

THE BOTANY OF GOUGH ISLAND.—I. Phanerogams and Ferns.
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National Antarctic Expedition. (Communicated by MR. W.
BOTTING HEMSLEY, F.R.S., F.L.S.)

[Read 4th May, 1905.]

(PLATES 7-9.)

GOUGH ISLAND, or Diego Alvarez, which lies in the mid-South Atlantic (Lat. $40^{\circ} 20' S.$, Long. $9^{\circ} 56' 30'' W.$), may be regarded as the most outlying island of the Tristan da Cunha group. It lies S.E. by S. about 220 miles from Nightingale Island, the nearest island of the group.

It is a small island some 7 or 8 miles in a northerly and southerly direction and 3 or 4 miles east and west. It rises to a height of about 4000 feet.

The island has never been permanently inhabited, though the islanders of Tristan da Cunha appear to have occasionally visited it according to Mr. Moseley*.

From August 1888 to January 1889 a party of twelve men belonging to a New London sealing schooner lived there. One of these men (George Comer), who appears to have had some knowledge of science, besides bringing home some bird-skins and eggs, kept a diary in which are a few notes relating to plants. Comer† says "there are two kinds of trees, though while one is plentiful, the other is quite scarce. The grass and brakes grow very rank." "Wood is plentiful. The trees are stunted, but quite thick in some places on the island." "The trees retain their leaves the year round." "The thick bushes extend to an elevation of about 2000 feet." The tree referred to is no doubt *Phyllica nitida*, while possibly the other "tree" is the tree-fern *Lomaria Boryana*. Comer also states that he found some potatoes growing wild "where there used to be a camp of sealers 18 years ago." Near the landing-place, on what is apparently the only piece of level ground near sea-level, ruins of one or two huts are to be seen. These, I afterwards found at Cape Town, had been inhabited in the year 1892 by a party of sealers from South Africa who had spent thirteen months on the island. The sealing had proved a comparative failure, and they had not

* Moseley, Journ. Linn. Soc., Bot. xiv. (1874) p. 384.

† Verrill, Trans. Conn. Acad. ix. (1895) pt. ii. p. 432.

returned. South-Sea whalers have occasionally touched here and even brought back collections of birds and rocks, but no plants seem to have been gathered. These whalers, chiefly American, are no doubt responsible for several introduced plants on the island. All that was previously known of the botany of Gough Island was the statement of the Tristan da Cunjans that *Phyllica* grew there, and that several of the other plants were similar to the Tristan species.

The Scottish National Antarctic Expedition, on its return from the Antarctic Regions in April 1904, made a stay of three days off this island; but only on one (April 22nd) was it possible, owing to the high sea running, to effect a landing, and even on that day it was only accomplished with difficulty. The extremely bad anchorage and the squally nature of the wind made it imperative that the shore party should keep within easy reach in the event of a sudden recall being necessary. This was unfortunate, as it prevented a visit to the higher ground, where several other species might have been found. On approaching the island one is struck by the amount of green to be seen: from the highest summit to the water's edge it seems to be clothed with vegetation, and even the steepest precipices, in which the land usually meets the sea, have their covering of moss.

Rainfall is probably great, as evidenced in the cascades of water pouring over the cliffs on all sides. Comer * notes incessant strong gales with mist, rain, and snow in the meteorological log he kept while on the island, but he apparently took very few readings of the air-temperature. Probably, however, the climate of Gough Island is very similar to that of Tristan da Cunha, where the temperature varies from 48° F. in winter to 74° F. in summer, and the precipitation is excessive the whole year round. At the time of our visit there was no snow-cap on the summit.

On the eastern side of the island a torrent coming down to the sea has cut a deep glen, and this seems to afford the only practicable road to the interior. It was here that a landing was effected †.

On landing one notices the rankness of the vegetation. Above high-water docks (*Rumex frutescens*) and the wild celery grow in

* Verrill, Trans. Conn. Acad. ix. (1895) pt. ii. p. 471.

