xème débarquement,
île Brabant, sur des roches complétement entourées
de glaces, à 350 métres au dessus du niveau de
la mer. 30 janvier 1898

When examined it was noted that these specimens, and indeed all others which Cardot named *W. racovitzae*, were of the tall, usually simple stemmed form of *P. nutans*, the latter name being retained by Cardot for plants of a comose form.

In passing, it may be noted that *Webera racovitzae* var. *laxiretis* Card. (Cardot, 1907*a*) has now been assigned to *Bryum inconnexum* by Horikawa and Ando (1961), while Cardot himself transferred *Webera gerlachei* Card., to *Bryum* (Cardot, 1901).

3. *Polytrichum* Hedw.

Polytrichum alpestre Hoppe

This species, which is widespread in the Northern Hemisphere, was first reported from within the Antarctic botanical zone by Cardot (1900, 1901) as *P. strictum* Banks from material collected during the

Belgian Antarctic Expedition of 1897–99 by Racovitza at Beneden Head (= "Cap Vañ Beneden") on 1 February 1898 and on 2 February 1898 at Cuverville Island (= "île de Cavelier de Cuverville"). The specimens are preserved in Brussels (BR).

Polytrichum alpinum Hedw.

P. alpinum, also widespread in the Northern Hemisphere, was first reported from the Antarctic botanical zone by Eights (1833) who collected it during the 1829–30 season from an unspecified locality on the South Shetland Islands, which were referred to by Eights as the "New South Shetland Islands". The original collection is preserved in the United States National Museum, Smithsonian Institution (US). So far, this is the oldest authenticated record in botanical literature of the occurrence of bryophytes in Antarctica.

Pogonatum alpinum (Hedw.) Roehl. var. *brevifolium* (R.Br.) Brid. =***Polytrichum alpinum*** Hedw.

The var. *brevifolium* was first reported from within the Antarctic botanical zone by Cardot (1900, 1901) from material collected by Racovitza (Nos. 252c, 270b) during the Belgian Antarctic Expedition of 1897–99. Racovitza's specimens are preserved at Brussels (BR) and bear the following collecting details:

> Herb. J. Cardot
> Mousses du voyage de la Belgica No. 252c
> *Pogonatum alpinum* Roehl. var. *brevifolium* Brid.
> Canal de la Belgica: Xème débarquement, sur des roches entourées de glaces. Alt. 350 m.
> Leg. Racovitza 30.1.1898.
>
> Herb. J. Cardot
> Mousses du voyage de la Belgica No. 270b
> *Pogonatum alpinum* Roehl. var. *brevifolium* Brid.
> Canal de Belgica: XXème débarquement, sur des roches isolées au milieu d'un glacier. Alt. 50 m.
> Leg. Racovitza 12 févr. 1898

In both cases, however, the collecting details published by Cardot (1901) were different to those given on the labels:

> Détroit de Gerlache: Xème débarquement, île Brabant, sur des roches complétement entourées de glaces, à 350 métres au-dessus du niveau de la mer; stérile. (No. 252c: 30 janvier 1898)
>
> XXème débarquement, Terre de Danco, à l'entrée du chenal de Lemaire, sur des roches isolées au milieu d'un glacier, à 50 métres au-dessus du niveau de la mer; stérile. (No. 270b: 12 février 1898)

In leaf length and dentition, the material falls within the normal range of variation shown by both these characters in *Polytrichum alpinum*, and so there is no case for awarding these, or any other Antarctic forms of *Pogonatum alpinum*, separate nomenclatural standing. Cardot himself was well aware of the variability of *Pogonatum alpinum* and commented "La plupart des spécimens rapportés des régions antarctiques se rapprochent beaucoup de la var. *septentrionale* Brid.; d'autres restent indécis entre cette variété, la variété *brevifolium* Brid., et la forme *austrogeorgicum* (C. Müll.) Card. Ces diverses variations s'enchevêtrent tellement les unes dans les autres qu'il est impossible de les délimiter d'une façon satisfaisante" (Cardot, 1908, p. 277). In spite of these remarks Cardot not only continued to refer material to var. *brevifolium* but also to var. *brevifolium* forma *elata* Card. The var. *brevifolium* is here reduced to synonymy under *Polytrichum alpinum* Hedw.

Pogonatum alpinum (Hedw.) Roehl. var. *brevifolium* (R.Br.) Brid. fo. *elata* Card. = ***Polytrichum alpinum*** Hedw.

This taxon was erected by Cardot (1908) for material collected by Skottsberg (No. 463) during the Swedish Antarctic Expedition of 1901–03. Skottsberg's material is preserved at Stockholm (S-PA) and the label bears the following details:

Svenska Sydpolarexpeditionen 1901–03 N : R 463
Terre Louis Philippe, île Challenger
Leg. Carl Skottsberg. 2.12.1902.
Pogonatum alpinum Röhl. var. *brevifolium* Brid. f. *elata* Card.

The collecting details published by Cardot (1908) were similar:

Région de Graham: terre Louis-Philippe
île Challenger. Skottsberg No. 463

Although the first published reference to the fo. *elata* was in the preliminary account of the mosses collected during the Swedish Expedition (Cardot, 1906) where the taxon was listed as new to science, no latin diagnosis was provided until two years later (Cardot, 1908, p. 277). It is clear from Cardot's description that he justified the taxon solely on its size—"Caulibus elongatis, usque 8 centimetres altis"—but apart from being well developed, Skottsberg's specimen is in no way remarkable and needs no separate nomenclatural recognition. Accordingly the fo. *elata* is here reduced to synonymy under *Polytrichum alpinum* Hedw.

Polytrichum antarcticum Card. = ***Polytrichum piliferum*** Hedw.

P. antarcticum Card. (Cardot, 1901) is based on a single collection obtained at Beneden Head during the Belgian Antarctic Expedition of 1897–99. Some of this material is preserved at Brussels (BR) and its label bears the following details:

Herb. J. Cardot
Mousses du voyage de la Belgica No. 236.
Polytrichum antarcticum Card. sp. nova
Canal de la Belgica: XIème débarquement, sur les corniches
de la falaise.
Leg. Racovitza 1 févr. 1898

What is undoubtedly a duplicate of the Brussels material is preserved in Cardot's herbarium at Paris (PC) and is labelled as follows:

Herb. J. Cardot
Polytrichum antarcticum Card. sp. nova
Terr. Antarc.: canal de la Belgica.
Leg. Racovitza 1898
Herb. Mus. Paris. Herbier de F. Renauld acquis en 1909

The details published by Cardot (1901) were, however, fuller:

Détroit de Gerlache: XIème débarquement
Terre de Danco, cap Van Beneden,
sur les corniches de la falaise.
No. 236. 1 février 1898

The first published reference to *P. antarcticum* Card. is to be found in the preliminary account of the mosses collected during the Belgian Antarctic Expedition (Cardot, 1900) where the plant is listed as new to science but no latin diagnosis or illustration was provided. However, it was compared with *P. piliferum* and *P. hyperboreum* and differences were enumerated. A latin diagnosis was provided a year later when the full account of the mosses collected during this expedition was published (Cardot, 1901). From later remarks it is clear that Cardot (1906, 1907*a*) became increasingly doubtful of its distinctness and, finally, when reporting *P. piliferum* as new to the Antarctic, Cardot (1913) said of *P. antarcticum* "il parait certain qu'un ne doit y voir qu'une forme ou une variété du *P. piliferum*". The most important diagnostic features of *P. antarcticum* were said to be the square cells at the base of the leaf sheath, the absence of "incrassato-papillose" border cells on the lamellae and the occurrence of small thick-walled cells forming the lamellae. Since these characters, which are well shown by the two specimens cited above, fall within the normal variation of *P. piliferum*, there appears to be no justification for giving the Antarctic material separate nomenclatural standing. Accordingly, *P. antarcticum* is here relegated to synonymy under *P. piliferum* Hedw.

Polytrichum juniperinum Hedw.

P. juniperinum, a species widespread in the Northern Hemisphere, has only recently been reported from within the Antarctic botanical zone (Longton, 1966). However, plants (Bennett 4 and 454) previously reported by Dixon (1920) are now referred to this species and the earliest known specimen of *P. juniperinum* Hedw. from within the zone was collected by A. G. Bennett on Deception Island on the 4 January 1918 (Bennett 4). The specimen is preserved in the British Museum (Nat. Hist.) (BM).

Polytrichum piliferum Hedw.

This species is also widespread in the Northern Hemisphere and was first reported from within the Antarctic botanical zone by Cardot (1913) from material collected by Gain at Cape Tuxen on 8 January 1909, during the French Antarctic Expedition of 1908–10. As plants previously referred to *P. antarcticum* Card. are now referred to this species, the earliest known collection from within the Antarctic botanical zone is from Beneden Head ("cap Van Beneden") where it was collected by Racovitza on 1 February 1898. The material is preserved at Brussels (BR) and in Cardot's herbarium at Paris (PC).

Polytrichum strictum Banks = ***Polytrichum alpestre*** Hoppe

See comments under *P. alpestre* above.

Polytrichum strictum Banks var. *alpestre* (Hoppe) Rabenh. = ***Polytrichum alpestre*** Hoppe

The existence, within the Antarctic botanical zone, of a variety distinct from the plants previously referred to *P. strictum*, was first reported by Cardot (1906, 1908) on the basis of material collected by Skottsberg in December 1902 at Moss Island (="île des Mousses" or "débarquement c") and later in November 1903 at Hope Bay ("baie d'Espérance"), during the Swedish South Polar Expedition of 1901–03. These specimens are preserved in Paris (PC) and, from examination, were seen to fall well within the range of *Polytrichum alpestre*. Accordingly, this variety is now removed from the Antarctic Check List. Material collected later by Gain (No. 283) from Rasmussen Island (= "Cap Rasmussen") and preserved at Kew (K) and Paris (PC) is also now referred to *Polytrichum alpestre*.

Polytrichum subpiliferum Card. = ***P. juniperinum*** Hedw.

This species was included as new to science in the preliminary account of the mosses collected during the Belgian Antarctic Expedition of 1897–99 (Cardot, 1900), but a latin diagnosis was not provided until the full account of the mosses of this expedition was published a year later (Cardot, 1901). The species is based on material collected by Racovitza in southern South America, a specimen of which is preserved in Brussels (BR) and bears the following label:

> Herb. J. Cardot
> Mousses du voyage de la Belgica, 60a
> *Polytrichum subpiliferum* Card. sp. nov.
>
> Détroit de Magellan: environs de Punta Arenas.
> Leg. Racovitza 9 Déc. 1897

A specimen in Cardot's herbarium at Paris (PC) bears an almost identical label, differing only in that "Mousses du" has not been included at the beginning of the second line. Both specimens are fruiting. In view of the presence of brownish toothed apices to the leaves, the low ± truncated, broad projections to the border cells of the lamellae, and the absence of tomentum extending high amongst the leaves, there appears to be no justification for treating these plants as anything other than *P. juniperinum* Hedw. Accordingly, *P. subpiliferum* Card. is here relegated to synonymy under *P. juniperinum* Hedw.

The existence of *P. subpiliferum* Card. in the Antarctic was based on another specimen, preserved in Brussels (BR), which was collected by Racovitza (No. 268c) at the entrance to the Lemaire Channel, on the Danco Coast, on 12 February 1898 during the Belgian Antarctic Expedition. This specimen has now been referred to *P. alpestre* Hoppe, as it has tomentum extending up the stem amongst the leaves, and the typical arrangement of border cells on the lamellae which characterize Antarctic material of that species. The tips of the leaf apices are rather blanched.

4. *Psilopilum* Brid.

Psilopilum antarcticum (C. Müll.) Par.

This species was first described as *Catharinea* (Psilopilum) *antarctica* by Müller (1883) from material collected by Naumann in December 1884, on Kerguelen during the German expedition of 1874–76 in S.M.S. *Gazelle*. It was later transferred to the present genus by Paris (1904).

A specimen from the original gathering is preserved in Utrecht (U) and bears the following information on its label:

Botanisch Museum Utrecht No. 62413
29 Apr. 1922.
Herb. Acad. Rheno-Trai.
Psilopilum antarcticum (C. Müll.)
Kerguelen. *Bryum*
Betsy's Cove 1874

There is a second label inside the packet which repeats the information on the outer label except that "Dec '74" is given as the date. It is not known why the name *Bryum* appears on the label; it may have been a provisional determination.

Müller's original description (Müller, 1883) was very brief and described the species inadequately, although it did refer to the apiculate leaf apex which is one of its most distinctive features. In his comprehensive account of the expedition's collections, Müller (1889) provided a fuller description.

The species was first reported from within the Antarctic botanical zone by Longton (1966) but the earliest collections were made by Holdgate (Nos. 405a ,418) on Bellingshausen Island in March 1962. The specimens are preserved in the British Antarctic Survey Herbarium (BIRM-ANT, No. 418) and at the British Museum (Nat. Hist.) (BM, No. 405a).

5. *Sarconeurum* Bryhn

Sarconeurum antarcticum Bryhn = ***S. glaciale*** (C. Müll.) Card. et Bryhn

This species was erected by Bryhn (1902) for material collected by Borchgrevink in "Newnes-Land" (probably the Newnes Glacier valley) and "Geikie Land" (Geikie Ridge) during the British Antarctic Expedition of 1898–1900. Specimens of the material preserved at the British Museum (Nat. Hist.) (BM) and the Farlow Herbarium (FH) have been examined.

The material at the British Museum, reported on by Gepp (1902) as *Barbula* sp., bears the following label:

Barbula sp.
Geikie Land (Antarctic)
C. E. Borchgrevink 1899
Southern Cross Expedition

Sarconeurum glaciale (H. f. & W.) Card. et Bryhn
Didymodon ? *glacialis* H. f. & Wils.
Sarconeurum antarcticum Bryhn

The three names at the bottom have clearly been added later, possibly by Cardot.

The specimen in the Farlow Herbarium bears the following label:

Sarconeurum glaciale (Hook. f. & W.) Card. et Bryhn
In peninsula Newnes Land
20 ped. super mare
Geikie Land (S. Victoria Land)
Leg. C. Borchgrevink 1898–1900
Det. E. B. Bartram

The material examined is identical to Hooker's material from Cockburn Island, a conclusion reached previously by Cardot (1907*b*) who first relegated *S. antarcticum* to synonymy under *S. glaciale* (Hook. f. et Wils.) Card. & Bryhn.

Sarconeurum glaciale (C. Müll.) Card. et Bryhn

This species is based on *Didymodon* ? *glacialis* Hook. f. et Wils., which was first described by Wilson and Hooker (1844–47) from material collected by Hooker on 6 January 1843 on Cockburn Island, specimens of which are preserved at the British Museum (Nat. Hist.) (BM), in Hooker's herbarium at Kew (K) and the Mitten Herbarium at the New York Botanical Garden (NY).

There are two specimens in the British Museum which are labelled as follows:

Cockburn Island No. 4
Didymodon ? *glacialis* H. fil & Wils.
Slide in collection 2864.

Herb. Musc. W. Wilson: 1874
Cockburn Island No. 4
Didymodon ? *glacialis* H. fil & Wils.
= *Sarconeurum*

The material at New York consists of three specimens, in one packet. Two of the specimens are labelled as follows:

Cockburn Island No. 4
Didymodon ? *glacialis*
H. fil & Wils.

while the label on the third reads:

Island. 64 13 S. 57 W.
Jan. 6, 1843

A small specimen, which is clearly a portion of this latter material, is also attached to an illustration mounted on the herbarium sheet.

When first described by Wilson and Hooker (1844–47), who gave the collecting details as "Cockburn Island, lat. 64°S., 57°W. (barren)", there already existed *Didymodon glacialis* (Brid.) Walh. (van der Wijk, Margadant and Florschütz, 1962), and so Wilson and Hooker's combination was illegitimate. Since Müller (1851) based his *Leptotrichum glaciale* on Wilson and Hooker's species, the specific epithet *glaciale* can be validated by citing the author as C. Müll. rather than Hook. f. & Wils. Later Cardot (1907*b*) transferred this species to Bryhn's genus *Sarconeurum* (Bryhn, 1902), so that the citation now becomes *Sarconeurum glaciale* (C. Müll.) Card. et Bryhn.

The most distinctive feature of the present species is its solid clavate leaf apex which is mostly absent from mature leaves but may still be seen on a few leaves in Hooker's original material, the oldest known collection of the species from within the Antarctic botanical zone.

Sarconeurum tortelloides S. W. Greene

Turfaceus; caules erecti, rhizoideis abundantibus inter folia, implicati infra. Folia humida erecta vel erecto-patentia, exsiccata adpressa, nervo valido in coma, nitentia, fragilissima et plerumque fracta nisi in coma, anguste ovata vel elliptica, cum constrictione parva prope medium folium et contracta gradatim in subulam angustam, canaliculatam, elongatam, in parte distali solida, cylindricata multistrataque in quartam longitudinis; margo planus, integer; nervus unicus, validus. Super cellulae quadratae vel rotundato-quadratae, nullo modo vel vix incrassatae, confertim papillosae et obscurae, obscurissimae in parte solida apicali, isodiametricae, in 2 vel 3 stratis, ad apicam variae, leves, angustae, elongatae, pellucidae, ad basem abrupte mutatae ab isodiametricis et viridibus ad rectangulares et hyalinas per lineam altiorem in margine quam ad nervum. Reliquum ignotum.

Turf-forming; stems erect, with abundant rhizoids amongst the leaves, matted below. Leaves erect to erecto-patent when moist, appressed when dry, with prominent nerve in the coma, shining, very fragile and mostly broken except in the coma, narrowly ovate to elliptical, with a small constriction near mid-leaf and tapering gradually to an elongate, narrow, channelled subula, distally solid, cylindrical and multistratose for $< \frac{1}{4}$ length; margin plane, entire; nerve single, strong. Upper cells quadrate to rounded-quadrate, not or scarcely incrassate, densely papillose, obscure, in solid region of apex very obscure, iso-

diametric, in 2–3 layers, in the apex differentiated, smooth, narrow, elongate, pellucid, in the base abruptly changing from isodiametric and chlorophyllose to rectangular and hyaline along a line higher at the margin than at the nerve. Remainder unknown.

This species is here described as new to science, the specific epithet having been chosen to draw attention to the distinctive cell pattern of the leaf base, which is comparable to that which characterizes the genus *Tortella*. The species is based on material collected by B. J. Taylor on Alexander Island, while undertaking geological field work as a member of the British Antarctic Survey. The label of the holotype, which is preserved at Birmingham (BIRM-ANT) with duplicates distributed to the British Museum (Nat. Hist.) (BM), Leningrad (LE) and New York (NY), bears the following information:

Sarconeurum tortelloides S. W. Greene
NNE facing rock niches
Alt. 200 ft. above glacier.
Spur at head of Eros Glacier, Alexander Island.
Leg. B. J. Taylor 2.12.1962.
No. Taylor 529

V. DISTRIBUTION TABLES

ALL specimens cited in these tables have been examined by the authors. Duplicates are known to exist for some of the material, e.g. Russian collections at Leningrad and Kühnemann material at Buenos Aires, but these have not been included as they have not been seen.

As no attempt was made when preparing the Distribution Tables II–XIV, to include the complete collecting data from each specimen label, it is important to note the following points when attempting to identify specimens in herbaria.

