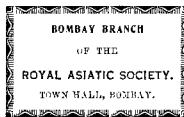




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ICONES FILICUM:

AD EAS POTISSIMUM SPECIES ILLUSTRANDAS DESTINATE,

QUE HACTENUS,

VEL IN HERBARIIS DELITUERUNT

PRORSUS INCOGNITE,

VEL SALTEM

NONDUM PER ICONES BOTANICIS

INNOTUERUNT.

---

FIGURES AND DESCRIPTIONS OF FERNS,

PRINCIPALLY OF SUCH

AS HAVE BEEN ALTOGETHER UNNOTICED BY BOTANISTS,

OR

AS HAVE NOT YET BEEN CORRECTLY FIGURED.

---

BY

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AND

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IN TWO VOLUMES.

VOLUME I.

CONTAINING PLATES I.—CXX.

7x.i.g  
LONDINI:

PROSTANT VENALES APUD TREUTTEL ET WÜRTZ, TREUTTEL FIL. ET RICHTER, 30, SOHO-SQUARE;  
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ARGENTORATI; APUD EOSDEM, VIA DICTA GRANDE RUE, No. 5.

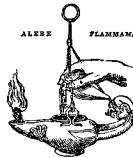
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\* The Plate to this is by mistake marked 48; and that to *S. rupestris*, by mistake 47.

THE present Work on FERNS having been brought to a close, it only remains for the Authors to return their grateful acknowledgements to those Botanists who have, in the most liberal manner, assisted them with specimens and observations. The names of these are, indeed, invariably given under the respective species which they have had the kindness to furnish; but it behoves the Authors, in an especial manner, to express their thanks to Dr. Wallich, of the Calcutta Botanic Garden; to the Rev. Lansdowne Guilding, of St. Vincent; to Dr. Bancroft, Mr. Wiles, and Mr. Lunan, of Jamaica; to Professor William Jameson, of Quito; to Charles Telfair, Esq. and Professor Bojer, of the Mauritius; and to Mr. Charles Fraser, of New Holland. To the first of these Gentlemen, in particular, they have been indebted for continued supplies of the Ferns of the vast continent of India; and these have now arrived to so great an extent,—and not from Dr. Wallich alone, but also from Dr. Wight, of Madras,—that it is in contemplation with the Authors, under the sanction and patronage of the Honourable the Board of Directors of the East India Company, to form from them a new and separate publication, under the title of “*FILICES ASIATICÆ RARIORES*,” to appear on the same size and plan as the “*PLANTÆ ASIATICÆ RARIORES*” of Dr. Wallich.

*Glasgow.* } *November 1, 1831.*  
*Edinburgh.* }

**NATHANIELI WALLICH, M.D.**

SOCIETATIS REGLE LONDINENSIS ET INSTITUTI REGII GALLICI SOCIO,

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D. D. D.

**GUL. J. HOOKER.**

**ROB. K. GREVILLE.**





*Scrophularia*  
*crinita*



## ACROSTICHUM CRINITUM.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES vertæ. Willd.

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsule* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ, v. setæ in quibusdam capsulis interinctæ). Br.

*ACROSTICHUM crinitum*; paleaceo-villosum, frondibus ellipticis obtusis ciliatis, fertilibus minoribus, stiptibus villosissimis.

*Acrostichum crinitum*. Linn. *Sp. Pl.* p. 1523. Swartz. *Syn. Fil.* p. 11. Willd. *Sp. Pl.* v. 5. p. 108.

Lingua cervina villosa amplis foliis subtrotundis. Plum. *Fil.* p. 109. t. 125.

HAB. In Martinicæ arborum truncis. Plumier. Insula Sancti Vincentii. Rev. L. Guilding.

*Radix* e fibris ramosis, pubescentibus.

*Caudex* nullus, nisi reliquæ stiptum vetustorum.

*Stipes* 6—8-pollicaris, crassitie pennæ anserinæ, semiteres, densissime villosus, villis longis, purpureo-nigris, basi dilatatis, horizontalibus.

*Frondes steriles* non raro pedales, ellipticæ seu ovals, basi apiceque obtusissimæ, paululum undulatæ, crassiusculæ, luteo-virides, costa prominente percursæ, utrinque villis nigris margineque ciliatæ. Hi villi insigniter fragiles sunt et sub lente basi dilatatæ, reticulatæ, marginibus involutis. *Frondes fertiles* plerumque duplo minores, supra margine villosæ, subtus fructiferæ.