† For a fuller account of Gough Island, see Scot. Geog. Mag. xx' (1905) p. 430.

luxuriant profusion, and in more stony ground I found several plants of the sow-thistle (*Sonchus oleraceus*)—these latter in flower. The tussac-grass (*Spartina arundinacea*) was not, at the place of landing, so abundant as in other parts of the coast, but here and there on the hillsides down to sea-level there were large tufts of it. In habit it is very similar to the tussac-grass of the Falkland Islands, but does not appear to grow in such masses as to almost entirely exclude other plants as it does on those islands. The only sward-forming "grass" seems to be *Scirpus* (spp.): on the southern side of the stream was about half an acre of this, making a rich pasture. Other grasses are to be found, but growing in more isolated tufts. The characteristic tree of the Tristan da Cunha group (*Phyllica nitida*) is well represented, and grows on Gough Island from about 2000 feet to sea-level, but above 100 feet it is most plentiful. The tree grows some 20 or 30 feet in height even on the most exposed ridges. The stems are not very thick, not more than 10 to 12 inches, and the branches are long and straggling, with leaves only at the extreme ends. Most of the branches are thickly encrusted with lichens. Tree-ferns grow in the rich ground beside the stream, and reach a height of 4 feet or more. The beach is thickly strewn with water-worn stems of these ferns, which have probably been brought down by the stream when in spate, carried into the sea and washed up on to the beach. Several species of ferns grow in nooks and crannies of the moist rocks, and apparently easily obtain a footing in the relatively soft volcanic ash. Mosses are plentiful everywhere, and in the bed of the stream I got several specimens of a liverwort.

The only plants in flower were *Sonchus oleraceus* and *Apium australe* and two species of *Rumex*, and the majority of even these were in seed. *Gnaphalium pyramidale* bore withered flowers, and *Phyllica nitida* and *Empetrum nigrum*, var. *rubrum*, were in fruit in a few places.

I found no trace of any plants introduced for cultivation by the settlers whose ruined huts we found. Beyond the huts was half an acre of ground beset with tree-stumps, the remains, no doubt, of the native tree which they had cut down for firewood.

The plants of Gough Island have, as might be expected, proved to be very similar to those of Tristan da Cunha. The present collection contains seventeen species of phanerogams and ten of

ferns. Four of the seventeen species of phanerogams are almost without doubt introduced (*Hypochaeris glabra*, *Sonchus oleraceus*, *Rumex obtusifolius*, and *Plantago major*). Of the remaining 21 species of Gough Island plants, eighteen are recorded from Tristan da Cunha—one (*Hydrocotyle leucocephala*) is a South-American plant and two are endemic (*Cotula* sp. nov. and *Asplenium* sp. nov.). Of the eighteen species also recorded from Tristan da Cunha, four certainly, and probably six, are endemic to the group. The mosses, liverworts, lichens, and fungi, the determination of which is not quite complete, will form the subject of a second paper. In conclusion, I have to thank the authorities at Kew and the British Museum for the facilities granted me for working in their herbaria. To Mr. C. B. Clarke I am particularly indebted for his determination of the species of *Scirpus*, and I would express my thanks to Mr. A. N. Bruce, B.Sc., for the care and trouble he has taken in the drawing of Plate 9 accompanying this paper.

DICOTYLEDONES.

PHYLICA NITIDA, *Lam. Encycl.* ii. p. 77; *DC. Prodr.* ii. p. 35; *Hemsl. Chall. Bot.* i. ii. p. 148, t. 25. P. arborea, *Thou. Esq. Fl. Trist.* p. 45. P. mauritiana, *Boj. ex Baker, Fl. Maurit.* p. 53.

Very common on the island up to a height of about 2000 feet, growing even on the most exposed ridges. It seldom grows more than some 25 feet in height, and the stems are always much bent and gnarled and generally covered with a growth of lichens.

Distribution. Tristan da Cunha, Inaccessible and Nightingale Islands, Amsterdam Island, Reunion and Mauritius.

HYDROCOTYLE LEUCOCEPHALA, *Cham. et Schlecht. in Linnæa*, i. (1826) p. 364.

Common in the glen in swampy places under waterfalls. This species differs from *Hydrocotyle capitata*, Thouars—the Tristan da Cunha plant—in the almost total absence of hairs on the leaves and leaf-stalks, except an occasional sparse covering near the blade.

Distribution. Brazil and Paraguay. This species does not appear to have been recorded outside of these two countries.

APIUM AUSTRALE, *Thou. Esq. Fl. Trist.* p. 43; *Hook. f. Handb. Fl. N. Zeal.* p. 90; *Hemsl. Chall. Bot.* i. II. p. 149.

Common on the low-lying ground down to high-water mark and growing very rankly in places. It appears to be a very variable plant, and the Gough Island variety has the leaves broadly ovate, and not linear like the specimens from Tristan da Cunha of Carmichael and Moseley.