Locality. The place-names for localities in the British Antarctic Territory used in the tables are generally those currently accepted for use in British official publications, as listed in the *Gazetteer of the British Antarctic Territory, South Georgia and the South Sandwich Islands* (1962), and its *Supplement* (1964), both published by H.M. Stationery Office. Place-names for the remainder of the Antarctic regions follow those given in *Antarctica* 2nd Edition; *Gazetteer No. 14, Official Name Decisions of the United States Board on Geographic Names*, Washington (Department of the Interior), 1966. A list of the less obvious equivalents as they have been transliterated for this report will be found below. Unofficial place-names, or names without official British equivalents, appear on many specimen labels, and if these are quoted in the tables they are given in inverted commas.

OFFICIAL BRITISH EQUIVALENTS OF UNOFFICIAL AND FOREIGN PLACE-NAMES

Bahia I de Mayo	Fumarole Bay
Blyth Point	Lockley Point
Cabo Primavera	Spring Point
Cabo Spring	Spring Point
Caleta Ardley	Ardley Island
Cap des Trois Pérez	Cape Pérez
Cap Rasmussen	Rasmussen Island
Cap Van Beneden	Beneden Head
Channel Point	Omega Island
Clark Island	Clark Peninsula
Co. Destacmento	Uruguay Cove
Co. Diebel	Point 0·5 miles west-south-west from Point Moreno
Crater Hill, Hallett Base	Crater Cirque
Crutchley Island	Powell Island
Edsel Ford Ranges	Ford Ranges
English Sound	English Strait
Faro Prat	*Edwards Point
Geikie Land	Geikie Ridge
Isla 25 de Mayo	King George Island
Isla Sobral	Omega Island
Ile Booth-Wandel	Booth Island
Ile de Cavelier de Cuverville	Cuverville Island
Ile Valdivia	Valdivia Point
Ile Wandel	Booth Island
Isla Observatorio	Kappa Island
Lystad (=Lysted) Island	Omega Island
Mount Luther	Luther Peak
Mt. 73	Lichen Peak
Mt. 72 W	Skua Gull Peak
Mt. 112 E	Mount Corey
Newnes Land	Newnes Glacier Ridge
Pointe Beatrice	Cape Andreas
Punta Faro	Edwards Point
Sevilla Landing	Lambda Island
Sobarnia Bay	East shore of Discovery Bay
Thurston Peninsula	Thurston Island
Xème débarquement	†Near Buls Bay, Brabant Island
XIème débarquement	†Beneden Head
XIIème débarquement	†Cuverville Island
XXème débarquement	†At entrance to the Lemaire Channel, on the Danco Coast
Débarquement *b*	‡Cape Andreas
Débarquement *d*	‡Valdivia Point
Desemb. *c*	‡Moss Islands
Desemb. *d*	‡Valdivia Point

* Locality not verified but probably Edwards Point. † According to Cardot (1901). ‡ According to Cardot (1908).

Specimen number. In all cases where numbers are quoted they are identical to those which appear on the specimen labels but some labels bear more information than has been included. For example, the name of the expedition on which a specimen was obtained has been omitted where the name of the collector, together with the number, is sufficient for identification; similarly, all habitat data have been excluded as these have been summarized under the species descriptions.

Herbarium. Where two or more herbaria are listed in the distribution tables after a collection number, it indicates that the original collection has been subdivided and distributed amongst the herbaria listed.

TABLE II

DISTRIBUTION OF *Andreaea depressinervis* Card.

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Laurie Island	Point Martin	27 Dec. 1954	Kühnemann 1954/79	BIRM-ANT
	"Co. Moneta"	Feb. 1963	Bellisio s.n. (Herb. No. 11765)	BA
	Cape Geddes	8 Apr. 1946	FIDS C3/1001/1	BM
	Cape Geddes	3 Oct. 1946	FIDS C8/1003/2	BIRM-ANT; BM
	Cape Geddes	22 Dec. 1946	FIDS C42/1014/3	BM; CHR; IAA; NY; PC; PRE; S-PA; TNS
	Cape Geddes	3 Jan. 1947	FIDS C44/1015/3	BM; LE
	Uruguay Cove	Feb. 1963	Bellisio s.n. (Herb. No. 11800)	BA
Fredriksen Island	West face	4 Jan. 1933	Disc. Invest. St. 1090/2	BM
Powell Island	John Peaks	7 Feb. 1965	R. Smith 271b	BIRM-ANT
	East of Falkland Harbour	4 Dec. 1964	R. Smith 50	BIRM-ANT
	West side	29 Jan. 1965	R. Smith 196a	BIRM-ANT
	East side	29 Jan. 1965	R. Smith 197b	BIRM-ANT
	East side	5 Feb. 1965	R. Smith 223a	BIRM-ANT
	South-east side	1 Feb. 1965	R. Smith 200b	BIRM-ANT
	—	3 Jan. 1933	Disc. Invest. I	BM
Michelsen Island	—	3 Jan. 1933	Disc. Invest. St. 1089/1	BM; MEL; S-PA
	East side	4 Dec. 1964	R. Smith 41a	BIRM-ANT
	East side	4 Dec. 1964	R. Smith 42	BIRM-ANT
Matthews Island	East side	20–25 Jan. 1965	R. Smith 160	BIRM-ANT
Coffer Island	—	21 Nov. 1961	Cameron and Kennett 9a	BIRM-ANT
Coronation Island	West of Cape Vik	11 Sep. 1950	FIDS H608/1	BM
	West of Amphibolite Point	9 Oct. 1950	FIDS H613/6	BM

TABLE II. DISTRIBUTION OF *Andreaea depressinervis* Card. (*continued*)

Sector S: South Orkney Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Coronation Island (*cont.*)	Olivine Point	17 Jan. 1965	R. Smith 113	BIRM-ANT
	Saunders Point	3 Dec. 1964	R. Smith 22	BIRM-ANT
	Small islet, off Saunders Point	8 Oct. 1950	FIDS H612/7	BM
Lynch Island	—	16 Mar. 1966	Lindsay 944	BIRM-ANT
Signy Island	—	Jan. 1964	Holdgate 681a	BIRM-ANT
	—	15 Feb.–29 Mar. 1965	R. Smith 1a	BIRM-ANT
	—	15 Feb.–29 Mar. 1965	R. Smith 2a	BIRM-ANT
	North Point	14 Dec. 1961	Holdgate 19	BIRM-ANT
	South of Foca Point	23 Jan. 1965	Longton 1121	BM
	Moraine Valley	9 Mar. 1951	FIDS H619/6	BM; CHR; IAA; MEL; SGO
	Borge Bay	18 Jan. 1933	Disc. Invest. 10	BM
	Borge Bay	18 Jan. 1933	Disc. Invest. St. 1092/3	BM; MEL; PC; SGO
	Borge Bay	17 Mar. 1951	FIDS H624/1	BM
	Berntsen Point	30 Dec. 1960	Taylor 348	BIRM-ANT; CHR; IAA; LE; MEL; NY; PC; PRE; S-PA; TNS
	South-east of Berntsen Point	17 Mar. 1951	FIDS H623/7	BM
	South-east of Berntsen Point	17 Mar. 1951	FIDS H620/2	BM
	Factory Cove	15 Dec. 1961	Holdgate 6	BIRM-ANT: PC
	Factory Cove	15 Dec. 1961	Holdgate 8	BM; NY; PRE; S-PA; TNS
	Factory Cove	9 Jan. 1964	Holdgate 725a	BIRM-ANT
	Factory Cove	13 Jan. 1964	Holdgate 742a	BM
	Factory Cove	21 Jan. 1964	Holdgate 746a	BIRM-ANT
	Factory Cove	1964	Holdgate 779	BM; IAA; MEL; PRE; SGO; TNS
	Observation Bluff	20 Jan. 1962	Holdgate 96	BM; LE; PC
	Between Factory Cove and Paal Harbour	20 Dec. 1961	Holdgate 27	BIRM-ANT; LE
	Port Jebsen	16 Jan. 1948	FIDS H84/2	BM
	Port Jebsen	2 Feb. 1964	Holdgate 775a	BIRM-ANT; IAA; PRE

TABLE II. DISTRIBUTION OF *Andreaea depressinervis* Card. (*continued*)

Sector S: South Orkney Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Signy Island (*cont.*)	Paal Harbour	22 Jan. 1964	Holdgate 750a	BIRM-ANT; CHR; NY; PRE; S-PA; TNS
	Paal Harbour	22 Jan. 1964	Holdgate 754a	BM; MEL; SGO
	North of Rusty Bluff	24 Mar. 1951	FIDS H626/7	BM; CHR
	Rusty Bluff	13 Jan. 1964	Holdgate 737a	BIRM-ANT; IAA; SGO; TNS
	Rusty Bluff	13 Jan. 1964	Holdgate 738b	BM
	Rusty Bluff	13 Jan. 1964	Holdgate 740a	BIRM-ANT
	Rusty Bluff	13 Jan. 1964	Holdgate 741b	BM
	Rethval Point	22 Jan. 1962	Holdgate 104	BM; NY; PC
	Rethval Point	22 Jan. 1962	Holdgate 105a	BIRM-ANT
	Between Rethval and Lenton Points	29 Jan. 1965	Longton 1155	BM; LE; S-PA
	Clowes Bay	4 Jan. 1964	Holdgate 690a	BIRM-ANT
	Clowes Bay	4 Jan. 1964	Holdgate 693a	BM
	Clowes Bay	4 Jan. 1964	Holdgate 698a	BM; CHR; LE; NY; S-PA
	Clowes Bay	4 Jan. 1964	Holdgate 700a	BIRM-ANT
Unspecified island	—	21 Jan. 1915	Bennett 20	BM

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island	North Foreland	7 Jan. 1966	Lindsay 653	BIRM-ANT
	Point Hennequin	29 Jan. 1966	Lindsay 847a	BM
	Potter Cove	10 Jan. 1955	Kühnemann 1955/1	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/23	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/81	BIRM-ANT
Heywood Island	—	6 Jan. 1966	Lindsay 646	BIRM-ANT
Desolation Island	—	8 Jan. 1935	Disc. Invest. St. 1487	S-PA
Robert Island	Edwards Point	5 Jan. 1966	Lindsay 606	BIRM-ANT
	West point	28 Dec. 1952	Frödin s.n.	S-PA
	South end	28 Dec. 1952	Frödin s.n.	S-PA
Greenwich Island	Discovery Bay	6 Jan. 1966	Lindsay 628	BIRM-ANT
Livingston Island	Byers Peninsula	30 Nov. 1965	Lindsay 96b	BIRM-ANT

TABLE II. DISTRIBUTION OF *Andreaea depressinervis* Card. (*continued*)

***Sector S:** South Shetland Islands—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Livingston Island (*cont.*)	Byers Peninsula	3 Dec. 1965	Lindsay 130a	BM
	Byers Peninsula	7 Dec. 1965	Lindsay 160	BIRM-ANT; NY; S-PA
	Byers Peninsula	13 Dec. 1965	Lindsay 283	BM
	Byers Peninsula	21 Dec. 1965	Lindsay 447a	BM; MEL
	Byers Peninsula	22 Dec. 1965	Lindsay 470	BIRM-ANT
	Barnard Point	25 Nov. 1965	Lindsay 28	BIRM-ANT

***Sector S:** Antarctic Peninsula, west coast*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Palmer Coast area	Cape Andreas	29 Nov. 1902	Skottsberg 429	S-PA
	Cape Andreas	29 Nov. 1902	Skottsberg 430	PC; S-PA
Danco Coast area	Moss Islands	1 Dec. 1902	Skottsberg 431	BA; S-PA
	Spring Point	13 Jan. 1954	Kühnemann 1954/75a	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/82	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/220	BIRM-ANT
	Cuverville Island	2 Feb. 1898	Racovitza 239	BR; PC
	Cuverville Island	2 Feb. 1898	Racovitza 240c	BR
	Litchfield Island	4 Jan. 1964	Corner 360a	BM
	Litchfield Island	5 Jan. 1964	Corner 386	BIRM-ANT; PRE; TNS;
	Laggard Island	3 Mar. 1965	Longton 1301	BIRM-ANT; CHR; NY; S-PA
	Wiencke Island, Lockley Point	19 Nov. 1944	Op. Tab. 1756	BM
	Wiencke Island, Lockley Point	19 Nov. 1944	Op. Tab. 1763a	BM
Graham Coast area	Entrance to Lemaire Channel	12 Feb. 1898	Racovitza 477	PC
	Booth Island	30 Dec. 1908	Exp. Ant. Fr. 130a, or Gain 130a	BM; S-PA
	Petermann Island	6 Dec. 1964	Corner 726a	BIRM-ANT
	Petermann Island	6 Dec. 1964	Corner 731	BM; PC
	Petermann Island	6 Dec. 1964	Corner 732	BM
	Petermann Island	9 Mar. 1965	Corner 787a	BIRM-ANT
	Petermann Island	9 Mar. 1965	Corner 792a	BM

TABLE II. DISTRIBUTION OF *Andreaea depressinervis* Card. (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area (*cont.*)	Petermann Island	25 Mar. 1964	Kennett 66	BIRM-ANT; S-PA
	Uruguay Island	25 Oct. 1964	Corner 597a	BM
	Uruguay Island	14 Mar. 1965	Corner 818a	BIRM-ANT
	The Barchans	28 Dec. 1964	Corner 752	BIRM-ANT
	Galindez Island	30 Jan. 1963	Schmitt 15–63b	US
	Galindez Island	2 Mar. 1964	Corner 426	BM; CHR; LE; NY
	Galindez Island	10 Apr. 1964	Corner 485	BIRM-ANT; MEL
	Galindez Island	11 Apr. 1964	Corner 493a	BIRM-ANT
	Galindez Island	17 Feb. 1965	Longton 1239	BM; IAA
	Galindez Island	17 Feb. 1965	Longton 1250	BIRM-ANT; PRE; SGO; TNS
	Galindez Island	14 Dec. 1935	BGLE 1314	BM
	Skua Island	7 Mar. 1965	Corner 778a	BIRM-ANT
	Cape Tuxen	26 Jan. 1961	Archibald 13b	BIRM-ANT
	Cape Tuxen	31 Jan. 1963	Schmitt 16a–63a	US
	Cape Tuxen	26 Nov. 1964	Corner 674a	BM
	Mount Demaria	26 Nov. 1964	Corner 682a	BIRM-ANT
	Largest of Berthelot Islands	3 Nov. 1964	Corner 623	BIRM-ANT
	Cape Pérez	5 Nov. 1964	Corner 634	BIRM-ANT
	Biscoe Islands	19 Mar. 1952	Behn s.n. (Herb. No. Concepcion 12592)	S-PA
Loubet Coast area	Liard Island	16 Nov. 1962	Killingbeck 156a	BIRM-ANT
	Pfaff Island	19 Nov. 1962	Killingbeck 175	BIRM-ANT
	Megaw Island	17 Nov. 1962	Killingbeck 167	BIRM-ANT; BM; PC
	Lagoon Island	25 Feb. 1936	BGLE 1476	BM
Fallières Coast area	Adelaide Island, south end near base hut	19 Feb. 1961	Taylor 468a	BM; S-PA
	Adelaide Island, south-west	8 Dec. 1962	Killingbeck 198a	BIRM-ANT
	Adelaide Island, near base hut	20 Dec. 1964	Longton 905	BIRM-ANT; IAA; MEL; PRE; SGO; TNS
	Adelaide Island, near base hut	28 Dec. 1964	R. Smith 86	BIRM-ANT
	Henkes Islands	9 Oct. 1948	FIDS E463/1	BM
	Avian Island	28 Dec. 1964	Longton 937	BIRM-ANT; CHR; LE; NY

TABLE II. DISTRIBUTION OF *Andreaea depressinervis* Card. (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Fallières Coast area (*cont.*)	Guébriant Islands	31 Jan. 1961	Taylor 446	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Guébriant Islands	31 Jan. 1961	Taylor 455	BM
	Faure Islands	Mar. 1966	Cousins 72	BIRM-ANT; PC
	Small island in Marguerite Bay	24 Jan. 1909	Exp. Ant. Fr. 264 or Gain 264	BM; S-PA

***Sector S:** Antarctic Peninsula, east coast*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Trinity Peninsula area	Hope Bay	1903 or 11 Nov. 1903	Skottsberg 427	BM; S-PA (2 specimens S-PA)
	Hope Bay	1945	Op. Tab. 2509	BM
	Hope Bay	6 Jan. 1945	Op. Tab. 2851	BM
	Hope Bay	10 Dec. 1960	Taylor 236	BM; LE
	Hope Bay	10 Dec. 1960	Taylor 239	BIRM-ANT; PC; SGO
	Hope Bay, south shore	7 Dec. 1963	Longton 43	BM
	Lake Boeckella	3 Jan. 1961	Brading 5	BIRM-ANT; CHR; PC; S-PA
	Lake Boeckella	3 Jan. 1961	Brading 214	BM
	Nobby Nunatak	15 Jan. 1960	Brading 4	BIRM-ANT
	Scar Hills	27 Dec. 1960	Taylor 329	BM; CHR; IAA; LE; MEL; NY; PRE; SGO; TNS
	Scar Hills	27 Dec. 1960	Taylor 334a	BM
	Paulet Island	20 Oct. 1903	Skottsberg 428	PC; S-PA
	"East Graham Land"	—	Op. Tab. 2521	BM

TABLE III

DISTRIBUTION OF *Andreaea gainii* Card. var. *gainii*

***Sector M:** South Sandwich Islands*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Vindication Island	East side	17 Mar. 1964	Longton 745	BIRM-ANT; BM; CHR; LE; NY; PC; S-PA; TNS
Montagu Island	Allen Point	7 Mar. 1964	Holdgate 804a	BIRM-ANT; CHR; IAA; MEL; NY; PRE; SGO; TNS

***Sector S:** South Orkney Islands*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Laurie Island	Cape Geddes	3 Oct. 1946	FIDS C8/1003/1	BIRM-ANT; BM; LE; MEL; NY; PC
	Cape Geddes	3 Jan. 1947	FIDS C44/1015/2	BM
	"Cerro Isla"	26 Feb. 1950	Ricardo Luti Herbera 1713	COLO; S-PA
	"Co. Moneta"	Feb. 1963	Bellisio s.n. (Herb. No. 11737)	BA
	"Cerro Mon, Bai Scotia"	Jan. 1963	Bellisio s.n. (Herb. No. 11767)	BA
	Point ½ mile west-south-west from Point Moreno	Feb. 1963	Bellisio s.n. (Herb. No. 11778)	BA
Powell Island	East side	5 Feb. 1965	R. Smith 225a	BIRM-ANT
	Central-south area	30 Jan. 1965	R. Smith 267	BIRM-ANT
Matthews Island	West side	20 Jan. 1965	R. Smith 159	BIRM-ANT
Coronation Island	Olivine Point	17 Jan. 1965	R. Smith 115	BIRM-ANT
	Saunders Point	3 Dec. 1964	R. Smith 23	BIRM-ANT
	Small islet off Saunders Point	8 Oct. 1950	FIDS H612/8	BM
Signy Island	—	15 Feb.–29 Mar. 1965	R. Smith 1b	BIRM-ANT
	—	15 Feb.–29 Mar. 1965	R. Smith 2b	BIRM-ANT
	Three Lakes Valley	4 Feb. 1962	Holdgate 149	BIRM-ANT; CHR; IAA
	South of Foca Point	23 Jan. 1965	Longton 1122	BIRM-ANT; CHR; IAA; MEL; NY; PRE; SGO; TNS
	Bay south-east of Foca Point	4 Dec. 1964	Longton 858b	BM; IAA; PRE; SGO; TNS
	Jane Peak	29 Jan. 1964	Holdgate 764a	BIRM-ANT; CHR; LE; MEL; NY; PC; S-PA; TNS