*Capsulæ* totam inferiorem partem, costa excepta, tegentes, intense fuscæ, annulo vix completo cinetæ, pedicellatæ, pedicello capsula subæque longo.

*Semina* sphaerica, subreticulata.

Fig. 1. Capsula clausa. f. 2. Eadem dehiscens. f. 3. Pedicellus. f. 4. Semina:—*magn. auct.*

*Acrostichum crinitum* seems to be a plant of very rare occurrence; the only station, hitherto given, being the Island of Martinique, where indeed the fructification does not appear to have been discovered. Our friend Mr. Guilding has sent us truly magnificent specimens from the Island of St. Vincent, in various states; and from these our figures have been made.



*Acrostichum succisifolium.*

## ACROSTICHUM SUCCISÆFOLIUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsule* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ, v. setæ in quibusdam capsulis interstinctæ). Br.

*ACROSTICHUM succisæfolium*; fronde simplici oblonga coriacea obtusissima stipiteque ferrugineo-squamosis, squamis lanceolatis spinuloso-serratis.

*Acrostichum succisæfolium*. *Pet. Th. Esq. de la Flore de Trist. d'Ac. p. 31. Carm. Descr. of the Isl. of Trist. d'Ac. in Linn. Trans. v. 12. p. 510. Kaulf. Enum. Fil. p. 60. Poir. in Encycl. Meth. Suppl. v. 1. p. 120.*

HAB. In sylvâ insulæ Tristan d'Acunha. *Aubert du Petit Thouars. Carmichael. Insulæ Mauritiæ. Aubert du Petit Thouars.*

*Caulex* repens, hic illic fibrosus, paleis squamosis, subulatis, intense fuscis ubique obsitus.

*Stipes* 6-pollicaris et ultra, erectus, crassiusculus, undique ferrugineo-paleaceus.

*Frons* digitalis, coriacea, oblonga, costa medio instructa, basi apiceque valde obtusa, utrinque paleaceo-squamosa, squamis lanceolatis, acuminatis, spinuloso-ciliatis, membranaceis, reticulatis, non raro subpelatis:—*fertilis* magis angusta basi apiceque obtusissima.

*Capsule* numerosissimæ, totam inferiorem partem frondis tegentes, costa excepta, intense fuscæ, pedicellatæ; *annulo* fere completo.

*Semina* subsphærica, reticulata, marginata.

Fig. 1. Squamæ. f. 2. 2. 2. 2. Capsulæ. f. 3. *Semina*:—*magn. auct.*

This very distinct species of *Acrostichum* seems to have been found by M. du Petit Thouars in the Isle of France, as well as in Tristan d'Acunha. Our specimens are from the latter island, where they were gathered by Captain Carmichael.

Poiret has given this plant upon the authority of Jussieu's Herbarium as the *A. succisæfolium* of that author; but he probably only adopted the name of Du Petit Thouars.



*Acrostichum glandulosum.*

ACROSTICHUM GLANDULOSUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *ACROSTICHUM*, Linn. Sori amorphi, seu *Capsula* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ v. setæ in quibusdam capsulis interstinctæ). Br.

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*ACROSTICHUM glandulosum*; fronde simplici oblonga coriacea basi apiceque acutiuscula subnervosa nudiuscula glabra glanduloso-punctata, stipite subsquamoso, caudice dense paleaceo.

*Acrostichum glandulosum*. Carmichael MSS.

*Acrostichum oblongum*? Desv. *Journ. de Bot.* 1813. p. 271.

HAB. In promontorio Bonæ Spei. Carmichael.

*Caudex* repens, crassus, lignosus, squamis ferrugineis, membranaceis, ciliato-dentatis, densissime obsitus.

*Stipes* 2—5 uncias longus, hinc sulcatus, basi præcipue subsquamosus.

*Frondes* 3—5-pollicares, oblongæ, coriaceæ, margine parum revolutæ, medio costatæ, nervis obscuris parallelis, punctis glandulosis pellucidis adpersæ, cætero glabræ, nitidæ, costa subtu paululum paleacea, basi apiceque acutiusculæ:—fertiles fronde minore angustiore, sed stipite longiore.