Distribution. Tristan da Cunha and Inaccessible Island, and very generally in extra-tropical regions of the Southern Hemisphere.

NERTERA DEPRESSA, *Gaertn. Fruct.* i. p. 124, t. 26; *Hook. f. Handb. Fl. N. Zeal.* p. 120; *Hemsl. Chall. Bot.* i. II. p. 150.

Erythrodanum alsineforme, *Thou. Esq. Fl. Trist.* p. 42, t. 10 (Nertera).

Common in the drier and more barren places.

Distribution. Tristan da Cunha and Inaccessible Island, and southern temperate regions except South Africa.

NERTERA DEPRESSA, *Gaertn.*, var. OBTUSA, *Rud. Br.*

A variety distinct from the normal *Nertera depressa* in having all its leaves obovate with no suggestion of acuteness.

Among the specimens of *Nertera depressa* gathered on Gough Island only one plant of this variety was found. In the Kew Herbarium there is one specimen from Inaccessible Island (*Moseley*, Inaccessible Island, 16.8.73) of this variety. The other specimens of this plant from Tristan da Cunha belong to the typical *Nertera depressa*, and the variety does not appear to occur elsewhere.

Distribution. Inaccessible Island.

GNAPHALIUM PYRAMIDALE, *Thou. Esq. Fl. Trist.* p. 40; *DC. Prodr.* vi. p. 234; *Hemsl. Chall. Bot.* i. II. p. 151, t. 26. G. Thouarsii, *Spreng. Syst. Veg.* iii. p. 473.

Common up the glen.

Distribution. Tristan da Cunha and Inaccessible Island.

COTULA GOUGHENSIS, *Rud. Br.*, sp. nov. (Plate 9.)

Herba annua erecta vel suberecta, 25 cm. in altitudine, inferne multe ramosa; folia sessilia fere amplexicaulia, bipinnatisecta, segmentis lanceolatis in apicem acutum rotundatis; capitula

folia non superantia, 8 mm. lata; involucri bractea late ovata vel fere rotundata, marginibus integris; flores dimorphi exteriores ♀ uniserrati sine corollis, interiores cum corollis; achenia compressa glabra.

This species is quite distinct in its much blunter leaves and broad involucreal bracts from the Nightingale Island species, *Cotula Moseleyi*. It is near *Cotula coronifolia*, but differs in having broad bracts and a smaller inflorescence. *Cotula coronifolia* is also in general a much coarser plant. The only species of *Cotula* near this species as regards the broad bracts is *Cotula integrifolia*, but in other respects this is quite distinct.

Endemic in Gough Island, where it is very plentiful.

HYPOCHÆRIS GLABRA, *Linn. Sp. Pl.* 810; *DC. Prodr.* vii. p. 90.

Very probably an introduced plant here, as Mr. Hemsley considers it to be in Tristan da Cunha.

Distribution. Almost cosmopolitan.

SONCHUS OLERACEUS, *Linn. Sp. Pl.* 792.

Common: probably introduced.

Distribution. Tristan da Cunha and Inaccessible Island and generally throughout temperate regions.

RUMEX OBTUSIFOLIUS, *Linn. Sp. Pl.* 335.

Probably introduced. It has not been recorded previously from the Tristan da Cunha group.

Distribution. Very widely spread in northern and southern hemispheres.

RUMEX FRUTESCENS, *Thou. Esq. Fl. Trist.* p. 38; *DC. Prodr.* xiv. p. 72; *Hemsl. Chall. Bot.* i. ii. p. 154, t. 30.

Very common at the mouth of the glen down to high-water mark.

Distribution. Tristan da Cunha and Inaccessible Islands.

EMPETRUM NIGRUM, *Linn. Sp. Pl.* 1022; var. RUBRUM, *Hemsl. Chall. Bot.* i. ii. p. 154. *E. rubrum*, *Vahl, in Willd. Sp. Pl.* iv. p. 713; *Hook. f. Fl. Antarct.* ii. p. 345. *E. medium*, *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 508.

Plentiful in dryer places.

Distribution. Tristan da Cunha, Inaccessible and Nightingale Islands, and in the Falkland Islands and Tierra del Fuego.

PLANTAGO MAJOR, *Linn. Sp. Pl.* 112.

Common and doubtlessly introduced.