TABLE III. DISTRIBUTION OF *Andreaea gainii* Card. var. *gainii* (*continued*)

Sector S: South Orkney Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Signy Island (*cont.*)	Moraine Valley	4 Mar. 1965	R. Smith 368	BIRM-ANT
	Between Jane Peak and Snow Hill	6 Feb. 1965	Longton 1197	BM; IAA; PRE: SGO
	Factory Cove	3 Dec. 1964	Longton 850	BM; PC; S-PA
	Factory Cove	31 Jan. 1965	Longton 1168	BM
	Observation Bluff	25 Jan. 1962	Holdgate 110	BM; NY; S-PA
	Paal Harbour	2 Apr. 1965	R. Smith 422	BIRM-ANT
	Between Rethval and Lenton Points	29 Jan. 1965	Longton 1157	BIRM-ANT; LE

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island	Admiralty Bay, Martel Inlet	17 Dec. 1934	Disc. Invest. St. 1481/5	BM
	Admiralty Bay, Keller Peninsula	24 Dec. 1960	Taylor 306a	BM
	Three Brothers Hill	31 Jan. 1966	Lindsay 860	BIRM-ANT
	Potter Cove	10 Jan. 1955	Kühnemann 1955/48	BIRM-ANT
	Barton Peninsula	18 Jan. 1966	Lindsay 720	BM; CHR
	Fildes Peninsula	16 Feb. 1966	John and Sugden 40b	BM
	Fildes Peninsula	16 Feb. 1966	John and Sugden 47	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/16	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/61	BIRM-ANT
Nelson Island	North of Strachan Hill	31 Jan. 1966	Lindsay 853	BIRM-ANT
	East of Rip Point	26 Jan. 1966	Lindsay 793a	BIRM-ANT
Meade Islands	Cave Island	8 Jan. 1966	Lindsay 672	BIRM-ANT
Greenwich Island	Discovery Bay	6 Jan. 1966	Lindsay 633a	BIRM-ANT
Half Moon Island	—	5 Jan. 1966	Lindsay 579a	BIRM-ANT
Livingston Island	Byers Peninsula	30 Nov. 1965	Lindsay 90a	BM
	Byers Peninsula	3 Dec. 1965	Lindsay 131	BM; NY; S-PA
	Byers Peninsula	4 Dec. 1965	Lindsay 135	BIRM-ANT
	Byers Peninsula	4 Dec. 1965	Lindsay 149	BM
	Byers Peninsula	7 Dec. 1965	Lindsay 165	BM
	Byers Peninsula	8 Dec. 1965	Lindsay 209	BIRM-ANT; CHR; IAA; LE; MEL; PC; SGO; S-PA

TABLE III. DISTRIBUTION OF *Andreaea gainii* Card. var. *gainii* (*continued*)

Sector S: South Shetland Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Livingston Island (*cont.*)	Byers Peninsula	16 Dec. 1965	Lindsay 406	BIRM-ANT
	Byers Peninsula	21 Dec. 1965	Lindsay 447b	BIRM-ANT
	Byers Peninsula	22 Dec. 1965	Lindsay 463	BM; MEL
	Byers Peninsula	30 Dec. 1965	Lindsay 516	BIRM-ANT
	False Bay	25 Feb. 1963	Schmitt 60–63a	US
	Charity Glacier	27 Nov. 1965	Lindsay 60	BIRM-ANT; CHR; LE; PC
	Barnard Point	26 Nov. 1965	Lindsay 46a	BIRM-ANT; PRE: TNS
Deception Island	North-west of Kroner Lake	9–10 Dec. 1964	R. Smith 61	BIRM-ANT

Sector S: Antarctic Peninsula, west coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Danco Coast area	Spring Point	14 Jan. 1954	Kühnemann 1954/78	BIRM-ANT
	Omega Island	27 Feb. 1941	Siple 376.3	FH; US
	"Almirante Brown"	17 Dec. 1953	Kühnemann 1953/129a	BIRM-ANT
Graham Coast area	Petermann Island	9 Mar. 1965	Corner 790a	BIRM-ANT
	Irizar Island	28 Oct. 1964	Corner 606	BIRM-ANT
	Uruguay Island	25 Oct. 1964	Corner 597b	BIRM-ANT
	Uruguay Island	4 Dec. 1964	Corner 717a	BM
	Edge Hill	19 Nov. 1964	Corner 662a	BIRM-ANT
	Galindez Island	14 Dec. 1935	BGLE 1314B (b)	BM
	Galindez Island	10 Apr. 1964	Corner 483a	BIRM-ANT
	Galindez Island	10 Apr. 1964	Corner 484	BM
	Skua Island	14 Apr. 1964	Corner 505a	BIRM-ANT
	Cape Tuxen	8 Jan. 1909	Gain 209 or Exp. Ant. Fr. 209	BM; NY; PC
	Cape Tuxen	26 Jan. 1961	Archibald 13c	BIRM-ANT
	Cape Tuxen	26 Nov. 1964	Corner 672a	BM
	Cape Tuxen	26 Nov. 1964	Corner 677a	BIRM-ANT
	Mount Demaria	26 Nov. 1964	Corner 682b	BIRM-ANT
	Mount Demaria	26 Nov. 1964	Corner 694	BM
	Largest of Berthelot Islands	3 Nov. 1964	Corner 622a	BIRM-ANT
	Cape Pérez	5 Nov. 1964	Corner 641b	BIRM-ANT

TABLE III. DISTRIBUTION OF *Andreaea gainii* Card. var. *gainii* (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Loubet Coast area	Nunatak above Hanusse Bay	5 Feb. 1965	Lamb 8044a	NY
	Adelaide Island, Mount Mangin	Sep. 1962	Killingbeck 149a	BM
	Léonie Island	1962	Killingbeck 212b	BIRM-ANT
Fallières Coast area	Adelaide Island, south-west corner	10 Dec. 1962	Killingbeck 211	BIRM-ANT; NY

***Sector S:** Antarctic Peninsula, east coast*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Trinity Peninsula area	East side of Hope Bay	16 Apr. 1945	Op. Tab. 2404	BM
	Nobby Nunatak	7 Jul. 1945	Op. Tab. 2436	BM
	Nobby Nunatak	15 Jan. 1960	Brading 31	BIRM-ANT; CHR; IAA; LE; MEL; NY; PC; SGO; S-PA; TNS
	Scar Hills	15 Jan. 1961	Brading 19	BM; CHR; IAA; NY; PC; PRE; S-PA; TNS
	Mount Flora	7 Dec. 1963	Longton 37a	BIRM-ANT
	Mount Flora	7 Dec. 1963	Longton 41	BIRM-ANT
Foyn Coast area	Cabinet Inlet, Cape Casey	1963	Tindal 5	BIRM-ANT
	Cabinet Inlet, Cape Casey	Dec. 1963	Tindal 60	BM

***Sector B:** Eights Coast*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Dustin Island	—	16 Feb. 1960	Leech s.n.	BIRM-ANT; NY

TABLE IV

DISTRIBUTION OF *Andreaea gainii* Card. var. *parallela* (C. Müll.) S. W. Greene

Sector M: South Sandwich Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Vindication Island	North-east corner	14 Mar. 1962	Holdgate 437	BIRM-ANT; BM; IAA; LE; PRE
	East side of summit	17 Mar. 1964	Holdgate 852a	BIRM-ANT; CHR; NY; PC
	Near centre of east side of island	17 Mar. 1964	Longton 747	BIRM-ANT; SGO
Bellingshausen Island	Within crater, east side	10 Mar. 1964	Holdgate 825a	BIRM-ANT; MEL; S-PA; TNS

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Powell Island	West coast	3 Feb. 1965	R. Smith 239a	BIRM-ANT
	John Peaks	7 Feb. 1965	R. Smith 271a	BIRM-ANT
Coronation Island	Wave Peak	16 Sep. 1950	FIDS H609/1	BIRM-ANT; BM

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Livingston Island	Byers Peninsula	8 Dec. 1965	Lindsay 227	BIRM-ANT

Sector S: Antarctic Peninsula, west coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area	Cape Tuxen	1 Apr. 1965	Corner 845	BIRM-ANT; CHR; IAA; LE; PC; PRE; S-PA; TNS

Sector B: Eights Coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
—	—	17 Feb. 1960	Wagoner s.n.	NY

TABLE V

DISTRIBUTION OF *Andreaea regularis* C. Müll.

Sector M: South Sandwich Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Leskov Island	North end	5 Mar. 1964	Longton 525	BM; IAA; PRE
	Summit ridge	5 Mar. 1964	Longton 530	BIRM-ANT; CHR; LE; NY; PC; S-PA

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Laurie Island	North-west Cape Geddes	3 Jan. 1947	FIDS C44/1015/4	BM
Powell Island	East side	29 Jan. 1965	R. Smith 196b	BIRM-ANT
	East side	29 Jan. 1965	R. Smith 197c	BIRM-ANT
	East side	1 Feb. 1965	R. Smith 200a	BIRM-ANT
	East side	5 Feb. 1965	R. Smith 219	BIRM-ANT
	East side	5 Feb. 1965	R. Smith 221b	BIRM-ANT
	West side	3 Feb. 1965	R. Smith 230	BIRM-ANT
Coronation Island	Mansfield Point	10 Feb. 1965	R. Smith 297	BIRM-ANT
	Olivine Point	17 Jan. 1965	R. Smith 116	BIRM-ANT
	Olivine Point	17 Jan. 1965	R. Smith 117	BIRM-ANT
	Olivine Point	17 Jan. 1965	R. Smith 118	BIRM-ANT
	Olivine Point	17 Jan. 1965	R. Smith 134b	BIRM-ANT
Signy Island	Spindrift Rocks	29 Jan. 1964	Holdgate 762a	BM; IAA; MEL; PRE
	South of Foca Point	23 Jan. 1965	Longton 1120	BM
	Moraine Valley	4 Mar. 1965	R. Smith 369	BIRM-ANT
	Berntsen Point	30 Dec. 1960	Taylor 394	BIRM-ANT
	Factory Cove	15 Dec. 1961	Holdgate 12	BM; IAA
	Factory Cove	21 Jan. 1964	Holdgate 746b	BIRM-ANT
	Observation Bluff	20 Jan. 1962	Holdgate 93	BM; IAA; MEL; PRE
	Observation Bluff	2 Feb. 1962	Holdgate 136a	BIRM-ANT
	Between Factory Cove and Paal Harbour	20 Dec. 1961	Holdgate 26a	BM; SGO; TNS
	Near Port Jebson	2 Feb. 1964	Holdgate 775b	BM
	Paal Harbour	22 Jan. 1964	Holdgate 751a	BM
	Paal Harbour	22 Jan. 1964	Holdgate 752b	BIRM-ANT
	Rusty Bluff	30 Dec. 1960	Taylor 379	BM; CHR; LE; NY; S-PA; TNS

TABLE V. DISTRIBUTION OF *Andreaea regularis* C. Müll. (*continued*)

Sector S: South Orkney Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Signy Island (*cont*).	Rusty Bluff	13 Jan. 1964	Holdgate 738a	BIRM-ANT; PC
	Rusty Bluff	13 Jan. 1964	Holdgate 741a	BM; PC
	Rusty Bluff	29 Jan. 1965	Longton 1160	BIRM-ANT; CHR; LE; NY; SGO; S-PA; TNS
	Between Rethval and Lenton Points	29 Jan. 1965	Longton 1158	BIRM-ANT; BM; IAA; MEL; PRE; SGO

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island	Potter Cove	10 Jan. 1955	Kühnemann 1955/82	BIRM-ANT
	Potter Cove	25 Jan. 1955	Kühnemann 1955/3	BIRM-ANT
	Barton Peninsula	18 Jan. 1966	Lindsay 715	BIRM-ANT; NY
	Barton Peninsula	19 Jan. 1966	Lindsay 731a	BIRM-ANT
	Barton Peninsula	23 Jan. 1966	Lindsay 766	BM; CHR; S-PA
	Barton Peninsula	24 Jan. 1966	Lindsay 776	BM
	North Spit	26 Jan. 1966	Lindsay 782	BIRM-ANT
	North Spit	26 Jan. 1966	Lindsay 783	BM
	Ardley Island	2 Jan. 1954	Kühnemann 1954/20	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/62	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/63	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/76	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/77	BIRM-ANT
Nelson Island	Harmony Cove	11 Jan. 1902 or 1902	Skottsberg 425	BA; FH; S-PA (5 specimens S-PA)
	Harmony Cove	11 Jan. 1902	Skottsberg 479	S-PA
Robert Island	Edwards Point	31 Jan. 1952	Behn s.n. (Herb. No. Concepcion 12558)	S-PA
Greenwich Island	—	31 Jan. 1953	Frödin s.n.	S-PA
	Duff Point	4 Jan. 1966	Lindsay 558	BIRM-ANT
	East shore of Discovery Bay	3 Mar. 1951	Frödin s.n.	S-PA
	East shore of Discovery Bay	3 Mar. ——	Frödin s.n.	S-PA (2 specimens)
Half Moon Island	—	5 Jan. 1966	Lindsay 585	BIRM-ANT
Livingston Island	Byers Peninsula	30 Nov. 1965	Lindsay 85	BIRM-ANT

TABLE V. DISTRIBUTION OF *Andreaea regularis* C. Müll. (*continued*)

Sector S: South Shetland Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Livingston Island (*cont.*)	Byers Peninsula	8 Dec. 1965	Lindsay 205	BM; LE
	Byers Peninsula	14 Dec. 1965	Lindsay 362	BM
	Barnard Point	25 Nov. 1965	Lindsay 19	BIRM-ANT
Desolation Island	—	9 Jan. 1935	Disc. Invest. St. 1487/1	BM
Deception Island	Between runway and Kroner Lake	9 Dec. 1964	R. Smith 60	BIRM-ANT
	Between Kroner Lake and Ronald Hill	10 Dec. 1964	Longton 903	BIRM-ANT
	Cathedral Crags	10 Mar. 1960	Leech s.n.	NY

Sector S: Antarctic Peninsula, west coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Trinity Peninsula area	Marescot Ridge	11 Dec. 1960	Brading 34	BIRM-ANT
Danco Coast area	Brabant Island	30 Jan. 1898	Racovitza 252d	BR
	Spring Point	13 Jan. 1954	Kühnemann 1954/29	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/80	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/104	BIRM-ANT
	Lambda Island	2 Mar. 1941	Siple 347.7	US
	Lambda Island	3 Mar. 1941	Siple 345.3	US
	Lambda Island	3 Mar. 1941	Siple 348.4	US
	Kappa Island	31 Dec. 1964	Lamb 7932	NY
	Pi Islands	25 Jan. 1965	Lamb 7968	NY
	Omega Island	27 Feb. 1941	Siple 375	US
	Omega Island	27 Feb. 1941	Siple 376	FH; US
	Omega Island	Mar. 1941	Siple 371.6	FH; US
	Omega Island	1 Mar. 1941	Siple 360	US
	Omega Island	4 Mar. 1941	Siple 344.4	US
	Omega Island	14 Mar. 1941	Siple 331	NY
	Omega Island	14 Mar. 1941	Siple 367	NY
	Omega Island	14 Mar. 1941	Siple 372.6	US
	Omega Island	14 Mar. 1941	Siple 372.11	US
	Omega Island	12 Mar. 1941	Siple 374.1	US
	Challenger Island	2 Dec. 1902	Skottsberg 426	BA; S-PA; US (2 specimens S-PA)

TABLE V. DISTRIBUTION OF *Andreaea regularis* C. Müll. (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Danco Coast area (*cont.*)	Anvers Island, Norsel Point	22 Jan. 1963	Schmitt 4–63	US
	Anvers Island, Norsel Point	22 Jan. 1963	Schmitt 4e–63a	US
	Anvers Island, Norsel Point	16 Feb. 1965	Longton 1229	BIRM-ANT
	Litchfield Island	5 Jan. 1964	Corner 385	BIRM-ANT; CHR; LE; NY
	Litchfield Island	5 Jan. 1964	Corner 393a	BM; PC; S-PA; TNS
	Laggard Island	3 Mar. 1965	Longton 1302	BIRM-ANT; IAA; MEL; PRE; SGO; TNS
	"Almirante Brown"	11 Dec. 1953	Kühnemann 1953/52a	BIRM-ANT
	Wiencke Island, Noble Peak	20 Nov. 1944	Op. Tab. 1791	BM
	Wiencke Island	19 Feb. 1961	FIDS Misc. 11	BIRM-ANT
	Doumer Island	23 Feb. 1961	FIDS Misc. 2	BIRM-ANT
Graham Coast area	Entrance to Lemaire Channel	12 Feb. 1898	Racovitza 267a	BR
	Entrance to Lemaire Channel	12 Feb. 1898	Racovitza 270a	BR; PC
	Booth Island	23 Mar. 1904	Exp. Char. 237b	PC
	Petermann Island	5 Jan. 1909	Exp. Ant. Fr. 167	BM
	Petermann Island	10 Mar. 1965	Longton 1361	BIRM-ANT; CHR; PRE
	Galindez Island	2 Jan. 1964	Corner 413	BM; SGO; S-PA
	Galindez Island	9 Mar. 1964	Corner 446	BM; TNS
	Galindez Island	9 Mar. 1964	Corner 447	BIRM-ANT
	Galindez Island	21 Apr. 1964	Corner 544a	BM
	Galindez Island	2 Jan. 1965	Corner 758	BIRM-ANT
	Galindez Island	26 Jan. 1965	Corner 767	BIRM-ANT; IAA; MEL; PRE; SGO
	Galindez Island	15 Mar. 1965	Corner 825b	BIRM-ANT
	Galindez Island	6 Mar. 1965	Longton 1325	BIRM-ANT; CHR; LE; NY; PC; S-PA
	Cape Tuxen	26 Jan. 1961	Archibald 13a	BIRM-ANT
	Cape Tuxen	26 Nov. 1964	Corner 683a	BM
	Berthelot Islands	1934–1937	BGLE s.n.	BM
	Somerville Island	17 Mar. 1960	Taylor 122a	BIRM-ANT

TABLE V. DISTRIBUTION OF *Andreaea regularis* C. Müll. (*continued*)

Sector S: Antarctic Peninsula, west coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Loubet Coast area	Nunatak above Hanusse Bay	5 Feb. 1965	Lamb 8044b	NY
	Nunatak above Hanusse Bay	5 Feb. 1965	Lamb 8046	NY
	Nunatak above Hanusse Bay	5 Feb. 1965	Lamb 8054	NY
	Nunatak above Hanusse Bay	5 Feb. 1965	Lamb 8069	BIRM-ANT; NY
	Adelaide Island, by Léonie Islands	19 Oct. 1948	FIDS E467/1	BM
Fallières Coast area	Adelaide Island, north-west of Cape Alexander	9 Dec. 1962	Killingbeck 200	BIRM-ANT
	Adelaide Island, north-west of Cape Alexander	Feb. 1963	Killingbeck 232	BM; MEL; NY; PC

Sector S: Antarctic Peninsula, east coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Trinity Peninsula area	Summit Pass	9 Nov. 1945	Op. Tab. 2571	BIRM-ANT; BM
Oscar II Coast area	North side of Churchill Peninsula	1963	Tindal 20	BIRM-ANT

Unspecified Locality

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
—	—	1899	Dr. Cook s.n.	US

TABLE VI

DISTRIBUTION OF *Pohlia cruda* (Hedw.) Lindb. var. *imbricata* (Card.) Bartr.