*Capsulæ* totam frondem tegentes, fusæ, numerosissimæ; longe pedicellatæ, annulo magno.

*Semina* sphærica, marginata, margine tuberculato.

Fig. 1. Capsulæ. f. 2. Capsula magis aucta. f. 3. Semina:—magn. auct.

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This is very nearly allied to *A. conforme* of Swartz: but our specimens of that plant are perfectly destitute of glandular dots. Still more closely does it approach the *A. oblongum* of Desvaux, which Kaulfuss unites with the *A. conforme*.



*Acrostichum Raddeanum*

## ACROSTICHUM · RADDIANUM.

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd.*

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ v. setæ in quibusdam capsulis interstinctæ). *Br.*

*ACROSTICHUM Raddianum*; frondibus stipiteque villosissimis, sterilibus lineari-lanceolatis, fertilibus ellipticis integris.

*Acrostichum spathulinum.* *Raddi, Fil. Brasil. p. 3. t. 15. f. 2.*

HAB. In udis rupibus torrentium super Montes Estrellenses, Brasiliæ. *Raddi.*

*Radix* dense cæspitosa, fibris valde ramosis subpinnatis.

*Stipites* plurimi ex eadem radice, 2—3 uncias longi, erecti, densissime pilosi, pilis patentibus rufescentibus.

*Frondes steriles* 3—4 uncias longæ, lineari-lanceolatæ, obtusæ, basi sensim in petiolum attenuatæ, utrinque margineque ferrugineo-pilosæ. Hi pili sub lente serrulati sunt, basi dilatati, concavi, reticulati, membranacei:—

*fertiles* sterilibus multo breviores, ellipticæ, acutiusculæ, dorso margineque solummodo pilosæ.

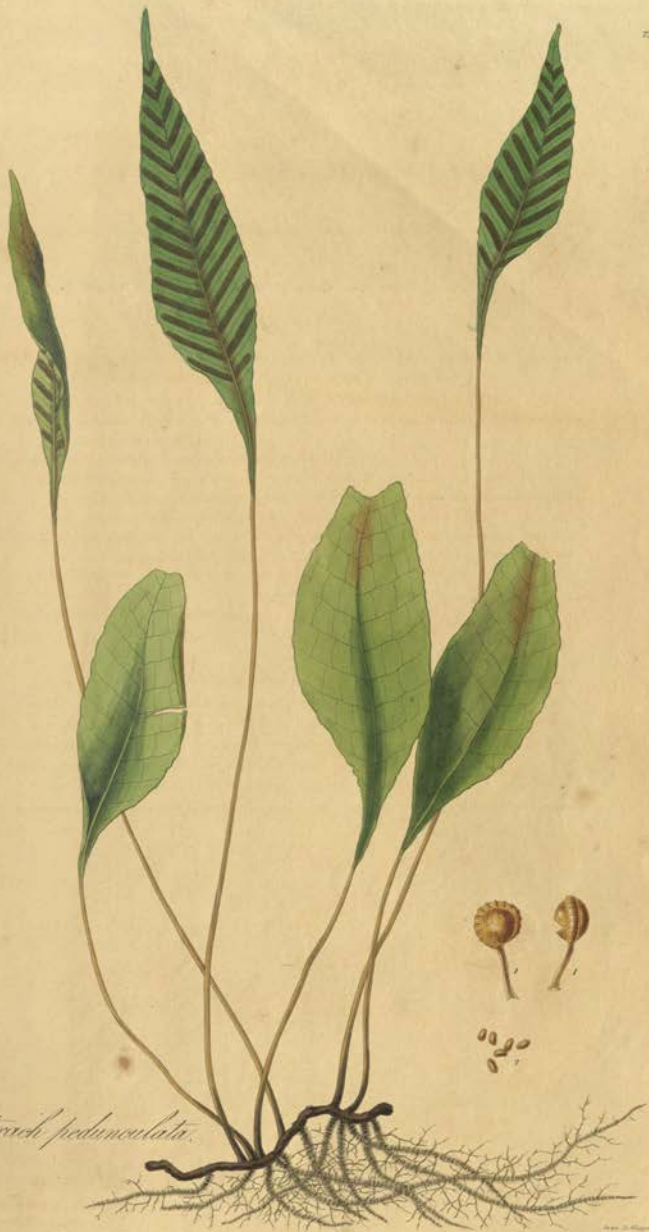
*Capsulæ* totam frondem dorso tegentes, longe pedicellatæ, sphericæ, late annulatæ, annulo incompleto.