Distribution. Generally throughout the northern hemisphere and introduced widely elsewhere.

MONOCOTYLEDONES.*

SCIRPUS THOUARSIANUS, *Schult. Mant.* ii. (1824) pp. 84 et 538; *Hemsl. Chall. Bot.* i. ii. pp. 156-158, tt. 33 et 34. S. prolifer, *Thou. Esq. Fl. Trist.* p. 36, t. 7. S. squarrosa, *Spreng. Syst. Veg.* iv. (1827) p. 28; *Boeck. in Linnæa*, xxxvi. (1869-70) p. 507. S. Thouarsianus, *Schult.*, var. bicolor, *Hemsl. Chall. Bot.* i. ii. p. 156, t. 34 (8-16). S. prolifero-ramosus, *Boeck. in Flora*, lviii. (1875) p. 261. S. virens, *Boeck. in Flora*, lviii. (1875) p. 260; *Hemsl. Chall. Bot.* i. ii. p. 158, t. 33 (7-12). S. pallescens, *Boeck. ex Hemsl. Chall. Bot.* i. ii. p. 158. S. Thouarsianus, *Schult.*, var. pallescens, *Hemsl. Chall. Bot.* i. ii. p. 158, t. 33 (1-6).

Isolepis prolifera, *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 503. I. squarrosa, *Carmich. l. c.* xii. (1818) p. 503. I. bicolor, *Carmich. l. c.* xii. (1818) p. 503; *Kunth, Enum.* ii. p. 216. I. acugnana, *Schult. Mant.* ii. (1824) p. 532; *Kunth, Enum.* ii. p. 216. I. Thouarsii, *A. Dietr. Syn. Pl.* ii. p. 109; *Kunth, Enum.* ii. p. 216.

Very common.

Distribution. Tristan da Cunha, Inaccessible and Nightingale Islands.

SCIRPUS SULCATUS, *Thou. Esq. Fl. Trist.* p. 36, t. 7; *Hemsl. Chall. Bot.* i. ii. p. 155 (var. Moseleyanus excl.) t. 31. S. Thouarsii, *Spreng. Syst. Veg.* iv. (1827) p. 27. S. conspersus, *Boeck. in Linnæa*, xxxvi. (1869-70) p. 505 pro p.

Isolepis sulcata, *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 503; *Kunth, Enum.* ii. p. 216. I. Carmichaeli, *Dietr. Syn. Pl.* ii. p. 107.

Not uncommon.

Distribution. Tristan da Cunha group only, unless the New Zealand plant *Scirpus sulcatus* var. ? *β. tristigmata*, C. B. Clarke, MSS., can be regarded as truly belonging to this species.

* For the determination of the species of *Scirpus* I am indebted to Mr. C. B. Clarke.

SCIRPUS MOSELEYANUS, *Boeck. in Flora*, 1875, p. 262. *S. sulcatus*, *Thou.*, var. *Moseleyanus*, *Hemsl. Chall. Bot.* i. ii. p. 155, t. 32 (fig. 6 excl.).

Only one specimen of this was gathered, but fortunately it was in fruit. The ripe fruits were previously unknown.

Distribution. Nightingale and Inaccessible Islands.

SPARTINA ARUNDINACEA, *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 504; *Kunth, Enum.* i. p. 279; *Hemsl. Chall. Bot.* i. ii. p. 160, t. 25.

Ponceletia arundinacea, *Thou. Esq. Fl. Trist.* p. 36.

This is one of the predominant plants of the island, apparently growing luxuriantly everywhere up to an elevation of over 1000 feet.

Distribution. Tristan da Cunha, Inaccessible and Nightingale Islands, and St. Paul and Amsterdam Islands.

POA ANNUA, *Linn. Sp. Pl.* p. 68.

A few plants of this were found near the ruined huts of some sealers. It is no doubt introduced as it is on Tristan da Cunha.

Distribution. Very widely spread.

CRYPTOGAMÆ—FILICES.

ADIANTUM ETHIOPICUM, *Linn. Sp. Pl.* ed. ii. p. 1560; *Thou. Esq. Fl. Trist.* p. 34; *Hook. & Baker, Syn. Fil.* p. 123; *Hemsl. Chall. Bot.* i. ii. p. 163. *A. thalictroides*, *Willd. ex Kunze, in Linnæa*, x. (1836) p. 530. *A. crenatum*, *Poir. in Lam. Encyc. Suppl.* i. p. 137. *A. Poiretii*, *Wikstr. in Kon. Vet.-Akad. Handl. Stock.* (1825) p. 443.