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Powell Island	—	30 Jan. 1965	R. Smith 249	BIRM-ANT
	East side	1 Feb. 1965	R. Smith 209	BIRM-ANT
	West side	3 Feb. 1965	R. Smith 234	BIRM-ANT
	West side	3 Feb. 1965	R. Smith 235a	BIRM-ANT
Matthews Island	West side	23 Jan. 1965	R. Smith 168	BIRM-ANT
Coronation Island	Olivine Point	17 Jan. 1965	R. Smith 143	BIRM-ANT
	Saunders Point	3 Dec. 1964	R. Smith 38	BIRM-ANT
Lynch Island	—	16 Mar. 1966	Lindsay 946b	BIRM-ANT
Signy Island	Between Spindrift Rocks and North Point	10 Jan. 1962	Holdgate 84a	BIRM-ANT
	Near Spindrift Rocks	29 Jan. 1964	Holdgate 765a	BM
	Three Lakes Valley	4 Feb. 1962	Holdgate 145	BIRM-ANT; SGO
	South of Three Lakes Valley	1 Feb. 1965	Longton 1185	BM; CHR; IAA; LE; MEL; NY; PC; PRE
	Thulla Point	8 Feb. 1962	Holdgate 161	BIRM-ANT; CHR; IAA; LE; MEL; NY; PC; PRE
	Between Jane Peak and Snow Hill	6 Feb. 1965	Longton 1193	BIRM-ANT; BM; CHR; SGO; S-PA; TNS
	Bay south-east of Foca Point	4 Dec. 1964	Longton 858a	BIRM-ANT; TNS
	Paal Harbour	2 Apr. 1965	R. Smith 424	BIRM-ANT
	Factory Cove	2 Feb. 1962	Holdgate 130a	BM; MEL; PRE; S-PA
	Factory Cove	21 Jan. 1964	Holdgate 749a	BIRM-ANT; TNS
	Factory Cove	16 Jan. 1965	Longton 1053	BIRM-ANT

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island	Lions Rump	26 Jan. 1966	Lindsay 799a	BIRM-ANT
	Admiralty Bay, Martel Inlet	17 Dec. 1934	Disc. Invest. St. 1481/3	BM
	Admiralty Bay, Keller Peninsula	24 Dec. 1960	Taylor 272a	BM; LE
	Admiralty Bay, Keller Peninsula	24 Dec. 1960	Taylor 299a	BIRM-ANT

TABLE VI. DISTRIBUTION OF *Pohlia cruda* (Hedw.) Lindb. var. *imbricata* (Card.) Bartr. (*continued*)

Sector S: South Shetland Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island (*cont.*)	Admiralty Bay, Keller Peninsula	24 Dec. 1960	Taylor 302a	BM; PRE; S-PA
	Ardley Island	2 Jan. 1954	Kühnemann 1954/32a	BIRM-ANT
Greenwich Island	South of English Strait	21 Jan. ——	Frödin s.n.	S-PA
	Below "Cerro Lopez" Glacier	3 Feb. 1953	Frödin s.n.	S-PA
Livingston Island	Byers Peninsula	30 Nov. 1965	Lindsay 100	BM; CHR
	Byers Peninsula	3 Dec. 1965	Lindsay 125	BIRM-ANT; IAA; LE; MEL; NY; PC
	Byers Peninsula	8 Dec. 1965	Lindsay 213	BM
	Byers Peninsula	13 Dec. 1965	Lindsay 314	BIRM-ANT; PRE; SGO
	Johnsons Dock	28 Dec. 1965	Lindsay 74	BIRM-ANT

Sector S: Antarctic Peninsula, west coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Palmer Coast area	Almond Point	21 Jan. 1962	Cameron and Kennett 74a	BIRM-ANT; BM
Danco Coast area	Brabant Island	30 Jan. 1898	Racovitza 252c	BR; PC
	Lambda Island	1 Mar. 1941	Siple 345.1	FH
	Lambda Island	2 Mar. 1941	Siple 347	US
	Lambda Island	3 Mar. 1941	Siple 345.2	US
	Lambda Island	3 Mar. 1941	Siple 348	FH; US
	Lambda Island	3 Mar. 1941	Siple 348.1	FH; US
	Omega Island	27 Feb. 1941	Siple 376.6	US
	Omega Island	Mar. 1941	Siple 371.4	US
	Omega Island	Mar. 1941	Siple 378.5	US
	Omega Island	1 Mar. 1941	Siple 335	US
	Omega Island	1 Mar. 1941	Siple 360.5	US
	Omega Island	4 Mar. 1941	Siple 361.2	US
	Omega Island	14 Mar. 1941	Siple 372.5	US
	Beneden Head	1 Feb. 1898	Racovitza 233a	BR; PC; S-PA
	Anvers Island, Arthur Harbour	16 Feb. 1965	Longton 1227	BIRM-ANT
	Litchfield Island	5 Jan. 1964	Corner 370a	BIRM-ANT

TABLE VI. DISTRIBUTION OF *Pohlia cruda* (Hedw.) Lindb. var. *imbricata* (Card.) Bartr. (*continued*)

Sector S: Antarctic Peninsula, west coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Danco Coast area (*cont.*)	Litchfield Island	5 Jan. 1964	Corner 377a	BM
	Laggard Island	3 Mar. 1965	Longton 1315	BIRM-ANT; CHR
	Goudier Island	18 Jan. 1935	Disc. Invest. St. 1489/3	BM
	Goudier Island	12 Mar. 1944	Tab. B.	BM
	Goudier Island	30 Dec. 1944	Op. Tab. 2146a	BM
	Goudier Island	18 Jan. 1945	Op. Tab. 2257	BM
	Goudier Island	9 Feb. 1960	Taylor 110	BM; PC; TNS
	Goudier Island	Feb. 1960	Taylor 177	BIRM-ANT
	Goudier Island	24 Jan. 1961	Taylor 416a	BIRM-ANT
	Near "Almirante Brown"	2 Feb. 1963	Schmitt 21–63a	BIRM-ANT; US
Graham Coast area	Entrance to Lemaire Channel	12 Feb. 1898	Racovitza 270c	BR; PC
	Petermann Island	5 Jan. 1909	Gain 171	S-PA
	Petermann Island	5 Jan. 1909	Gain 173	S-PA
	Petermann Island	5 Jan. 1909	Gain 174 or Exp. Ant. Fr. 174	K; S-PA
	Petermann Island	6 Dec. 1964	Corner 724a	BIRM-ANT
	Petermann Island	9 Mar. 1965	Corner 791	BM
	Irizar Island	28 Oct. 1964	Corner 604a	BIRM-ANT
	Largest island between Irizar and Uruguay Islands	3 Mar. 1964	Corner 434a	BM
	Uruguay Island	4 Dec. 1964	Corner 718b	BIRM-ANT
	Edge Hill	19 Nov. 1964	Corner 659a	BIRM-ANT
	Largest island of The Barchans	28 Dec. 1964	Corner 748	BIRM-ANT; BM; CHR; IAA; NY; S-PA
	Galindez Island	14 Dec. 1935	BGLE 1312a	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Galindez Island	14 Dec. 1935	BGLE 1313a	BM
	Galindez Island	17 Dec. 1935	BGLE 1322a	BM; IAA; TNS
	Galindez Island	12 Feb. 1960	Taylor 91a	BIRM-ANT
	Galindez Island	12 Feb. 1960	Taylor 93	BIRM-ANT; BM; CHR; IAA; LE; MEL; PC; PRE; SGO; S-PA; TNS
	Galindez Island	Feb. 1960	Taylor 181	BIRM-ANT

TABLE VI. DISTRIBUTION OF *Pohlia cruda* (Hedw.) Lindb. var. *imbricata* (Card.) Bartr. (*continued*)

Sector S: Antarctic Peninsula, west coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area (*cont.*)	Galindez Island	27 Jan. 1961	Taylor 420	BIRM-ANT; CHR; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Galindez Island	27 Jan. 1961	Taylor 422	BM; CHR; IAA; MEL; PC
	Galindez Island	28 Feb. 1964	Corner 404b	BIRM-ANT
	Galindez Island	2 Mar. 1964	Corner 420	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Galindez Island	2 Mar. 1964	Corner 429b	BIRM-ANT
	Galindez Island	15 Mar. 1964	Corner 468a	BM; LE; NY
	Galindez Island	5 May 1964	Corner 554a	BIRM-ANT
	Galindez Island	29 Nov. 1964	Corner 700a	BIRM-ANT
	Galindez Island	1 Feb. 1965	Corner 769a	BIRM-ANT; TNS
	Galindez Island	17 Feb. 1965	Longton 1246	BIRM-ANT; BM; PC; PRE; SGO; S-PA
	Galindez Island	6 Mar. 1965	Longton 2311	BIRM-ANT
	Corner Islands	18 Aug. 1964	Corner 567	BIRM-ANT
	Most westerly of Corner Islands	14 Jan. 1965	Corner 764	BIRM-ANT; NY; PC
	Skua Island	13 Mar. 1964	Corner 453	BIRM-ANT; CHR; IAA; LE; MEL
	Skua Island	14 Apr. 1964	Corner 506a	BIRM-ANT
	Skua Island	27 Feb. 1966	Northover 6	BM
	Black Island	22 Aug. 1964	Corner 577	BM; PRE; SGO; S-PA
	Cape Tuxen	8 Jan. 1909	Gain 193a	PC; S-PA
	Cape Tuxen	8 Jan. 1909	Gain 208 or Exp. Ant. Fr. 208	PC; S-PA
	Near Cape Tuxen	26 Jan. 1961	Archibald 17	BIRM-ANT; CHR; TNS
	Largest of Berthelot Islands	3 Nov. 1964	Corner 626a	BIRM-ANT; IAA; PRE
	Green Island	18 Mar. 1935	BGLE 1083a	BM
	Cape Pérez	5 Nov. 1964	Corner 637a	BIRM-ANT
	Beascochea Bay	13 Sep. 1935	BGLE 1195a	BM; LE; MEL; NY; PC; S-PA

TABLE VI. DISTRIBUTION OF *Pohlia cruda* (Hedw.) Lindb. var. *imbricata* (Card.) Bartr. (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Loubet Coast area	Pfaff Island	19 Nov. 1962	Killingbeck 177	BIRM-ANT; CHR; LE; TNS
	Adelaide Island, point east of Mount Bouvier	8 Mar. 1963	Killingbeck 234	BIRM-ANT
	Adelaide Island, Mount Bouvier	1 Nov. 1962	Killingbeck 155	BM
	Adelaide Island, Mount Mangin	Sep. 1962	Killingbeck 148a	BIRM-ANT
	Adelaide Island, Mount Gaudry	10 Sep. 1962	Killingbeck 142b	BIRM-ANT
	Adelaide Island, Mount Gaudry	10 Sep. 1962	Killingbeck 144	BM
	Adelaide Island, Mount Liotard	27 Nov. 1962	Killingbeck 189b	BIRM-ANT
	Webb Island	29 Sep. 1948	FIDS E456/2	BM
Fallières Coast area	Adelaide Island, south-east corner	19 Feb. 1961	Taylor 459	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Adelaide Island, south-east corner	19 Feb. 1961	Taylor 463	BM; IAA; NY
	Adelaide Island, south-east corner	19 Feb. 1961	Taylor 466a	BM; CHR; LE; TNS
	Adelaide Island, south-east corner	28 Dec. 1964	R. Smith 91	BIRM-ANT
	Adelaide Island, south-east corner	28 Dec. 1964	Longton 914	BM
	Jenny Island	30 Jan. 1909	Gain 247c	PC
	Jenny Island	30 Jan. 1961	Taylor 442a	BIRM-ANT
	Jenny Island	Feb. 1962	Killingbeck 117	BM; MEL; NY; PRE; SGO; S-PA
	"East Base"	—	Siple 92	US
	"East Base"	—	USASE 92b	US
George VI Sound	Alexander Island, Eros Glacier	15 Dec. 1962	Taylor 523	BIRM-ANT; BM; NY; PC; S-PA
	Alexander Island, Fossil Bluff	28 Jan. 1962	Taylor 509a	BIRM-ANT
	Buttress Nunataks	1 Dec. 1949	FIDS E611	BM

TABLE VI. DISTRIBUTION OF *Pohlia cruda* (Hedw.) Lindb. var. *imbricata* (Card.) Bartr. (*continued*)

***Sector S:** Antarctic Peninsula, east coast*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Foyn Coast area	Cabinet Inlet, Eden Glacier	1963	Tindal 3b	BIRM-ANT
	Cabinet Inlet, Eden Glacier	Nov. 1963	Tindal 30	BIRM-ANT; BM
Wilkins Coast area	Finley Heights	19 Oct. 1965	Cousins 1	BIRM-ANT
	Finley Heights	19 Oct. 1965	Cousins 5a	BIRM-ANT

Unspecified Locality

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
—	—	1908–1910	Exp. Ant. Fr. 205 *pr.p.*	S-PA

TABLE VII

DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb.

Sector M: South Sandwich Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Leskov Island	Summit ridge	5 Mar. 1964	Longton 490a	BM; MEL; PRE
	Summit ridge	5 Mar. 1964	Longton 508a	BIRM-ANT; CHR; LE; NY; S-PA
	Summit ridge	5 Mar. 1964	Longton 533	BIRM-ANT; IAA
	Summit ridge	5 Mar. 1964	Holdgate 833a	BIRM-ANT; NY; PC; SGO; S-PA; TNS
	Near northern end	5 Mar. 1964	Longton 518a	BM; IAA; PC; TNS
Candlemas Island	North of Sea Serpent Cove	9 Jan. 1961	Archibald 5b	BIRM-ANT; CHR; IAA; LE; MEL; NY; PC; PRE; SGO
	West shore	11 Mar. 1964	Longton 628	BM; NY
	West shore	11 Mar. 1964	Longton 630	BIRM-ANT
	West shore	9 Mar. 1964	Longton 589	BM; S-PA; TNS
	North end of ice cap	13 Mar. 1964	Longton 686	BIRM-ANT; CHR; LE; PC
	North part	14 Mar. 1962	Holdgate 442a	BIRM-ANT; CHR; IAA; LE; NY; PC; PRE; SGO; S-PA; TNS
	North of western lagoon	14 Mar. 1964	Longton 692	BM
	North of western lagoon	14 Mar. 1964	Longton 696	BIRM-ANT; CHR; IAA; LE; MEL; NY
	North of western lagoon	14 Mar. 1964	Longton 697a	BM; MEL; TNS
	North of western lagoon	14 Mar. 1964	Longton 699	BIRM-ANT; S-PA
	North of western lagoon	14 Mar. 1964	Longton 703	BM
	North of western lagoon	14 Mar. 1964	Longton 704	BIRM-ANT; BM; MEL; PC; PRE; SGO; S-PA; TNS
	North of western lagoon	14 Mar. 1964	Longton 705	BIRM-ANT; IAA; LE; NY; PC; PRE; SGO; S-PA
	North of western lagoon	14 Mar. 1964	Longton 712a	BIRM-ANT
	North of plain between lagoons	8 Mar. 1964	Longton 538	BM; CHR; MEL; PC; PRE; SGO; S-PA; TNS
	North of plain between lagoons	8 Mar. 1964	Longton 540a	BM
	West end of eastern lagoon	10 Mar. 1964	Longton 595	BIRM-ANT; CHR; IAA; LE

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

Sector M: South Sandwich Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Candlemas Island (*cont.*)	South of lagoon	14 Mar. 1962	Holdgate 446	BIRM-ANT; CHR; IAA; LE; MEL; NY; PRE; S-PA
	Between lagoons and most southerly exposed lava ridge	8 Mar. 1964	Longton 541	BM
	Between lagoons and most southerly exposed lava ridge	8 Mar. 1964	Longton 549	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Between lagoons and most southerly exposed lava ridge	8 Mar. 1964	Longton 553	BM; MEL; NY; PRE; S-PA; TNS
	Between lagoons and most southerly exposed lava ridge	8 Mar. 1964	Longton 556a	BIRM-ANT; SGO
	Between lagoons and most southerly exposed lava ridge	8 Mar. 1964	Longton 573	BIRM-ANT; PC
Saunders Island	South of Harper Point	14 Mar. 1964	Holdgate 847	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	South of Harper Point	14 Mar. 1964	Holdgate 848	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	North end of Cordelia Bay	14 Mar. 1962	Holdgate 433	BIRM-ANT; CHR; LE; NY; PC; SGO; TNS
Bellingshausen Island	Southern slopes of main cone	13 Mar. 1962	Holdgate 407	BIRM-ANT
	Southern slopes of main cone	13 Mar. 1962	Holdgate 421a	BM
	Southern lip of main crater	13 Mar. 1962	Holdgate 425a	BIRM-ANT
	Southern slopes of cone	8 Mar. 1964	Holdgate 830a	BIRM-ANT; SGO; S-PA
	Southern flanks of cone	9 Mar. 1964	Holdgate 816b	BM
	East end of southern flanks of cone	9 Mar. 1964	Holdgate 817a	BM; CHR; NY; PC; TNS
	Southern slopes	9 Mar. 1964	Holdgate 812b	BIRM-ANT
	Southern slopes	10 Mar. 1964	Holdgate 838b	BM

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Laurie Island	Cape Geddes	22 Dec. 1946	FIDS C42/1014/4	BM
	Cape Geddes	3 Jan. 1947	FIDS C44/1015/5	BM
	Point Martin	27 Dec. 1954	Kühnemann 1954/6	BIRM-ANT
Fredriksen Island	West face	4 Jan. 1933	Disc. Invest. St. 1090/4	BM
Powell Island	West side	3 Feb. 1965	R. Smith 235b	BIRM-ANT
	East side	5 Feb. 1965	R. Smith 224	BIRM-ANT
	East side	29 Jan. 1965	R. Smith 195	BIRM-ANT
	—	30 Jan. 1965	R. Smith 250	BIRM-ANT
	Falkland Harbour	4 Dec. 1964	R. Smith 56	BIRM-ANT
	Falkland Harbour	31 Jan. 1965	R. Smith 274	BIRM-ANT
Michelsen Island	East side	4 Dec. 1964	R. Smith 45	BIRM-ANT
Matthews Island	North-east	24 Jan. 1965	R. Smith 190	BIRM-ANT
	West side	23 Jan. 1965	R. Smith 157c	BIRM-ANT
	Coffer Island Bay	25 Jan. 1965	R. Smith 181	BIRM-ANT
Coronation Island	Mansfield Point	10 Feb. 1965	R. Smith 292	BIRM-ANT
	Mansfield Point	10 Feb. 1965	R. Smith 293	BIRM-ANT
	Mansfield Point	10 Feb. 1965	R. Smith 294	BIRM-ANT
	Mansfield Point	10 Feb. 1965	R. Smith 295	BIRM-ANT
	Olivine Point	17 Jan. 1965	R. Smith 120a	BIRM-ANT
	Olivine Point	17 Jan. 1965	R. Smith 138	BIRM-ANT
	Olivine Point	17 Jan. 1965	R. Smith 145	BIRM-ANT
	Olivine Point	17 Jan. 1965	R. Smith 149	BIRM-ANT
Lynch Island	—	16 Mar. 1966	Lindsay 942b	BIRM-ANT
	—	16 Mar. 1966	Lindsay 964a	BM
Signy Island	South side of Starfish Cove	27 Jan. 1962	Holdgate 124a	BIRM-ANT; CHR; LE; NY
	South side of Starfish Cove	27 Jan. 1962	Holdgate 125a	BIRM-ANT
	Cove south of Foca Point	23 Jan. 1965	Longton 1124	BIRM-ANT; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA
	Ridge inland from Thulla Point	8 Feb. 1962	Holdgate 160a	BM; S-PA; TNS
	Mooring Point	20 Jan. 1962	Holdgate 97	BM; IAA; MEL; PC; PRE; SGO; S-PA; TNS

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

Sector S: South Orkney Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Signy Island (*cont.*)	Between Jane Peak and Snow Hill	6 Feb. 1965	Longton 1196	BIRM-ANT; CHR; IAA; LE; MEL
	—	15–29 Mar. 1965	R. Smith 3	BIRM-ANT
	Borge Bay	17 Mar. 1951	FIDS H622/1	BM
	Borge Bay	17 Mar. 1951	FIDS H624/1	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Borge Bay	18 Jan. 1933	Disc. Invest. St. 1092/4	BM
	Berntsen Point	31 Dec. 1963	Holdgate 668a	BM
	Behind base hut	20 Dec. 1961	Holdgate 23	BIRM-ANT; NY; PC; PRE; SGO
	Behind base hut	20 Dec. 1961	Holdgate 35a	BIRM-ANT; CHR; IAA; LE
	Behind base hut	27 Dec. 1961	Holdgate 49	BIRM-ANT; CHR; IAA; LE
	Behind base hut	29 Dec. 1961	Holdgate 55	BM; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Behind base hut	9 Jan. 1964	Holdgate 716a	BIRM-ANT
	Behind base hut	9 Jan. 1964	Holdgate 719a	BM
	Behind base hut	3 Dec. 1964	Longton 844	BM; PC; SGO
	Behind base hut	18 Feb. 1965	R. Smith 307	BIRM-ANT
	Behind base hut	24 Feb. 1965	R. Smith 332	BIRM-ANT
	South shore of Factory Cove	22 Dec. 1961	Holdgate 40b	BM
	Bluffs south of Factory Cove	2 Feb. 1962	Holdgate 133a	BM
	Port Jebsen	9 Feb. 1962	Holdgate 162a	BIRM-ANT
	Port Jebsen	2 Feb. 1964	Holdgate 771a	BM; MEL; NY; PC; PRE; SGO
	Between Factory Cove and Paal Harbour	2 Feb. 1962	Holdgate 128a	BIRM-ANT
	Observation Bluff	30 Dec. 1961	Holdgate 72a	BM
	Moraine Valley	9 Mar. 1951	FIDS H619/2	BM
	Rusty Bluff	13 Jan. 1964	Holdgate 740b	BIRM-ANT; S-PA; TNS
	Rusty Bluff	13 Jan. 1964	Holdgate 741c	BM; TNS
	Above Clowes Bay	4 Jan. 1964	Holdgate 703a	BIRM-ANT; CHR; S-PA; TNS
	Above Clowes Bay	4 Jan. 1964	Holdgate 694a	BIRM-ANT

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

***Sector S:** South Shetland Islands*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island	Near Point Thomas	21 Jan. 1937	Disc. Invest. St. 1954/4	BIRM-ANT; BM
Nelson Island	Harmony Cove	11 Jan. 1902	Skottsberg 451	PC; S-PA
Greenwich Island	Spark Point, Discovery Bay	6 Jan. 1966	Lindsay 644	BIRM-ANT
	Spit Point, Yankee Harbour	3 Jan. 1966	Lindsay 534	BIRM-ANT
	Spit Point, Yankee Harbour	3 Jan. 1966	Lindsay 544	BM
Half Moon Island	South of huts	5 Jan. 1966	Lindsay 591a	BM
Livingston Island	Byers Peninsula	7 Dec. 1965	Lindsay 163	BIRM-ANT
	Byers Peninsula	21 Dec. 1965	Lindsay 438	BIRM-ANT
	Byers Peninsula	21 Dec. 1965	Lindsay 445a	BM
Deception Island	—	7 Jan. 1953	Frödin s.n.	S-PA

***Sector S:** Antarctic Peninsula, west coast*

Island or area	*Locality*	*Date*	*Specimen Number*	*Herbarium*
Trinity Peninsula area	Tower Island	Dec. 1966–Jan. 1967	Lindsay s.n.	BIRM-ANT
Palmer Coast area	Cape Andreas	29 Nov. 1902	Skottsberg 457	PC; S-PA
Danco Coast area	Moss Islands	1 Dec. 1902	Skottsberg 453	PC; S-PA (5 specimens S-PA)
	Moss Islands	1 Dec. 1902	Skottsberg 456	PC; S-PA
	Brabant Island	30 Jan. 1898	Racovitza 252a	BR; PC; S-PA
	Spring Point	13 Jan. 1954	Kühnemann 1954/181	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/221a	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/186b	BIRM-ANT
	Spring Point	13 Aug. 1959	Kühnemann 1959/103	BIRM-ANT
	Omega Island	28 Feb. 1941	Siple 377.2	FH; US
	Omega Island	28 Feb. 1941	Siple 377.3	US
	Omega Island	4 Mar. 1941	Siple 360.8	FH; US
	Omega Island	Mar. 1941	Siple 371.7	US
	Omega Island	13 Jan. 1965	Lamb 7935	BIRM-ANT; NY
	Omega Island	13 Jan. 1965	Lamb 7937	NY
	Omega Island	13 Jan. 1965	Lamb 7938	NY
	Pi Islands	25 Jan. 1965	Lamb 7969b	NY

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Danco Coast area (*cont.*)	Valdivia Point	2 Dec. 1902	Skottsberg 454	PC; S-PA (4 specimens S-PA)
	Anvers Island	25 Feb. 1965	Lippert 2	BIRM-ANT; NY
	Anvers Island, Arthur Harbour	1 Mar. 1963	Schmitt 69–63a	US
	Anvers Island, Norsel Point	4 Feb. 1965	Lamb 8005b	NY
	Anvers Island, Norsel Point	7 Feb. 1965	Lamb 8113	NY
	Anvers Island, Norsel Point	16 Feb. 1965	Longton 1224	BIRM-ANT
	Anvers Island, Norsel Point	16 Feb. 1965	Longton 1226	BM; CHR; IAA; LE; NY; MEL; PC; S-PA
	Anvers Island, Norsel Point	26 Feb. 1965	Lippert 9	NY
	Anvers Island, Norsel Point	26 Feb. 1965	Lippert 10a	BIRM-ANT; NY
	Cuverville Island	2 Feb. 1898	Racovitza 244	BR; PC; S-PA (2 specimens S-PA)
	Cuverville Island	2 Feb. 1898	Racovitza 474	BR; PC
	Beneden Head	1 Feb. 1898	Racovitza 473	BR
	Beneden Head	20 Jan. 1962	Cameron and Kennett 52	BIRM-ANT
	Litchfield Island	5 Jan. 1964	Corner 387	BIRM-ANT; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA
	Litchfield Island	5 Jan. 1964	Corner 392a	BM
	Litchfield Island	5 Jan. 1964	Corner 396	BIRM-ANT; NY; TNS
	Laggard Island	3 Mar. 1965	Longton 1300	BIRM-ANT; PC; S-PA; TNS
	Goudier Island	28 Dec. 1908	Gain 102	PC
	Goudier Island	28 Dec. 1908	Gain 106	PC
	Goudier Island	9 Feb. 1960	Taylor 105a	BM; CHR
	Wiencke Island, Lockley Point	19 Nov. 1944	Op. Tab. 1760	BM; SGO
	Wiencke Island, Lockley Point	19 Nov. 1944	Op. Tab. 1761	BIRM-ANT; PRE
	Bryde Island	16 Feb. 1958	J. Smith M179b	BIRM-ANT

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

Sector S: Antarctic Peninsula, west coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Danco Coast area (*cont.*)	"Almirante Brown"	17 Dec. 1953	Kühnemann 1953/205	BIRM-ANT
	"Almirante Brown"	17 Dec. 1953	Kühnemann 1953/240a	BIRM-ANT
	"Almirante Brown"	17 Dec. 1953	Kühnemann 1953/241	BIRM-ANT
	"Almirante Brown"	17 Dec. 1953	Kühnemann 1953/255b	BIRM-ANT
	"Almirante Brown"	16 Feb. 1958	J. Smith M181a	BIRM-ANT
Graham Coast area	Booth Island	30 Dec. 1908	Gain 134a	PC; S-PA
	Petermann Island	5 Jan. 1909	Gain 161	PC; S-PA (2 specimens S-PA)
	Petermann Island	5 Jan. 1909	Gain 165	PC; S-PA
	Petermann Island	8 Feb. 1909	Gain 270b	PC; S-PA
	Petermann Island	6 Dec. 1964	Corner 726b	BM
	Petermann Island	9 Mar. 1965	Corner 790b	BM
	Petermann Island	9 Mar. 1965	Corner 792b	BIRM-ANT
	Petermann Island	9 Mar. 1965	Corner 839b	BIRM-ANT; CHR; NY; PC; TNS
	Irizar Island	3 Dec. 1964	Corner 715	BM; IAA; LE; MEL
	Un-named island between Irizar and Uruguay Islands	3 Mar. 1964	Corner 436b	BM; LE; SGO
	Un-named island between Irizar and Uruguay Islands	27 Nov. 1964	Corner 699b	BIRM-ANT
	Uruguay Island	3 Mar. 1964	Corner 440	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Uruguay Island	4 Dec. 1964	Corner 718c	BM
	Uruguay Island	12 Mar. 1965	Longton 1373	BIRM-ANT; CHR; IAA; LE
	Edge Hill	19 Nov. 1964	Corner 655	BIRM-ANT; MEL; NY; PC
	Edge Hill	19 Nov. 1964	Corner 662a	BM; PRE
	The Barchans	28 Dec. 1964	Corner 749b	BIRM-ANT
	Rasmussen Island	10 Mar. 1909	Gain 280a	PC; S-PA
	Rasmussen Island	10 Mar. 1909	Gain 281	PC
	Rasmussen Island	10 Mar. 1909	Gain 282	PC; S-PA
	Rasmussen Island	10 Mar. 1909	Gain 283b	PC

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

Sector S: Antarctic Peninsula, west coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area (*cont.*)	Galindez Island	28 Feb. 1935	BGLE 1057	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Galindez Island	31 Mar. 1935	BGLE 1114a	BIRM-ANT; BM
	Galindez Island	10 Dec. 1935	BGLE 1311c	BIRM-ANT; BM; IAA; MEL; PC
	Galindez Island	2 Jan. 1957	J. Smith M170	BIRM-ANT; SGO; TNS
	Galindez Island	11 Feb. 1960	Taylor 48a	BIRM-ANT
	Galindez Island	11 Feb. 1960	Taylor 52	BM
	Galindez Island	11 Feb. 1960	Taylor 66	BIRM-ANT
	Galindez Island	11 Feb. 1960	Taylor 95a	BIRM-ANT; NY
	Galindez Island	12 Feb. 1960	Taylor 98	BM
	Galindez Island	2 Mar. 1964	Corner 416b	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Galindez Island	2 Mar. 1964	Corner 421	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Galindez Island	2 Mar. 1964	Corner 424a	BIRM-ANT; CHR; IAA; LE; MEL; NY; PRE; SGO; S-PA; TNS
	Galindez Island	2 Mar. 1964	Corner 429a	BIRM-ANT
	Galindez Island	2 Mar. 1964	Corner 430	BIRM-ANT
	Galindez Island	8 Mar. 1964	Corner 442	BM; CHR; IAA; LE; MEL; PC; PRE; SGO; S-PA; TNS
	Galindez Island	8 Mar. 1964	Corner 444	BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Galindez Island	11 Mar. 1964	Corner 451	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Galindez Island	11 Mar. 1964	Corner 452	BM; PC
	Galindez Island	15 Mar. 1964	Corner 463a	BM; S-PA

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area (*cont.*)	Galindez Island	16 Mar. 1964	Corner 473	BM
	Galindez Island	9 Apr. 1964	Corner 486	BIRM-ANT; LE
	Galindez Island	6 Jul. 1964	Corner 561	BIRM-ANT
	Galindez Island	31 Dec. 1964	Corner 754	BIRM-ANT; NY; PRE
	Galindez Island	17 Feb. 1965	Longton 1249	BIRM-ANT; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; TNS
	Galindez Island	7 Mar. 1965	Longton 1330	BIRM-ANT
	Galindez Island	22 Mar. 1965	Corner 837	BM; CHR; IAA; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Skua Island	24 Jun. 1964	Corner 556a	BIRM-ANT
	Skua Island	7 Mar. 1965	Corner 778b	BM; CHR; IAA; LE; MEL; NY
	Winter Island	15 Mar. 1960	Taylor 127	BM; PC
	Winter Island	15 Mar. 1960	Taylor 131	BIRM-ANT; S-PA
	Corner Island	22 Aug. 1964	Corner 580	BIRM-ANT
	Cape Tuxen	8 Jan. 1909	Gain 197b	PC
	Cape Tuxen	26 Nov. 1964	Corner 673	BIRM-ANT; CHR; IAA
	Cape Tuxen	26 Nov. 1964	Corner 674b	BM; IAA; LE; MEL; NY; PC; PRE; TNS
	Cape Tuxen	26 Nov. 1964	Corner 680	BIRM-ANT; S-PA
	Cape Tuxen	26 Nov. 1964	Corner 684a	BM; PRE; SGO; TNS
	Cape Tuxen	1 Apr. 1965	Corner 850a	BIRM-ANT
	Berthelot Islands	6 Jan. 1909	Gain 181	PC
	Largest of Berthelot Islands	3 Nov. 1964	Corner 622b	BIRM-ANT
	Berthelot Islands, Green Island	18 Mar. 1935	BGLE 1074a	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Somerville Island	17 Mar. 1960	Taylor 122b	BIRM-ANT; NY; SGO
	Cape Pérez	6 Mar. 1909	Gain 272c or Exp. Ant. Fr. 272c	PC; S-PA

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

Sector S: Antarctic Peninsula, west coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area (*cont.*)	Beascochea Bay	13 Sep. 1935	BGLE 1195b	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
Loubet Coast area	Jona Island	16 Nov. 1962	Killingbeck 160a	BIRM-ANT
	Megaw Island	17 Nov. 1962	Killingbeck 165a	BM
	Adelaide Island, point east of Mount Bouvier	8 Mar. 1963	Killingbeck 236a	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC
	Adelaide Island, point east of Mount Bouvier	10 Mar. 1963	Killingbeck 245	BIRM-ANT; BM; PRE; SGO; S-PA; TNS
	Webb Island	—	Killingbeck 255	BIRM-ANT
	Léonie Island	17 Jan. 1909	Gain 232	PC
	Léonie Island	17 Jan. 1909	Gain 233	PC; S-PA
Fallières Coast area	South-east corner of Bourgeois Fjord	15 Dec. 1936	BGLE 1516a	BM; LE; NY; S-PA
	Adelaide Island, Rothera Point	20 Jan. 1963	Schmitt 3c–63a	BIRM-ANT; US
	Adelaide Island, near Cape Alexandra	9 Dec. 1962	Killingbeck 202	BM; CHR; MEL; TNS
	Adelaide Island, south-east corner	21 Dec. 1964	Longton 913	BM; SGO
	Adelaide Island, south-east corner	28 Dec. 1964	R. Smith 98	BIRM-ANT
	Jenny Island	15 Jan. 1909	Gain 213	PC; S-PA
	Jenny Island	15 Jan. 1909	Gain 216 or Exp. Ant. Fr. 216	PC; S-PA
	Jenny Island	15 Jan. 1909	Gain 217a	PC
	Jenny Island	Jan. 1909	Exp. Ant. Fr. 217	S-PA
	Jenny Island	15 Jan. 1909	Gain 220	PC
	Jenny Island	15 Jan. 1909	Gain 231d	PC
	Jenny Island	30 Jan. 1909	Gain 237b	PC
	Jenny Island	30 Jan. 1961	Taylor 430	BM
	Jenny Island	30 Jan. 1961	Taylor 436	BIRM-ANT
	Jenny Island	30 Jan. 1961	Taylor 437	BM; CHR; LE; NY; SGO; S-PA
	Jenny Island	30 Jan. 1961	Taylor 442b	BIRM-ANT
	Jenny Island	Feb. 1962	Killingbeck 119a	BIRM-ANT; IAA; MEL; PC; PRE; TNS

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

Sector S: Antarctic Peninsula, west coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Fallières Coast area (*cont.*)	Jenny Island	24 Jan. 1963	Killingbeck 230	BM; IAA; LE; MEL; NY; PC; SGO; TNS
	Jenny Island	1 Mar. 1966	Hodson 83a	BIRM-ANT
	Avian Island	10 Feb. 1962	Killingbeck 136	BIRM-ANT; BM; MEL
	Avian Island	19 Jan. 1963	Schmitt 2a–63	US
	Avian Island	19 Jan. 1963	Schmitt 2c–63	US
	Guébriant Islands	31 Jan. 1961	Taylor 454a	BIRM-ANT; CHR; IAA; LE
	Guébriant Islands	31 Jan. 1961	Taylor 456	BM; MEL; NY; PC; PRE; SGO; S-PA; TNS
	Island in Marguerite Bay	24 Jan. 1909	Gain 265	PC; S-PA
	"East Base"	—	Perkins 201	US
	Most easterly of Mica Islands	9 Jan. 1949	FIDS E167/1	BIRM-ANT; BM
George VI Sound	Alexander Island, Stephenson Nunatak	10 Dec. 1949	FIDS E616/9	BM

Sector S: Antarctic Peninsula, east coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Trinity Peninsula area	Mount Flora	13 Dec. 1948	FIDS D1091/18	BM
	West side of Prince Gustav Channel	20 Dec. 1959	Brading 215	BIRM-ANT
Oscar II Coast area	Starbuck Glacier	25 Nov. 1963	Kennett 34	BIRM-ANT
	Gulliver Nunatak	7 Nov. 1963	Kennett 11	BIRM-ANT
Foyn Coast area	Cabinet Inlet	1963	Tindal 3a	BM
	Cabinet Inlet	Nov. 1963	Tindal 23	BIRM-ANT
	Cabinet Inlet	Nov. 1963	Tindal 40	BIRM-ANT
	Cabinet Inlet	Dec. 1963	Tindal 57b	BM
	Cabinet Inlet	1963	Tindal 66	BM; MEL
Wilkins Coast area	Engel Peaks	27 Nov. 1965	Cousins 63a	BIRM-ANT

TABLE VII. DISTRIBUTION OF *Pohlia nutans* (Hedw.) Lindb. (*continued*)

Sector B: Ellsworth Land

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Thurston Island area	"Gneiss Island"	—	Starr s.n.	BIRM-ANT; NY
	"Gneiss Island"	—	Starr s.n.	BIRM-ANT; NY
	"Gneiss Island"	—	Starr s.n.	NY (2 specimens)

Sector R: Victoria Land

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Edisto Inlet area	Crater Cirque	11–12 Jan. 1958	Herb. Allis. 6441	BIRM-ANT; Herb. Allis.
Pennell Coast	Cape North	12 Feb. 1962	Orton s.n.	BIRM-ANT; NY