Very plentiful in the glen.

This is a very variable plant, and the Gough Island plant shows several varieties. Until a satisfactory monograph of the genus appears, it seems preferable to include all the Gough Island specimens under the name of *Adiantum ethiopicum*.

Distribution. Tristan da Cunha and Inaccessible Island; Central and South America (except the extreme south), South Africa, India, and New Zealand.

PTERIS INCISA, *Thunb. Prodr. Fl. Cap.* p. 133; *Hook. & Baker, Syn. Fil.* p. 172; *Hemsl. Chall. Bot.* i. ii. p. 163. *P. vesperilionis* δ . *Carmichaeliana*, *Agardh, Rec. Sp. Gen. Pter.*

p. 80. *P. vesperilionis* β , *R. Br. ex Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 513.

Growing in dryer places than the preceding plant; not very common.

The Tristan da Cunha specimens of this widely-spread species differ from others in the fact that the veins of the fronds do not anastomose at all (*vide* Hook. & Baker, *Syn. Fil.* p. 172). The Gough Island plants belong to the same variety.

Distribution. Tristan da Cunha, Nightingale and Inaccessible Islands. Also tropical and temperate South America, South Africa to West Tropical Africa, from the Himalayas to New Zealand and Polynesia.

LOMARIA ALPINA, *Spreng. Syst. Veg.* iv. p. 62; *Hook. f. Fl. Antarct.* ii. p. 393, t. 150; *Hook. & Baker, Syn. Fil.* p. 178; *Hemsl. Chall. Bot.* i. II. p. 164. *L. antarctica*, *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 513.

Acrostichum polytrichoides, *Thou. Esq. Fl. Trist.* p. 32, t. 2 (*A. polypodoides*).

Polypodium Pennamarina, *Poir. in Lam. Encyc.* v. p. 520.

Not uncommon in the glen.

Distribution. Tristan da Cunha and South America, including the Falkland Islands and Staten Island, Australia, New Zealand, Marion Island, Kerguelen, the Crozets, St. Paul and Amsterdam Islands.

LOMARIA BORYANA, *Willd. Sp. Pl.* v. p. 292; *Hook. & Baker, Syn. Fil.* p. 180; *Hemsl. Chall. Bot.* i. II. p. 163. *L. magellanica*, *Desv. in Mag. Nat. Berl.* (1811) p. 330; *Hook. f. Fl. Antarct.* ii. p. 393. *L. palmæformis*, *Desv. in Mém. Soc. Linn. Par.* vi. (1827) p. 290. *L. robusta*, *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 512.

Pteris palmæformis, *Thou. Esq. Fl. Trist.* p. 30.

Many specimens of this fern were found growing in marshy ground in the sheltered glen.

It reaches a height of from 2 to 3 feet, but the stems almost always grow in a procumbent position. In diameter the trunk varies from 2 inches to as much as 5 or 6.

The Gough Island plant belongs to the same variety as the Tristan da Cunha one, which Carmichael described as a new species (*Lomaria robusta*, Carmich.). It, however, only differs

in having the usually naked rachis more or less densely scaly throughout, and is hardly entitled to specific rank. It must be very plentiful further inland, as the beach is thickly strewn with waterworn stems evidently carried down by the stream from the interior and washed up again by the sea.

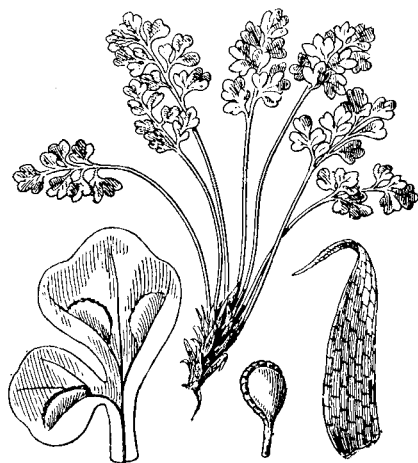
Distribution. Tristan da Cunha; Tropical America to Tierra del Fuego and the Falkland Islands, South Africa, Mauritius, Reunion, and Madagascar.

ASPLENium OBTUSATUM, *Forst. f. Prod.* p. 80; *Hook. & Baker, Syn. Fil.* p. 207. *A. obliquum*, *Forst. f. l. c.*; *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 512. *A. crassum*, *Thou. Esq. Fl. Trist.* p. 33.