Unspecified Locality

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
—	—	1908–10	Exp. Ant. Fr. 113	S-PA
—	—	1908–10	Exp. Ant. Fr. 114	S-PA

TABLE VIII

DISTRIBUTION OF *Polytrichum alpestre* Hoppe

Sector M: South Sandwich Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Leskov Island	Summit ridge	5 Mar. 1964	Holdgate 834a	BM
	Summit ridge	5 Mar. 1964	Longton 512	BIRM-ANT
Bellingshausen Island	South slopes of main cone	13 Mar. 1962	Holdgate 412a	BIRM-ANT
	South flanks of cone	9 Mar. 1964	Holdgate 820b	BM

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Laurie Island	—	Dec. 1962	Bellisio s.n. (Herb. No. 11726)	BA
	Cape Geddes	28 Nov. 1946	FIDS C24/1008/1	BM; CHR; LE; PC; S-PA
	Cape Geddes	29 Nov. 1946	FIDS C26/1010/1	BIRM-ANT; BM
	Cape Geddes	22 Dec. 1946	FIDS C42/1014/1	BM; IAA; MEL; NY; PRE; SGO; TNS
	Scotia Bay	Oct. 1903	Brown s.n.	K
	Scotia Bay	Dec 1903	Brown s.n.	K
	Point Martin	29 Dec. 1944	Kühnemann 1944/68a	BIRM-ANT
	Point Martin	29 Dec. 1944	Kühnemann 1944/72	BIRM-ANT
	Point Martin	27 Dec. 1954	Kühnemann 1954/2	BIRM-ANT
	Point Martin	27 Dec. 1954	Kühnemann 1954/7	BIRM-ANT
	Point Martin	27 Dec. 1954	Kühnemann 1954/14	BIRM-ANT
	Point Martin	29 Dec. 1954	Kühnemann 1954/67	BIRM-ANT
Powell Island	South-west side	30 Jan. 1965	R. Smith 242	BIRM-ANT
Coronation Island	Mansfield Point	10 Feb. 1965	R. Smith 286	BIRM-ANT
	West of Cape Vik	11 Sep. 1950	FIDS H608/2	BM
	Olivine Point	17 Jan. 1965	R. Smith 134a	BIRM-ANT
	Olivine Point	17 Jan. 1965	R. Smith 136	BIRM-ANT
	Saunders Point	3 Dec. 1964	R. Smith 21	BIRM-ANT
	Small islet off Saunders Point	8 Oct. 1950	FIDS H612/4	BM
Lynch Island	—	16 Mar. 1966	Lindsay 942a	BIRM-ANT
	—	24 Jan. 1966	R. Smith 513	BIRM-ANT

TABLE VIII. DISTRIBUTION OF *Polytrichum alpestre* Hoppe (*continued*)

Sector S: South Orkney Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Signy Island	—	1912–13	Bennett 22, 23*	BM
	Jane Peak	16 Jan. 1948	FIDS H85/1	BM; TNS
	Moraine Valley	9 Mar. 1951	FIDS H619/1	BIRM-ANT; BM
	Borge Bay	18 Jan. 1933	Disc. Invest. St. 1092/1	BM
	Borge Bay	18 Jan. 1933	Disc. Invest. 7c	BM
	Borge Bay	18 Jan. 1933	Disc. Invest. 13	BM
	Borge Bay	17 Mar. 1951	FIDS H624/2	BM
	Berntsen Point	17 Mar. 1951	FIDS H621/1	BM; LE; NY; PC
	Factory Cove	30 Dec. 1960	Taylor 398	BIRM-ANT
	Factory Cove	15 Dec. 1961	Holdgate 3	BIRM-ANT; CHR; S-PA
	Factory Cove	15 Dec. 1961	Holdgate 11	BM; MEL
	Factory Cove	9 Jan. 1964	Holdgate 723a	BM
	Factory Cove	9 Jan. 1964	Holdgate 724a	BIRM-ANT; IAA; TNS
	Factory Cove	9 Jan. 1964	Holdgate 735a	BIRM-ANT; CHR; MEL; NY; PRE; SGO; S-PA
	Factory Cove	1 Dec. 1964	Longton 825	BIRM-ANT; IAA
	North of Polynesia Point	28 Dec. 1963	Holdgate 666a	BIRM-ANT
	Between Borge Bay and Paal Harbour	13 Feb. 1937	Disc. Invest. St. 1962/2	BM
	Between Factory Cove and Paal Harbour	20 Dec. 1961	Holdgate 42	BIRM-ANT
	Between Factory Cove and Paal Harbour	2 Feb. 1962	Holdgate 135a	BM
	Rusty Bluff	1 Mar. 1965	R. Smith 355	BIRM-ANT

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island	Ardley Island	2 Jan. 1954	Kühnemann 1954/22a	BIRM-ANT
Deception Island	—	7 Dec. 1927	Olstad s.n.	S-PA
	Whalers Bay	24 Dec. 1934	Disc. Invest. St. 1483/4	BM

* Two numbers on one specimen.

TABLE VIII. DISTRIBUTION OF *Polytrichum alpestre* Hoppe (*continued*)

***Sector S:** Antarctic Peninsula, west coast*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Trinity Peninsula area	Tower Island	Dec. 1966–Jan. 1967	Lindsay s.n.	BIRM-ANT
Danco Coast area	Moss Islands	1 Dec. 1902	Skottsberg 465	S-PA (3 specimens)
	Spring Point	14 Jan. 1954	Kühnemann 1954/27	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/172a	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/183a	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/185a	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/204a	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/257	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/261	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/271	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/272	BIRM-ANT
	Omega Island	22–23 Jan. 1952	Popovici s.n. (Herb. No. 9195)	BA
	Omega Island	Jan. 1952	Popovici s.n. (Herb. No. 9221)	BA
	Anvers Island, Arthur Harbour	7 Dec. 1957	FIDS Misc. 18	BIRM-ANT
	Anvers Island, Norsel Point	4 Feb. 1965	Lamb 8005a	NY
	Anvers Island, Norsel Point	6 Feb. 1965	Lamb 8089b	NY
	Anvers Island, Norsel Point	24 Feb. 1965	Lippert 18	NY
	Anvers Island, Norsel Point	26 Feb. 1965	Lippert 11	NY
	Anvers Island, between Palmer Station and Norsel Point	16 Feb. 1965	Longton 2304	BIRM-ANT
	Cuverville Island	2 Feb. 1898	Racovitza 243a	BR
	Beneden Head	1 Feb. 1898	Racovitza 234a	BR
	Beneden Head	20 Jan. 1962	Cameron and Kennett 51	BIRM-ANT; NY; S-PA
	Litchfield Island	4 Jan. 1964	Corner 366a	BIRM-ANT
	Litchfield Island	5 Jan. 1964	Corner 388a	BM; CHR
	Laggard Island	3 Mar. 1965	Longton 1318	BIRM-ANT
	Bryde Island	16 Feb. 1958	J. Smith M179a	BIRM-ANT
	"Almirante Brown"	28 Jan. 1952	Popovici s.n. (Herb. No. 9211)	BA

TABLE VIII. DISTRIBUTION OF *Polytrichum alpestre* Hoppe (*continued*)

Sector S: Antarctic Peninsula, west coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Danco Coast area (*cont.*)	"Almirante Brown"	Feb. 1952	Popovici s.n. (Herb. No. 9220)	BA
	"Almirante Brown"	17 Dec. 1953	Kühnemann 1953/132a	BIRM-ANT
	"Almirante Brown"	17 Dec. 1953	Kühnemann 1953/237	BIRM-ANT
	"Almirante Brown"	17 Dec. 1953	Kühnemann 1953/255a	BIRM-ANT
	"Almirante Brown"	17 Dec. 1953	Kühnemann 1953/259	BIRM-ANT
	"Almirante Brown"	16 Feb. 1958	J. Smith M182	BIRM-ANT
Graham Coast area	Entrance to Lemaire Channel	12 Feb. 1898	Racovitza 268c	BR
	Loubat Point	19 Mar. 1964	Kennett 53	BIRM-ANT
	Petermann Island	4 Jan. 1909	Exp. Ant. Fr. 155	BM; K
	Petermann Island	5 Jan. 1909	Exp. Ant. Fr. 162	BM; K
	Petermann Island	5 Jan. 1909	Exp. Ant. Fr. 166 *pr.p.*	K
	Petermann Island	25 Mar. 1964	Kennett 64	BIRM-ANT; NY; S-PA
	Edge Hill	19 Nov. 1964	Corner 648b	BIRM-ANT
	Uruguay Island	24 Feb. 1935	BGLE 1053	BM
	The Barchans	28 Dec. 1964	Corner 749a	BIRM-ANT
	Rasmussen Island	10 Mar. 1909	Gain 283a or 283 *pr. p.*	PC; K
	Rasmussen Island	1 Mar. 1964	Corner 411a	BIRM-ANT
	Argentine Islands	8 Feb. 1909	Exp. Ant. Fr. 270	BM; K
	Galindez Island	28 Mar. 1935	BGLE 1120A	BM
	Galindez Island	12 Nov. 1935	BGLE 1256	BM (2 specimens)
	Galindez Island	10 Dec. 1935	BGLE 1311A	BM
	Galindez Island	10 Dec. 1935	BGLE 1311B	BM
	Galindez Island	2 Jan. 1957	J. Smith M169a	BIRM-ANT; CHR; TNS
	Galindez Island	2 Jan. 1957	J. Smith M172	BM; IAA
	Galindez Island	8 Apr. 1959	Llano 3	NY
	Galindez Island	11 Feb. 1960	Taylor 46	BIRM-ANT; S-PA
	Galindez Island	11 Feb. 1960	Taylor 50	BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; TNS
	Galindez Island	12 Feb. 1960	Taylor 51	BIRM-ANT; LE; NY; PC; S-PA
	Galindez Island	11 Feb. 1960	Taylor 64	BM; CHR; IAA; MEL; S-PA; TNS

TABLE VIII. DISTRIBUTION OF *Polytrichum alpestre* Hoppe (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area (*cont.*)	Galindez Island	11 Feb. 1960	Taylor 80	BIRM-ANT
	Galindez Island	12 Feb. 1960	Taylor 96	BM; MEL; PRE; SGO
	Galindez Island	Feb. 1961	FIDS Misc. 28	BIRM-ANT
	Galindez Island	30 Jan. 1963	Schmitt 15–63a	BIRM-ANT; US
	Galindez Island	2 Mar. 1964	Corner 416a	BIRM-ANT
	Galindez Island	2 Mar. 1964	Corner 417a	BM
	Galindez Island	2 Mar. 1964	Corner 431a	BIRM-ANT
	Galindez Island	21 Apr. 1964	Corner 546a	BM
	Skua Island	1 Nov. 1935	BGLE 1252	BM
	Skua Island	13 Mar. 1964	Corner 458a	BIRM-ANT
	Skua Island	13 Apr. 1964	Corner 495a	BM
	Winter Island	15 Mar. 1960	Taylor 123	BM; LE; NY
	Winter Island	15 Mar. 1960	Taylor 124	BIRM-ANT; CHR; IAA; LE; MEL; PC; PRE; SGO; S-PA; TNS
	Winter Island	15 Mar. 1960	Taylor 126	BM; NY
	Winter Island	15 Mar. 1960	Taylor 130	BIRM-ANT; CHR; IAA; PC; S-PA; TNS
	Cape Tuxen	8 Jan. 1909	Exp. Ant. Fr. 204	BM; K
	Cape Tuxen	26 Jan. 1961	Archibald 18a	BM
	Cape Tuxen	31 Jan. 1963	Schmitt 16a–63b	US
	Cape Tuxen	26 Nov. 1964	Corner 686b	BIRM-ANT
	Berthelot Islands	6 Jan. 1909	Exp. Ant. Fr. 180 *pr. p.*	BM; K
	Largest of Berthelot Islands	3 Nov. 1964	Corner 612b	BIRM-ANT
	Green Island	18 Mar. 1935	BGLE 1073	BM (2 specimens)
	Green Island	18 Mar. 1935	BGLE 1074	BM
	Green Island	18 Mar. 1935	BGLE 1074 *pr. p.*	BM
	Green Island	18 Mar. 1935	BGLE 1075	BM (2 specimens)
	Green Island	18 Mar. 1935	BGLE 1076	BM
	Green Island	18 Mar. 1935	BGLE 1081	BM
Loubet Coast area	Pfaff Island	19 Nov. 1962	Killingbeck 180	BIRM-ANT
Fallières Coast area	Jenny Island	30 Jan. 1909	Exp. Ant. Fr. 239	BM; K
	Jenny Island	30 Jan. 1909	Exp. Ant. Fr. 242a	K

TABLE VIII. DISTRIBUTION OF *Polytrichum alpestre* Hoppe (*continued*)

Sector S: Antarctic Peninsula, west coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Fallières Coast area (*cont.*)	Jenny Island	30 Jan. 1961	Taylor 427	BIRM-ANT; CHR; IAA; LE; NY; PC; PRE; TNS
	Jenny Island	24 Jan. 1962	Killingbeck 111a	BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; TNS
	Jenny Island	Feb. 1962	Killingbeck 115	BIRM-ANT; MEL; SGO; S-PA
	Jenny Island	24 Jan. 1963	Killingbeck 226	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS

Sector S: Antarctic Peninsula, east coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Trinity Peninsula area	"East Graham Land"	1944–45	Op. Tab. 2515	BM
	Hope Bay	11 Nov. 1903	Skottsberg 464	S-PA (2 specimens)
	Hope Bay	10 Dec. 1960	Taylor 232	BM; LE; NY; PC
	Hope Bay	10 Dec. 1960	Taylor 233	BIRM-ANT; CHR; IAA; MEL; PRE; SGO; S-PA; TNS
	Hope Bay, near base hut	Jan. 1959	Brading 2	BIRM-ANT
	Hope Bay, near base hut	Jan. 1959	Brading 12	BM
	Lake Boeckella	8 Jul. 1945	Op. Tab. 2437	BM
	Lake Boeckella	3 Jan. 1961	Brading 27	BIRM-ANT; NY; SGO; S-PA
	Lake Boeckella	3 Jan. 1961	Brading 32	BM; MEL; PRE; TNS
	Lake Boeckella	3 Jan. 1961	Brading 37	BIRM-ANT
	Mount Flora	13 Dec. 1948	FIDS D1091/19	BM; LE; PC
	Mount Flora	27 Dec. 1960	Taylor 326	BIRM-ANT; CHR; IAA; LE; MEL; NY; PC; SGO; S-PA; TNS
	Mount Flora	15 Jan. 1961	Brading 16	BIRM-ANT; CHR; IAA; LE; MEL; NY; PRE; SGO; S-PA; TNS
	Mount Flora	15 Jan. 1961	Brading 18	BM; PC

TABLE VIII. DISTRIBUTION OF *Polytrichum alpestre* Hoppe (*continued*)

Sector S: Antarctic Peninsula, east coast—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Trinity Peninsula area (*cont.*)	Mount Flora	15 Jan. 1961	Brading 21	BM; CHR; IAA; PRE
	Mount Flora	15 Jan. 1961	Brading 25	BIRM-ANT

Unspecified Locality

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
—	"Brava Reserva"	1952	Popovici s.n. (Herb. No. 9224)	BA

TABLE IX

DISTRIBUTION OF *Polytrichum alpinum* Hedw.

Sector M: South Sandwich Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Leskov Island	—	5 Mar. 1964	Holdgate 836a	BIRM-ANT
	Summit ridge	5 Mar. 1964	Longton 511	BIRM-ANT; BM; TNS
	Summit ridge	5 Mar. 1964	Longton 489	BIRM-ANT
	South end of summit ridge	5 Mar. 1964	Holdgate 835a	BIRM-ANT
Candlemas Island	North of Sea Serpent Cove	9 Jan. 1961	Archibald 5a	BIRM-ANT
	South of lagoons	14 Mar. 1962	Holdgate 445a	BIRM-ANT
	South-west	14 Mar. 1962	Holdgate 449	BIRM-ANT; BM; CHR; IAA; LE; NY; PRE; S-PA; TNS
	Most southerly exposed lava ridge	7 Mar. 1964	Longton 2310	BIRM-ANT
	West shore	9 Mar. 1964	Longton 590	BIRM-ANT; PC
	West end of eastern lagoon	10 Mar. 1964	Longton 594	BIRM-ANT; CHR; S-PA
	North end of ice cap	13 Mar. 1964	Longton 683	BIRM-ANT; MEL; PC; SGO
	North end of ice cap	13 Mar. 1964	Longton 684	BIRM-ANT; CHR; NY; S-PA; TNS
	North of western lagoon	14 Mar. 1964	Longton 700	BIRM-ANT; LE
	North of eastern lagoon	21 Mar. 1964	Longton 778	BIRM-ANT; BM; IAA; MEL
	North of crater	21 Mar. 1964	Longton 792	BIRM-ANT
Vindication Island	North-east coast	17 Mar. 1964	Holdgate 851a	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	North end	17 Mar. 1964	Longton 716	BIRM-ANT
Bellingshausen Island	South slopes of main cone	13 Mar. 1962	Holdgate 404	BIRM-ANT; MEL; PC; SGO
	South slopes of main cone	13 Mar. 1962	Holdgate 417	BIRM-ANT; BM; CHR; IAA; NY; S-PA
	Within main crater on west side	13 Mar. 1962	Holdgate 429a	BIRM-ANT; LE; PRE; SGO; TNS
	South slopes	9 Mar. 1964	Holdgate 811a	BIRM-ANT
	South slopes	10 Mar. 1964	Holdgate 838a	BIRM-ANT; BM; CHR; IAA; LE; NY; PRE; S-PA; TNS
	South flanks of cone	9 Mar. 1964	Holdgate 820a	BIRM-ANT

TABLE IX. DISTRIBUTION OF *Polytrichum alpinum* Hedw. (*continued*)

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
—	—	Jan.–Feb. 1915	Bennett 17	BM
Laurie Island	Cape Geddes	22 Dec. 1946	FIDS C42/1014/2	BM; NY
	Cape Geddes	3 Jan. 1947	FIDS C44/1015/1	BIRM-ANT; BM; LE; MEL; PRE; SGO; TNS
Fredriksen Island	West face of island	4 Jan. 1933	Disc. Invest. St. 1090/1	BIRM-ANT; BM
Powell Island	Falkland Harbour	4 Dec. 1964	R. Smith 57	BIRM-ANT
	Falkland Harbour	31 Jan. 1965	R. Smith 277	BIRM-ANT
	East side	29 Jan. 1965	R. Smith 197a	BIRM-ANT
	East side	1 Feb. 1965	R. Smith 205	BIRM-ANT
	East side	5 Feb. 1965	R. Smith 221a	BIRM-ANT
	West side	3 Feb. 1965	R. Smith 231	BIRM-ANT
	South-west side	30 Jan. 1965	R. Smith 243	BIRM-ANT
Michelsen Island	East side	4 Dec. 1964	R. Smith 46	BIRM-ANT
Matthews Island	East side	20 Jan. 1965	R. Smith 177	BIRM-ANT
	Promontory north of Coffer Island	24 Jan. 1965	R. Smith 188	BIRM-ANT
Coffer Island	—	21 Nov. 1961	Cameron and Kennett 9b	BIRM-ANT
Coronation Island	Mansfield Point	10 Feb. 1965	R. Smith 285	BIRM-ANT
	Olivine Point	16 Jan. 1965	R. Smith 135	BIRM-ANT
	Saunders Point	3 Dec. 1964	R. Smith 20	BIRM-ANT
Lynch Island	—	24 Jan. 1966	R. Smith 514	BIRM-ANT
	—	27 Jan. 1966	Longton 2312	BIRM-ANT
Signy Island	North Point	14 Dec. 1961	Holdgate 16	BM
	Borge Bay	18 Jan. 1933	Disc. Invest. St. 1092/2	BM
	Borge Bay	13 Feb. 1937	Disc. Invest. St. 1962/1	BM
	Berntsen Point	17 Mar. 1951	FIDS H620/13	BM
	Berntsen Point	30 Dec. 1960	Taylor 355*	BIRM-ANT; CHR; IAA; NY; PC; TNS
	Berntsen Point	30 Dec. 1960	Taylor 361*	LE; MEL; PRE
	Factory Cove	26 Apr. 1947	FIDS H52/1022	BM
	Factory Cove	16 Feb. 1951	FIDS H618/2	BM
	Factory Cove	17 Mar. 1951	FIDS H624/4	BM; S-PA

* These are duplicate specimens.