Common in the glen.

This species varies a great deal, and the Gough Island plants, while agreeing with some of Moseley's plants from the Tristan da Cunha Islands, are considerably smaller than Carmichael's specimens from the same place.

Distribution. Tristan da Cunha, Inaccessible and Nightingale Islands. Widely distributed elsewhere.



Asplenium alvarezense, nat. size; with pinnule, sporangium, and scale from caudex, enlarged.

ASPLENium ALVAREZENSE, *Rud. Br.*, sp. nov. (See woodcut.)
Herba parva; caudex brevis, paleis paucis sparsis; stipites

1 ad 5 cm., tenues virides nudi; frondes oblongo-deltoides bipinnatæ subcoriaceæ; pinnæ superiores sæpe in pinnulas indistincte divisæ; pinnulæ cuneatæ vel late obovatæ, margine exteriori rotundato; pinnularum venæ dichotomæ; sori mediani lineares.

This species is very near to *Asplenium Ruta-muraria*, from which it chiefly differs in having its pinnules always entire. Unfortunately none of the specimens show the sori in very good condition.

Endemic in Gough Island. It is plentiful on the stems of tree-fern (*Lomaria Boryana*), but not common elsewhere.

POLYPODIUM AQUILINUM, *Thou. Esq. Fl. Trist.* p. 32; *Hook. & Baker, Syn. Fil.* p. 311; *P. acunhianum, Carmich. fide Hemsl. Chall. Bot. i. II.* p. 167.

Nephrodium aquilinum, Hemsl. Chall. Bot. l. c. t. 39.

Common.

Distribution. Tristan da Cunha, Nightingale and Inaccessible Islands; Amsterdam Island?

POLYPODIUM AUSTRALE, *Mett. Polypod.* p. 36; *Hook. & Baker, Syn. Fil.* p. 322; *Hemsl. Chall. Bot. i. II.* p. 168.

Grammitis australis, R. Br. Prodr. Fl. Nov. Holl. p. 146; *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 510.

G. magellanica, Desv. Journ. Bot. iii. (1814) p. 275.

Only one specimen of this was found.

Distribution. Tristan da Cunha. Tierra del Fuego, Australia, New Zealand, and Marion Island.

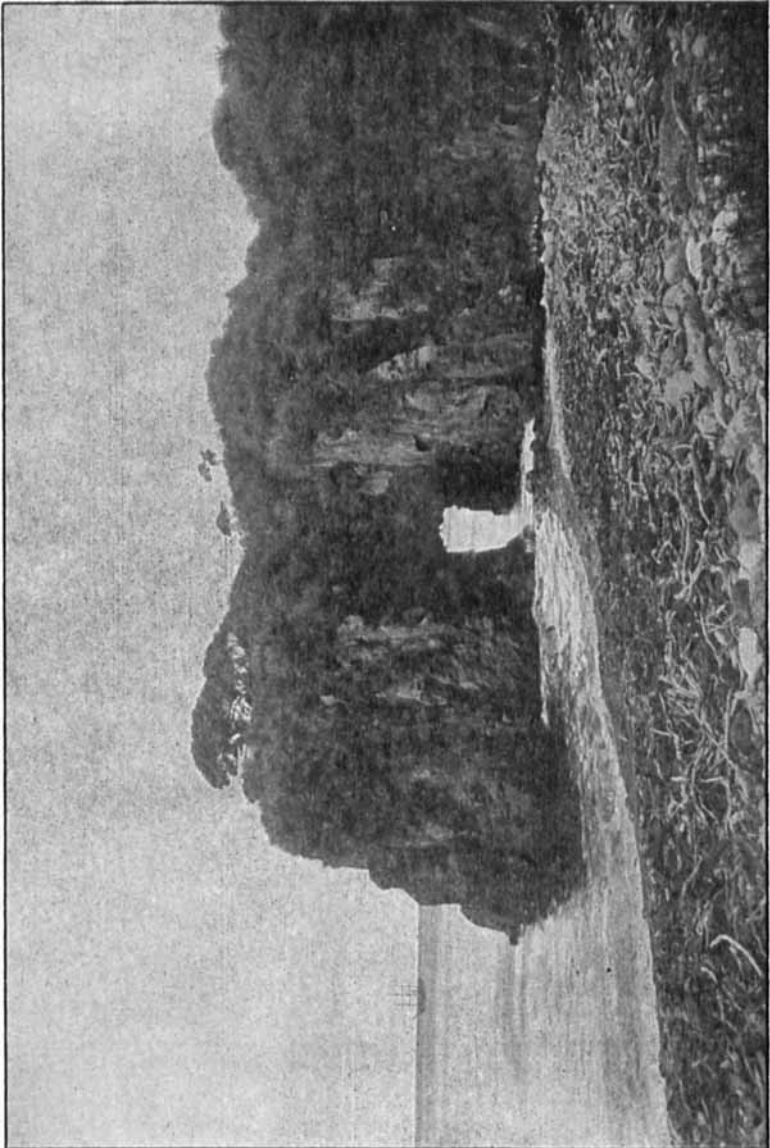
For the determination of this species I am indebted to Mr. C. H. Wright of the Royal Gardens, Kew.

ASPIDIUM CAPENSE, *Willd. Sp. Pl.* v. p. 267; *Hook. & Baker, Syn. Fil.* p. 254. *A. coriaceum, Swartz, Prod. Fl. Ind. Occ.* p. 133; *Hook. Sp. Fil.* iv. p. 32; *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 511; *Hemsl. Chall. Bot. i. II.* p. 167.

Polypodium calyptratum, Thou. Esq. Fl. Trist. p. 33.

Fairly common.

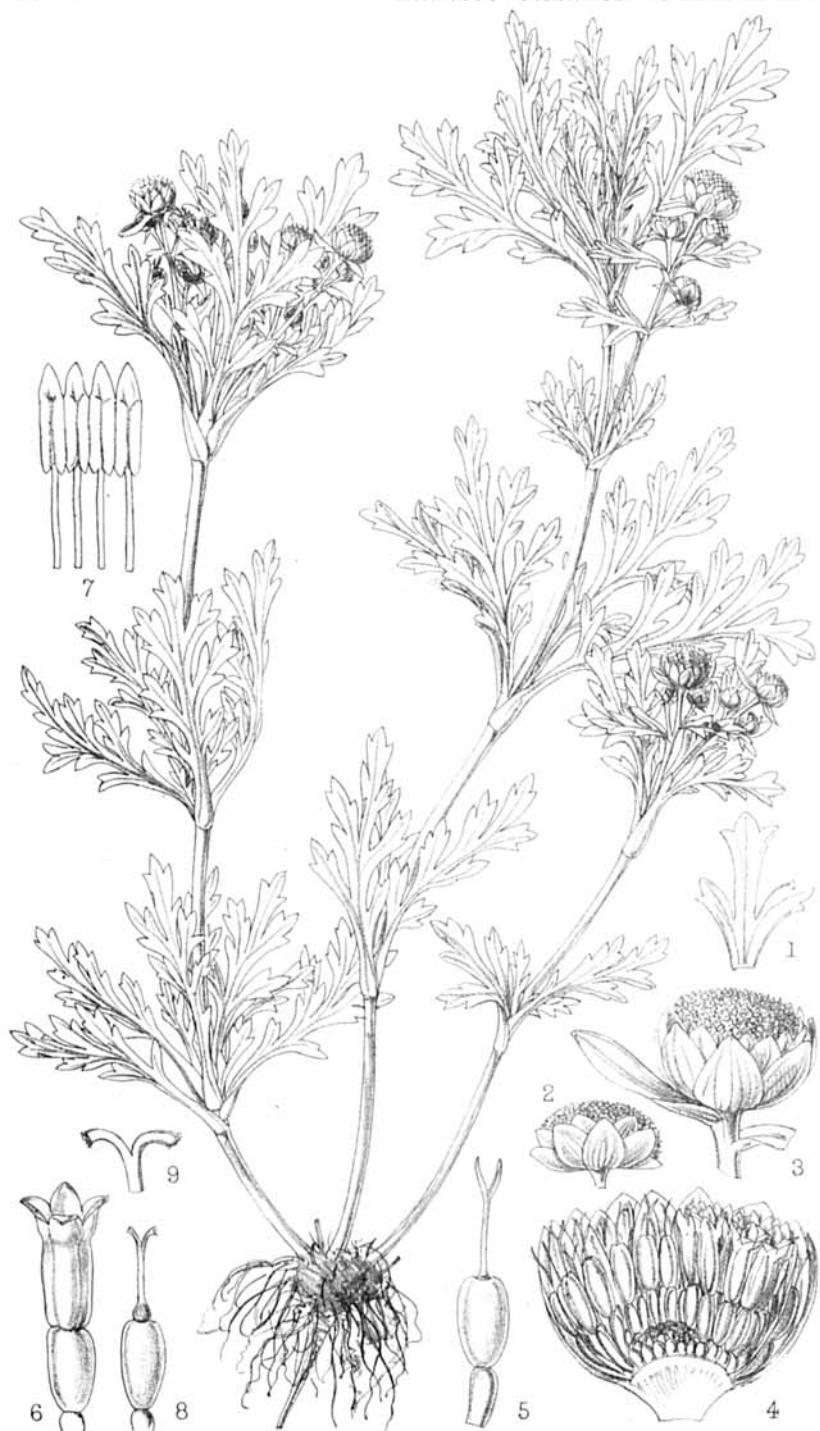
The Gough Island specimens are larger than the Tristan da Cunha ones of Moseley, and in size approximate more to the specimen of De l'Isle's from Amsterdam Island.