TABLE IX. DISTRIBUTION OF *Polytrichum alpinum* Hedw. (*continued*)

Sector S: South Orkney Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Signy Island (*cont.*)	Factory Cove	20 Dec. 1961	Holdgate 29a	BIRM-ANT
	Factory Cove	27 Dec. 1961	Holdgate 52	BM; SGO
	Factory Cove	9 Jan. 1964	Holdgate 721a	BIRM-ANT
	Factory Cove	1 Dec. 1964	Longton 826	BIRM-ANT; CHR; PC
	East of Observation Bluff	30 Dec. 1961	Holdgate 64	BIRM-ANT; LE
	Between Factory Cove and Paal Harbour	2 Feb. 1962	Holdgate 129	BIRM-ANT; IAA; NY; S-PA
	Paal Harbour	22 Jan. 1964	Holdgate 752a	BIRM-ANT
	Clowes Bay	1 Jan. 1964	Holdgate 676a	BIRM-ANT

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
"New South Shetland Island"	—	1829–1830	Eights s.n.	US
King George Island	Esther Harbour, Venus Bay	6 Jan. 1937	Disc. Invest. St. 1949/2	BIRM-ANT; BM; CHR
	Admiralty Bay	31 Mar. 1927	Disc. Invest. D4	BM
	Admiralty Bay	5 Jan. 1953	Frödin s.n.	S-PA
	Admiralty Bay, Visca Anchorage	17 Dec. 1934	Disc. Invest. St. 1481/2	BM
	Admiralty Bay, Martel Inlet	1 Mar. 1947	FIDS G36/5	BM; LE; PC; SGO
	Admiralty Bay, Keller Peninsula	24 Dec. 1960	Taylor 276	BIRM-ANT; TNS
	Admiralty Bay, Keller Peninsula	24 Dec. 1960	Taylor 278a	BM; PRE
	Admiralty Bay, Keller Peninsula	24 Dec. 1960	Taylor 281	BIRM-ANT; SGO; S-PA
	Admiralty Bay, Keller Peninsula	24 Dec. 1960	Taylor 292	BM; LE; MEL
	Admiralty Bay, Keller Peninsula	28 Jan. 1966	Lindsay 838	BM
	Admiralty Bay, Point Thomas	21 Jan. 1937	Disc. Invest. St. 1954/1	BIRM-ANT; BM; CHR; IAA; NY; PC
	Martins Head	7 Jan. 1937	Disc. Invest. St. 1950/2	BM; IAA; NY; S-PA; TNS
	Fildes Peninsula	16 Feb. 1966	John and Sugden 40a	BIRM-ANT

TABLE IX. DISTRIBUTION OF *Polytrichum alpinum* Hedw. (*continued*)

Sector S: South Shetland Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island (*cont.*)	Fildes Peninsula	16 Feb. 1966	John and Sugden 48	BIRM-ANT; MEL; PRE
	Potter Cove	10 Jan. 1955	Kühnemann 1955/18	BIRM-ANT
	Potter Cove	28 Jan. 1955	Kühnemann 1955/4	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/24	BIRM-ANT
	Ardley Island	2 Jan. 1954	Kühnemann 1954/253	BIRM-ANT
Penguin Island	—	19 Jan. 1937	BGLE s.n.	BM
	East side	9 Jul. 1937	Disc. Invest. St. 1951/1	BIRM-ANT; BM; LE; SGO
	—	11 Mar. 1960	Leech s.n.	NY (3 specimens)
	—	11 Mar. 1960	Starr s.n.	NY
Fildes Strait	—	18 Dec. 1934	Disc. Invest. St. 1482/2	BM
	—	21 Dec. 1934	Disc. Invest. St. 1483/1	BM
Nelson Island	North of Strachan Hill	31 Jan. 1966	Lindsay 855a	BIRM-ANT
	Harmony Cove	11 Jan. 1902	Skottsberg 461	S-PA (2 specimens)
	Harmony Cove	11 Jan. 1902	Skottsberg 462	S-PA
	Harmony Cove	14 Dec. 1934	Disc. Invest. St. 1480/2	BM
Robert Island	—	23 Feb. 1951	Etcheverry s.n.	S-PA
	Coppermine Cove	31 Dec. 1934	Disc. Invest. St. 1485/4	BM
	Coppermine Cove	23 Feb. 1951	Frödin s.n.	S-PA
	Coppermine Cove	8 Nov. 1953	Frödin s.n.	S-PA
	West point	28 Dec. 1952	Frödin s.n.	S-PA
Greenwich Island	—	27 Jan. 1951	Frödin s.n.	S-PA
	Between "Cerro Lopez" and English Sound	31 Jan. 1953	Frödin s.n.	S-PA (3 specimens)
	Yankee Harbour	13 Dec. 1934	Disc. Invest. St. 1479/3	BM
	Yankee Harbour	12 Feb. 1963	Schmitt 43b–63a	US
	Yankee Harbour	3 Jan. 1966	Lindsay 536	BIRM-ANT; BM; CHR
	Discovery Bay	6 Jan. 1966	Lindsay 631a	BIRM-ANT
Half Moon Island	—	5 Jan. 1966	Lindsay 588a	BIRM-ANT
	—	5 Jan. 1966	Lindsay 592	BIRM-ANT
	Moon Bay	31 Dec. 1953	Kühnemann 1953/124	BIRM-ANT
	Moon Bay	31 Dec. 1953	Kühnemann 1953/194	BIRM-ANT

TABLE IX. DISTRIBUTION OF *Polytrichum alpinum* Hedw. (*continued*)

Sector S: South Shetland Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Livingston Island	Byers Peninsula	30 Nov. 1965	Lindsay 89	BM; LE; S-PA
	Byers Peninsula	4 Dec. 1965	Lindsay 133	BIRM-ANT
	Byers Peninsula	7 Dec. 1965	Lindsay 159	BIRM-ANT
	Byers Peninsula	7 Dec. 1965	Lindsay 184	BIRM-ANT
	Byers Peninsula	8 Dec. 1965	Lindsay 223a	BM
	Byers Peninsula	13 Dec. 1965	Lindsay 316	BM; CHR; IAA; MEL; NY
	Byers Peninsula	21 Dec. 1965	Lindsay 436	BIRM-ANT
	Byers Peninsula	22 Dec. 1965	Lindsay 454	BM; PRE; SGO; TNS
	Byers Peninsula	22 Dec. 1965	Lindsay 455	BIRM-ANT; LE
	Johnsons Dock	28 Nov. 1965	Lindsay 81	BIRM-ANT; TNS
	North of Devils Point	13 Dec. 1965	Lindsay 312a	BIRM-ANT
	South of Charity Glacier	25 Nov. 1965	Lindsay 41	BIRM-ANT
	Barnard Point	25 Nov. 1965	Lindsay 6	BM; PC
	Barnard Point	26 Nov. 1965	Lindsay 45a	BIRM-ANT
Desolation Island	—	9 Jan. 1935	Disc. Invest. St. 1487/4	BIRM-ANT; BM; CHR; NY; PC
Deception Island	—	4 Jan. 1918	Bennett 5	BM
	—	1918	Bennett 455	BM
	—	1918	Bennett 456	BM
	—	17 Jan. 1936	BGLE 1385	BM (2 specimens)
	—	1944	Op. Tab. BB 110/3	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS
	—	Dec. 1951	Kühnemann 1951/265	BIRM-ANT
	—	Dec. 1951	Kühnemann 1951/267	BIRM-ANT
	—	29 Dec. 1951	Kühnemann 1951/268	BIRM-ANT
	—	11 Jan. 1954	Kühnemann 1954/134a	BIRM-ANT
	—	11 Jan. 1954	Kühnemann 1954/191a	BIRM-ANT
	—	11 Jan. 1954	Kühnemann 1954/270a	BIRM-ANT
	Fumarole Bay	29 Dec. 1951	Kühnemann 1951/66	BIRM-ANT
	Fumarole Bay	29 Dec. 1951	Kühnemann 1951/98	BIRM-ANT
	Fumarole Bay	29 Dec. 1951	Kühnemann 1951/136b	BIRM-ANT

TABLE IX. DISTRIBUTION OF *Polytrichum alpinum* Hedw. (*continued*)

Sector S: South Shetland Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Deception Island (*cont.*)	Fumarole Bay	29 Dec. 1951	Kühnemann 1951/266	BIRM-ANT
	Fumarole Bay	2 Jan. 1962	Killingbeck 67	BIRM-ANT; MEL
	Ronald Hill	30 Jan. 1960	Taylor 14	BIRM-ANT; BM; IAA; LE; PC
	Ronald Hill	9 Dec. 1964	R. Smith 66	BIRM-ANT
	North shore of Kroner Lake	29 Jan. 1960	Taylor 13	BIRM-ANT
	Between Kroner Lake and Ronald Hill	4 Dec. 1963	Longton 2300	BIRM-ANT
	Between Kroner Lake and Ronald Hill	10 Dec. 1964	Longton 2303	BIRM-ANT
	North-west of Whalers Bay	4 Feb. 1951	Frödin s.n.	S-PA
	North-west of Whalers Bay	28 Jan. 1953	Frödin s.n.	S-PA
	Whalers Bay	7 Jan. 1953	Frödin s.n.	S-PA
	Whalers Bay	Feb. 1959	Brading 41	BM
	Whalers Bay	29 Jan. 1960	Taylor 11	BIRM-ANT; SGO
	Whalers Bay	10 Mar. 1960	Leech s.n.	NY
	West of Whalers Bay	7 Jan. 1953	Frödin s.n.	S-PA
	West of Whalers Bay	7 Jan. 1953	Frödin s.n.	S-PA
	South-west of Neptunes Bellows	10 Jan. 1935	Disc. Invest. St. 1488/4	BM; MEL
	South-west of Neptunes Bellows	12 Jan. 1962	Cameron and Kennett 36	BIRM-ANT; CHR; IAA; PC; PRE; SGO; S-PA; TNS
	Cathedral Crags	10 Mar. 1960	Leech s.n.	NY
	Cathedral Crags	10 Mar. 1960	Leech s.n.	NY
	Collins Point	3 Feb. 1960	Taylor 39	BM; PC; PRE; TNS
	Collins Point	3 Feb. 1960	Taylor 40	BIRM-ANT; CHR; IAA; LE; MEL; NY; PRE; SGO; S-PA; TNS
	Collins Point	22 Jan. 1961	Leech s.n.	NY
	Collins Point	15 Dec. 1961	Killingbeck 26	BIRM-ANT; CHR; LE
	Collins Point	9 Dec. 1964	Longton 878	BIRM-ANT; S-PA
	"El Grumete"	11 Jan. 1954	Kühnemann 1954/207	BIRM-ANT
	"El Grumete"	11 Jan. 1954	Kühnemann 1954/213	BIRM-ANT
	"El Grumete"	11 Jan. 1954	Kühnemann 1954/264	BIRM-ANT
	"El Grumete"	Nov. 1954	Kühnemann 1954/158	BIRM-ANT

TABLE IX. DISTRIBUTION OF *Polytrichum alpinum* Hedw. (*continued*)

Sector S: South Shetland Islands—continued

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Deception Island (*cont.*)	"Punta Faro"	9 Jan. 1954	Kühnemann 1954/195	BIRM-ANT
	"Punta Faro"	9 Jan. 1954	Kühnemann 1954/227	BIRM-ANT
	"Punta Faro"	9 Jan. 1954	Kühnemann 1954/252	BIRM-ANT
	"Punta Faro"	9 Jan. 1954	Kühnemann 1954/262	BIRM-ANT
	"Punta Faro"	9 Jan. 1954	Kühnemann 1954/263	BIRM-ANT
	"Punta Faro"	9 Jan. 1954	Kühnemann 1954/269	BIRM-ANT
	New Rock	22–31 Jan. 1950	Ricardo Luti Herbera 1530	COLO; S-PA
	New Rock	22–31 Jan. 1950	Ricardo Luti Herbera 1538	S-PA
	New Rock	22–31 Jan. 1950	Ricardo Luti Herbera s.n.	S-PA

Sector S: Antarctic Peninsula, west coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Palmer Coast area	Almond Point	21 Jan. 1962	Cameron and Kennett 77a	BIRM-ANT; NY; TNS
	Cape Andreas	29 Nov. 1902	Skottsberg 467	S-PA
	Cape Andreas	29 Nov. 1902	Skottsberg 468	S-PA
Danco Coast area	Brabant Island	30 Jan. 1898	Racovitza 252c	BR
	Spring Point	13 Jan. 1954	Kühnemann 1954/177a	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/186a	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/256	BIRM-ANT
	Lambda Island	3 Mar. 1941	Siple 345.10	US
	Lambda Island	3 Mar. 1941	Siple 348.3	US
	Kappa Island	10 Jan. 1952	Popovici s.n. (Herb. No. 9238)	BA
	Kappa Island	20 Jan. 1952	Popovici s.n. (Herb. No. 9239)	BA
	Omega Island	1 Mar. 1941	Siple 335.15	FH; US
	Omega Island	Mar. 1941	Siple 371.10	US
	Omega Island	14 Mar. 1941	Siple 372	US
	Omega Island	14 Mar. 1941	Siple 372.1	US
	Omega Island	28 Feb. 1941	Siple 377.5	FH; US
	Omega Island	Mar. 1941	Siple 378.4	FH; US
	Omega Island	Jan. 1952	Popovici s.n. (Herb. No. 9221)	BA

TABLE IX. DISTRIBUTION OF *Polytrichum alpinum* Hedw. (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Danco Coast area (*cont.*)	Challenger Island	2 Dec. 1902	Skottsberg 463	S-PA
	Anvers Island, Arthur Harbour	6 Feb. 1965	Lamb 8071a	NY
	Anvers Island, Arthur Harbour	6 Feb. 1965	Lamb 8089e	NY
	Anvers Island, Norsel Point	25 Feb. 1965	Lippert 5	NY
	Anvers Island, Norsel Point	25 Feb. 1965	Lippert 7a	NY
	Spigot Peak	20 Jan. 1962	Cameron and Kennett 63	BIRM-ANT; S-PA
	Cuverville Island	2 Feb. 1898	Racovitza 241	BR
	Beneden Head	1 Feb. 1898	Racovitza 235	BR
	Beneden Head	20 Jan. 1962	Cameron and Kennett 53	BIRM-ANT; LE; MEL; PC; PRE; TNS
	Litchfield Island	4 Jan. 1964	Corner 364	BIRM-ANT
	Litchfield Island	5 Jan. 1964	Corner 379	BM
	Laggard Island	3 Mar. 1965	Longton 1293	BIRM-ANT
	Goudier Island	24 Jan. 1945	Op. Tab. 2281	BM
	Goudier Island	14 Jan. 1958	J. Smith M168	BIRM-ANT
	Wiencke Island	19 Nov. 1944	Op. Tab. 1751	BM
	Wiencke Island, Alice Creek	21 Feb. 1964	Corner 861a	BIRM-ANT
	Doumer Island	12 Dec. 1944	Op. Tab. 1928	BM
	Doumer Island	18 Feb. 1961	FIDS Misc. 5	BIRM-ANT
Graham Coast area	Entrance to Lemaire Channel	12 Feb. 1898	Racovitza 270b	BR
	Booth Island	30 Dec. 1908	Exp. Ant. Fr. 126 or Gain 126	BM; S-PA; K
	Booth Island	30 Dec. 1908	Gain 129	PC; K
	Booth Island	30 Dec. 1908	Gain 132	PC
	Largest island between Uruguay and Irizar Islands	3 Mar. 1964	Corner 436a	BIRM-ANT; IAA; NY; S-PA
	Largest island between Uruguay and Irizar Islands	27 Nov. 1964	Corner 699a	BIRM-ANT
	Uruguay Island	4 Dec. 1964	Corner 718a	BIRM-ANT
	Galindez Island	15 Mar. 1935	BGLE 1109	BM (2 specimens)
	Galindez Island	2 Dec. 1935	BGLE 1279	BM

TABLE IX. DISTRIBUTION OF *Polytrichum alpinum* Hedw. (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area (*cont.*)	Galindez Island	12 Feb. 1960	Taylor 67	BIRM-ANT; CHR; LE
	Galindez Island	30 Jan. 1963	Schmitt 15–63c	US
	Galindez Island	28 Feb. 1964	Corner 410	BM
	Galindez Island	16 Mar. 1964	Corner 471	BIRM-ANT
	Galindez Island	31 Dec. 1964	Corner 753a	BIRM-ANT
	Galindez Island	22 Mar. 1965	Corner 838a	BM
	Cape Tuxen	8 Jan. 1909	Gain 197a	S-PA
	Cape Tuxen	26 Nov. 1964	Corner 686a	BIRM-ANT
	Largest of the Berthelot Islands	3 Nov. 1964	Corner 614a	BIRM-ANT
	Cape Pérez	5 Nov. 1964	Corner 641a	BIRM-ANT
Loubet Coast area	Pfaff Island	19 Nov. 1962	Killingbeck 181	BIRM-ANT
	Adelaide Island, Mount Mangin	Sep. 1962	Killingbeck 147	BIRM-ANT
	Adelaide Island, Mount Gaudry	10 Sep. 1962	Killingbeck 142a	BIRM-ANT
	Adelaide Island, Mount Liotard	27 Nov. 1962	Killingbeck 189a	BIRM-ANT
	Webb Island	1960–63	Killingbeck 249a	BIRM-ANT
	Léonie Islands, Léonie Island	1962	Killingbeck 212a	BIRM-ANT
	Léonie Islands, Lagoon Island	25 Feb. 1936	BGLE 1476	BM
	Léonie Islands	22 Oct. 1948	FIDS E468/2	BM
Fallières Coast area	Adelaide Island, south-east corner	16 Feb. 1937	BGLE 1565	BM
	Most easterly of Mica Islands	9 Jan. 1949	FIDS E167/2	BM

Unspecified Locality

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
—	—	1899	Dr. Cook s.n.	NY (2 specimens)

TABLE X

DISTRIBUTION OF *Polytrichum juniperinum* Hedw.