GOUGH ISLAND.



VEGETATION ON GOUGH ISLAND.



A. N. Bruce del.
J. N. Fitch lith.

COTULA GOUGHENSIS.

West, Newman imp.

Distribution. Tristan da Cunha. America south of Cuba, South Africa, Mascarene Islands, Amsterdam Island, Australia, and Polynesia.

ACROSTICHUM CONFORME, Swartz, *Syn. Fil.* pp. 10 & 192, t. 1. fig. 1; *Carmich. in Trans. Linn. Soc. Lond.* xii. (1818) p. 509; *Hook. & Baker, Syn. Fil.* p. 401; *Hemsl. Chall. Bot.* i. II. p. 169. *A. laurifolium*, *Thou. Esq. Fl. Trist.* p. 31.

Varies a little in the degree of scaliness, but the Gough Island plant is identical with other specimens from Tristan da Cunha.

Distribution. Tristan da Cunha. St. Helena and throughout the southern hemisphere.

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EXPLANATION OF THE PLATES.

PLATE 7.

Phylica nitida and *Spartina arundinacea* on Gough Island. Waterworn stems of *Lomaria Boryana* on the beach.
(From a photograph by W. S. Bruce.)

PLATE 8.

Vegetation on Gough Island, showing *Adiantum æthiopicum*, *Lomaria alpina*,
Aerostichum conforme, *Polypodium aquilinum*, and *Scirpus* sp.

(From a photograph by W. S. Bruce.)

PLATE 9.

COTULA GOUGHENSIS, R. N. Rudmose Brown.

Plant, natural size.

- Fig. 1. Apex of leaf. $\times 2$.
 2. Inflorescence. $\times 3$.
 3. Inflorescence with bract.
 4. Vertical section of inflorescence. $\times 6$.
 5. Outer ♀ flower with no corolla. $\times 10$.
 6. Disc-flower with corolla. $\times 10$.
 7. Stamens of disc-flower. $\times 12$.
 8. Disc-flower with corolla and stamens removed. $\times 10$.
 9. Enlarged stigma. $\times 15$.

Mansonieæ, a new Tribe of the Natural Order Sterculiaceæ.

By Lt.-Col. D. PRAIN, I.M.S., F.R.S., F.L.S.

[Read 6th April, 1905.]

(PLATE 10.)

MR. F. B. MANSON, of the Indian Forest Department, has of late assisted the Botanical Survey of India by the communication of material from the rich forests of Tenasserim. Among specimens sent by him to the Calcutta Herbarium are examples of a species that is of interest, in a variety of ways, alike to forestry and to botany.

The immediate occasion of the communication of these specimens has been an enquiry into the source of Kalamet, which has long been known as a scented wood held in considerable estimation by the Burmese. Except that it appears to be employed as a cosmetic by Burmese ladies, the uses to which Kalamet is put are not fully known; even as regards its use as a cosmetic details are wanting as to its preparation. There is, however, a considerable demand for the wood and its retail value varies, in Rangoon, from 12 annas to 3 rupees (=one to four shillings) per viss (= 3.0857 lbs.), apparently according to the abundance or scarcity of supplies. It is exported from Mergui pretty regularly, and the following table, furnished by Mr. Manson, exhibits the quantity and value of the exports from 1887-8 to 1902-3.