Sector M: South Sandwich Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Candlemas Island	Northern part	14 Mar. 1962	Holdgate 443	BIRM-ANT; BM; CHR; IAA; S-PA; TNS
	North of western lagoon	14 Mar. 1964	Longton 702	BIRM-ANT; PRE

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Signy Island	Foca Point	5 Mar. 1965	R. Smith 379	BIRM-ANT
	South of Foca Point	23 Jan. 1965	Longton 1115	BIRM-ANT; MEL; PC
	Thulla Point	8 Feb. 1962	Holdgate 154	BIRM-ANT

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island	Admiralty Bay, MacKellar Inlet	21 Jan. 1937	Disc. Invest. St. 1954/2	BM
Deception Island	—	4 Jan. 1918	Bennett 4	BM
	—	1918	Bennett 454	BM
	—	18 Feb. 1922	Bennett 457	BM
	—	Jan. 1923	Bennett s.n.	BM
	—	6 Dec. 1927	Olstad 17	BM
	—	6 Jan. 1936	BGLE 1350	BM
	Port Foster	12 Mar. 1927	Sanders 1	BM
	Ronald Hill	8 Feb. 1945	Op. Tab. 2326	BM
	Ronald Hill	30 Jan. 1960	Taylor 15	BIRM-ANT; LE; NY; PC
	Ronald Hill	30 Jan. 1960	Taylor 34	BM; CHR; SGO; S-PA
	Ronald Hill	22 Dec. 1960	Taylor 247	BIRM-ANT; BM; IAA; MEL; PRE; TNS
	Ronald Hill	9 Dec. 1964	R. Smith 68	BIRM-ANT
	Whalers Bay	10 Mar. 1960	Leech s.n.	NY

TABLE X. DISTRIBUTION OF *Polytrichum juniperinum* Hedw. (*continued*)

Sector S: Antarctic Peninsula, west coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Palmer Coast area	Almond Point	21 Jan. 1962	Cameron and Kennett 77b	BIRM-ANT
Danco Coast area	Omega Island	1 Mar. 1941	Siple 335.14	FH; US
	Omega Island	31 Jan. 1965	Lamb 7998a	NY
	Anvers Island, Norsel Point	26 Feb. 1965	Lippert 15b	NY
Graham Coast area	Uruguay Island	12 Mar. 1965	Longton 1370	BIRM-ANT; LE; NY; PC; PRE; SGO
Fallières Coast area	South-east corner of Bourgeois Fjord	15 Dec. 1936	BGLE 1516	BM

TABLE XI

DISTRIBUTION OF *Polytrichum piliferum* Hedw.

Sector M: South Sandwich Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Candlemas Island	North of western lagoon	14 Mar. 1964	Longton 701	BIRM-ANT

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
King George Island	Admiralty Bay	27 Nov. 1925	Bennett 37	BM
	Admiralty Bay	27 Nov. 1925	Bennett 1408	BM
	Admiralty Bay	1926	Bennett s.n.	BM
	Admiralty Bay, Point Thomas	21 Jan. 1937	Disc. Invest. St. 1954/3	BM; CHR; NY; S-PA
	Turret Point	27 Jan. 1966	Lindsay 819	BIRM-ANT
Greenwich Island	Yankee Harbour	3 Jan. 1966	Lindsay 548	BM; NY
	Discovery Bay	6 Jan. 1966	Lindsay 645a	BIRM-ANT
Livingston Island	Byers Peninsula	30 Nov. 1965	Lindsay 96a	BM; PC; S-PA
	Byers Peninsula	7 Dec. 1965	Lindsay 183	BIRM-ANT
	Byers Peninsula	8 Dec. 1965	Lindsay 224a	BM; CHR; LE; NY
	Byers Peninsula	13 Dec. 1965	Lindsay 265	BIRM-ANT
	Byers Peninsula	13 Dec. 1965	Lindsay 291	BIRM-ANT
	Byers Peninsula	21 Dec. 1965	Lindsay 446	BM; MEL; TNS
Deception Island	—	10 Feb. 1918	Bennett 1	BM
	—	2 Jan. 1923	Bennett 885	BM
	Ronald Hill	9 Dec. 1964	R. Smith 67	BIRM-ANT

Sector S: Antarctic Peninsula, west coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Palmer Coast area	Almond Point	21 Jan. 1962	Cameron and Kennett 77c	BIRM-ANT
Danco Coast area	Moss Islands	1 Dec. 1902	Skottsberg 466	S-PA (2 specimens)
	Spring Point	13 Jan. 1954	Kühnemann 1954/49	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/167	BIRM-ANT
	Spring Point	13 Jan. 1954	Kühnemann 1954/187	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/258	BIRM-ANT
	Spring Point	14 Jan. 1954	Kühnemann 1954/260	BIRM-ANT

TABLE XI. DISTRIBUTION OF *Polytrichum piliferum* Hedw. (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*)

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Danco Coast area (*cont.*)	Pi Islands	25 Jan. 1965	Lamb 7969a	NY
	Pi Islands	25 Jan. 1965	Lamb 7972a	BIRM-ANT; NY
	Anvers Island, Norsel Point	26 Feb. 1965	Lippert 12	BIRM-ANT; NY
	Beneden Head	1 Feb. 1898 or 1898	Racovitza 236 or Racovitza s.n.	BR; PC
	Wiencke Island, Noble Peak	20 Nov. 1944	Op. Tab. 1788a	BM
Graham Coast area	Edge Hill	19 Nov. 1964	Corner 648a	BIRM-ANT
	Mount Demaria	26 Nov. 1964	Corner 688	BIRM-ANT; IAA; PRE; SGO
	Largest of Berthelot Islands	3 Nov. 1964	Corner 612a	BIRM-ANT; BM
	Cape Pérez	5 Nov. 1964	Corner 633a	BIRM-ANT

***Sector S:** Antarctic Peninsula, east coast*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Foyn Coast area	Cabinet Inlet, Eden Glacier	Nov. 1963	Tindal 24	BIRM-ANT
	Cabinet Inlet, Cape Casey	1963	Tindal 1	BIRM-ANT
	Cabinet Inlet, Cape Casey	Dec. 1963	Tindal 57a	BM

TABLE XII

DISTRIBUTION OF *Psilopilum antarcticum* (C. Müll.) Par.

Sector M: South Sandwich Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Candlemas Island	North of eastern lagoon	21 Mar. 1964	Longton 782	BIRM-ANT; CHR; S-PA
Bellingshausen Island	South slopes	13 Mar. 1962	Holdgate 405a	BM
	South slopes	13 Mar. 1962	Holdgate 418	BIRM-ANT
	South slopes	9 Mar. 1964	Holdgate 812a	BIRM-ANT
	South slopes	9 Mar. 1964	Holdgate 815a	BM
	South slopes	9 Mar. 1964	Holdgate 816a	BIRM-ANT; NY
	South slopes	8 Mar. 1964	Holdgate 828a	BM
	South slopes	8 Mar. 1964	Holdgate 829a	BIRM-ANT
	West side	13 Mar. 1962	Holdgate 429b	BIRM-ANT
	West side	13 Mar. 1962	Holdgate 480	BM
	South flanks of crater	10 Mar. 1964	Holdgate 814a	BM
	South-east rim of crater	10 Mar. 1964	Holdgate 824a	BIRM-ANT

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Signy Island	Moraine Valley	21 Jan. 1965	Longton 1088	BIRM-ANT; IAA; LE; MEL; PC; PRE; TNS
	Moraine Valley	11 Feb. 1965	R. Smith 305	BIRM-ANT
	Moraine Valley	3 Mar. 1965	R. Smith 372	BIRM-ANT

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Deception Island	South-south-west of Ronald Hill	3 Dec. 1963	Longton 33	BIRM-ANT; SGO
	South-west of Ronald Hill	9 Dec. 1964	R. Smith 69a	BIRM-ANT

TABLE XIII

DISTRIBUTION OF *Sarconeurum glaciale* (C. Müll.) Card. et Bryhn

Sector M: Dronning Maud Land

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Princess Astrid Coast	Novolazarevskaya	Feb. 1965	Meyer 6	BIRM-ANT; NY
—	St. 46 F, "Ekberget"	30 Jan. 1951	NBS Ant. Exp. s.n.	S-PA
	St. 46 F, "Ekberget"	30 Jan. 1951	NBS Ant. Exp. N1	S-PA
	St. 46 F, "Ekberget"	30 Jan. 1951	NBS Ant. Exp. N2	S-PA
	St. 46 F, "Ekberget"	30 Jan. 1951	NBS Ant. Exp. N3	S-PA
	St. 46 F, "Ekberget"	30 Jan. 1951	NBS Ant. Exp. N5	S-PA
—	Tottanfjella	13 Jan. 1964	Bowra Z91a	BIRM-ANT
	Tottanfjella	14 Jan. 1964	Bowra Z92a	BIRM-ANT; BM; CHR; IAA; LE; MEL; NY; PC; PRE; SGO; S-PA; TNS

Sector S: South Orkney Islands

Island or area	*Locality*	*Date*	*Specimen numbers*	*Herbarium*
Signy Island	Near North Point	29 Sep. 1966	R. Smith 658	BIRM-ANT

Sector S: South Shetland Islands

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Deception Island	Neptunes Bellows	3 Dec. 1963	Longton 24	BIRM-ANT

Sector S: Antarctic Peninsula, west coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area	Petermann Island	9 Mar. 1965	Corner 783	BIRM-ANT
	Petermann Island	10 Mar. 1965	Longton 1351	BIRM-ANT
	Petermann Island	10 Mar. 1965	Longton 1353a	BM
	Largest island between Irizar and Uruguay Islands	3 Mar. 1964	Corner 437a	BIRM-ANT
	Uruguay Island	25 Oct. 1964	Corner 602	BM
	Uruguay Island	14 Mar. 1965	Corner 821	BIRM-ANT
	Edge Hill	19 Nov. 1964	Corner 660	BIRM-ANT
	Galindez Island	28 Feb. 1964	Corner 404a	BIRM-ANT; NY; S-PA
	Galindez Island	15 Mar. 1964	Corner 466a	BM; CHR

TABLE XIII. DISTRIBUTION OF *Sarconeurum glaciale* (C. Müll.) Card. et Bryhn (*continued*)

***Sector S:** Antarctic Peninsula, west coast—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Graham Coast area (*cont.*)	Galindez Island	11 Apr. 1964	Corner 491	BIRM-ANT
	Galindez Island	7 Mar. 1965	Longton 1329	BM
	Corner Islands	18 Aug. 1964	Corner 569	BM
	Most easterly of Corner Islands	12 Mar. 1965	Longton 1367	BIRM-ANT
	Island between Grotto and Corner Islands	20 Aug. 1964	Corner 574	BIRM-ANT
	Black Island	22 Aug. 1964	Corner 579	BIRM-ANT
	Black Island	22 Mar. 1965	Corner 832	BM
Loubet Coast area	Adelaide Island, Sighing Peak	29 Sep. 1948	FIDS E453	BM
Fallières Coast area	Lagotellerie Island	9 Oct. 1948	FIDS E473	BIRM-ANT; BM; LE

***Sector S:** Antarctic Peninsula, east coast*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Trinity Peninsula area	Cockburn Island	6 Jan. 1843	Hooker 4	BM; K; NY (2 specimens BM)
Wilkins Coast area	Briesemeister Peak	9 Nov. 1965	Cousins 42	BIRM-ANT

***Sector B:** Marie Byrd Land*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Ford Ranges	Mount Corey	—	Siple 43a	FH; NY
	Skua Gull Peak	—	Siple 7a	FH; NY
	Lichen Peak	—	Siple G1	FH; NY
	Lichen Peak	1934	Siple 46	BIRM-ANT; BM; FH; NY
	Lichen Peak	—	Siple 51	FH; NY
	"Peak 244"	—	Perkins 224a	US

***Sector R:** King Edward VII Land*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Rockefeller Mountains	Mount Paterson	18 Dec. 1940	Frazier and Wade 276*	FH
	Mount Paterson	18 Dec. 1940	Fitzsimmons 276*	US

* These are duplicate specimens.

TABLE XIII. DISTRIBUTION OF *Sarconeurum glaciale* (C. Müll.) Card. et Bryhn (*continued*)

Sector R: Transantarctic Mountains

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
—	Barrett Glacier	13–14 Dec. 1964	Wise 16	BIRM-ANT; NY
	Barrett Glacier	13 Dec. 1964	Wise 18	BIRM-ANT; NY

Sector R: Victoria Land

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Ross Island	Cape Crozier	21 Jan. 1964	Schofield AA-10	NY
	Cape Crozier	31 Jan. 1964	Rudolph 64024	NY
	Cape Mackay	30 Jan. 1962	Litell s.n.	NY
	Pram Point	27 Jan. 1956	Lewis HP-10	US
	Pram Point	Nov. 1960	Allison 6881	Allis.
	Crater Hill	21–25 Nov. 1957	Llano 2177d	NY
	Crater Hill	21–25 Nov. 1957	Llano 2211	NY
	Crater Hill	15 Dec. 1957	Llano 2217	BIRM-ANT; NY
	Crater Hill	12 Dec. 1957	Llano 2217a	NY (2 specimens)
	Crater Hill	5 Dec. 1959	Holm-Hansen Bag 27	NY
	Crater Hill	3 Feb. 1965	Steere and Greene 65/17	BIRM-ANT; NY
	Observation Hill	12 Dec. 1957	Llano 2256	NY
	Observation Hill	3 Feb. 1965	Steere and Greene 65/16	BIRM-ANT; NY
	Arrival Heights	16 Nov. 1957	Llano 2123a	NY
	Arrival Heights	Nov.-Dec. 1957	Llano 2158	NY
	Arrival Heights	Nov.-Dec. 1957	Llano 2159	NY
	Arrival Heights	Nov.-Dec. 1957	Llano 2160	BIRM-ANT; NY
	Arrival Heights	Nov.-Dec. 1957	Llano 2168	BIRM-ANT; NY
	Arrival Heights	Nov.-Dec. 1957	Llano 2169	NY
	Arrival Heights	Nov.-Dec. 1957	Llano 2170	NY
	Arrival Heights	Nov.-Dec. 1957	Llano 2172	NY
	Arrival Heights	Nov.-Dec. 1957	Llano 2173	NY
	Arrival Heights	Nov.-Dec. 1957	Llano 2180	NY
	Arrival Heights	5 Feb. 1965	Steere and Greene 65/35	BIRM-ANT; NY
	Arrival Heights	8 Feb. 1965	Steere and Greene 65/56	BIRM-ANT; NY
	Hut Point Peninsula	Nov.-Dec. 1957	Llano 2139a	NY

TABLE XIII. DISTRIBUTION OF *Sarconeurum glaciale* (C. Müll.) Card. et Bryhn (*continued*)

***Sector R:** Victoria Land—continued*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Ross Island (*cont.*)	Horseshoe Bay	4 Feb. 1965	Steere and Greene 65/29	BIRM-ANT; NY
	Mount Erebus	4 Feb. 1965	Steere and Greene 65/32	BIRM-ANT; NY
	Mount Terror	22 Jan. 1902	Disc. Exp. s.n.	BM
	"Discovery" Winter Quarters	15 Dec. 1903	Brit. Nat. Ant. Exp. s.n. or Disc. Exp. s.n.	BM (3 specimens)
	Castle Rock	1 Dec. 1958	Worthley 26	FH
	Hill behind McMurdo Base	21 Jan. 1962	Rudolph s.n.	NY
McMurdo Sound area	Gneiss Point	3 Dec. 1957	Llano 2196a	NY
	Gneiss Point	3 Dec. 1957	Llano 2198a	NY
	Walcott Glacier	9 Jan. 1964	Schofield AA-8	NY
Granite Harbour area	The Flatiron	14 Jan. 1964	Schofield AA-5	NY
	The Flatiron	3 Feb. 1965	Steere and Greene 65/18	BIRM-ANT; NY
	The Flatiron	6 Feb. 1965	Steere and Greene 65/46	BIRM-ANT; NY
	Cuff Cape	6 Feb. 1965	Steere and Greene 65/55	BIRM-ANT; NY
Terra Nova Bay area	Backstairs Passage Glacier	17 Jan. 1963	Ricker s.n. (M7)*	WELT
	Backstairs Passage Glacier	17 Jan. 1963	Ricker s.n. (M8a)*	WELT
Edisto Inlet area	Luther Peak	18 Nov. 1964	Wise s.n.	NY
	Crater Cirque	14 Nov. 1964	Wise s.n.	NY
—	Geikie Ridge	1899	Borchgrevink s.n.	BM
	"Newnes Land" and Geikie Ridge	1898–1900	Borchgrevink s.n.	FH

***Sector W:** Wilkes Land*

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Budd Coast area	Clark Peninsula	26–30 Jan. 1958	Llano 2828a	NY
Knox Coast area	Bunger Hills	27 Jan. 1956	Korotkevicz 26	BIRM-ANT; NY
	Bunger Hills	29 Jan. 1956	Korotkevicz s.n.	BIRM-ANT
	Bunger Hills	Jan. 1956	Vialov s.n.	BIRM-ANT
	Bunger Hills	3 Mar. 1957	Hollerbach 12 bis/562	BIRM-ANT
	Bunger Hills	13 Feb. 1957	Hollerbach I, II/312	BIRM-ANT; NY

* These specimens are duplicates.

TABLE XIII. DISTRIBUTION OF *Sarconeurum glaciale* (C. Müll.) Card. et Bryhn (*continued*)

Sector W

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Queen Mary Coast area	—	1913–1914	Dr. Mawson's Exp.	BM; FH
	Haswell Island	3 Feb. 1957	Hollerbach 3/173	BIRM-ANT

Sector E

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Ingrid Christensen Coast area	Nunatak to west of Larsemann Hills	21 Jan. 1956	Markov 1	BIRM-ANT; NY

TABLE XIV

DISTRIBUTION OF *Sarconeurum tortelloides* S. W. Greene

Sector S: Antarctic Peninsula, west coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
George VI Sound	Alexander Island, Mount Ariel	28 Nov. 1961	Taylor 506	BIRM-ANT
	Alexander Island, Fossil Bluff	28 Jan. 1962	Taylor 509b	BIRM-ANT
	Alexander Island, head of Eros Glacier	2 Dec. 1962	Taylor 529	BIRM-ANT; BM; LE; NY

Sector S: Antarctic Peninsula, east coast

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
Nordenskjöld Coast area	Evensen Nunatak	17 Nov. 1947	FIDS D746/3	BM
Wilkins Coast area	Finley Heights	19 Oct. 1965	Cousins 3	BIRM-ANT; CHR; IAA; S-PA

Unspecified locality

Island or area	*Locality*	*Date*	*Specimen number*	*Herbarium*
—	—	—	Bryant 84	US

VI. ACKNOWLEDGEMENTS

MOST of the work embodied in this report was carried out in the Department of Botany, University of Birmingham, and it is a pleasure to acknowledge the facilities provided by the Professors of Botany, Professor J. Heslop-Harrison and Professor J. G. Hawkes. It is with equal pleasure that we acknowledge the assistance, both professional and financial, provided by the British Antarctic Survey through its Director, Sir Vivian Fuchs.

We are greatly indebted to the many people, botanists and non-botanists alike, who collected for us in the field and who contributed specimens for examination: we should also like to thank the Directors and Keepers of those Institutions and Herbaria mentioned in the text who loaned us material from their collections. We are also indebted to Dr. D. M. Moore of the University of Reading for assistance with the latin translation.

Finally, two of us (S.W.G. and D.M.G.) would like to acknowledge with gratitude, the provision of two Research Associateships by the National Science Foundation's Office of Antarctic Programs, which enabled us to spend 14 months at the New York Botanical Garden, by the kind invitation of its Director, Dr. W. C. Steere, working on American and other Antarctic bryophyte collections.

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