*Semina* parva, sphericæ.

Fig. 1. Pilus vel squama. f. 2. *Capsulæ.* f. 3. *Semina*:—*magn. auct.*

We have changed the name which Professor Raddi applied to this Fern, because of its similarity with that of *spathulatum*, given by Bory de St. Vincent to a species of the Isle of France, and which, as far as we can judge from the figure in the Voyage aux Quatres Isles des Mers d'Afrique, we agree with Raddi in considering very nearly indeed allied to the present; differing almost solely in the very obtuse and emarginate extremity of the fertile fronds.





*Ceterach pedunculata.*

## CETERACH PEDUNCULATA.

FILICES.—GYRATÆ. Br. POLYPODIACÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. CETERACH. Sori lineares transversales. Indusia nulla. Willd.

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CETERACH *pedunculata*; fronde simplici lato-lanceolata sinuato-crenata reticulata basi attenuata, fertili longe stipitata, soris e costa ad marginem frondis attingentibus.

HAB. Sylhet Ind. Orientalis, ubi legit *D. Smith*. Misit clariss. *Wallich*.

*Caudex* repens, lignosus, tortuosus, pennæ passerinæ crassitie, subtus radiculosa, radiculis e fibris ramosis descendentibus, quorum majoribus hirsutis.

*Frondes* steriles et fertiles ex eadem caudice, utraque stipitata.

*Sterilis*: *Stipes* erectus, glaber, gracilis, nitidus, pallide fuscus hinc sulcatus, 3—4-pollicaris. *Frons* 4—6-pollicaris, lato-lanceolata, membranacea, fusco-viridis, apice acuminata, basi attenuata, decurrente, margine sinuato-crenata, costa instructa venisque horizontali-patentibus, venulis anastomosantibus.

*Fertilis*: *Stipes* ut in sterili, sed triplo longior. *Frons* ut in sterili, sed magis angusta, crenata, substantiaque firmiore. *Indusium* nullum. *Sori* lineares, intense fuscî, in venis parallelis et cum iis alternantibus et totam latitudinem e costa ad marginem occupantes. *Capsulæ* sphericæ, sublonge pedicellatæ, reticulatæ, annulo fere completo. *Semina* minuta, oblonga, vix angulata, fusca.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

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How far the genus *Ceterach* merits to be distinguished from *Grammitis* must be left to be determined by future observation. Kaulfuss makes one of the characters to depend on the chaffy scales with which the fructification is covered, as in *Ceterach Officinarum*. These scales are totally wanting in our plant; but the *sori* are *transverse*, upon which appears to rest the main character of the genus as distinguishable from *Grammitis*.

*Grammitis* again, according to Mr. Brown, has the *sori* "venulâ unicâ insidentes." In *Ceterach pedunculata* they occupy each a number of veinlets or reticulations exactly intermediate between the straight lateral veins.



*Grammitis decurrens*



GRAMMITIS DECURRENS.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *GRAMMITIS*. Sori oblongi, lineares, recti, sparsi. *Indusia* nulla. Willd.

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*GRAMMITIS decurrens*; fronde pinnatifida, segmentis remotis lanceolatis acuminatis integerrimis, stipite rachique glabris.

*Grammitis decurrens*. Wall. MSS.

HAB. In India Orientali (Nepal?). Wallich.

*Caudex* repens, crassus, valde fibrosus, fibris ramosis non raro hirsutis.

*Stipes* pedalis et ultra, pennæ corvinæ crassitie, erectus, glaber, nitidus, fuscus, teres, hinc sulcatus.

*Frons*, circumscriptione late ovata, profunde pinnatifida, segmentis 6—8-pollicaribus, patentibus, lanceolatis, acuminatis, coriaceo-membranaceis, apice acuminatis, marginibus integerrimis; rachi lævi superne late, inferne anguste alata.

*Sori* in medio frondis ut et in segmentis, lineares, obliqui, venulis suppositi, prope costam, sed non ad marginem attingentes.

*Capsulæ* sphericæ, longe pedicellatæ, reticulatæ, annulo incompleto.

*Semina* parva, oblongo-subreniformia.

Fig. 1. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

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In the *Grammitis decurrens* of Dr. Wallich we have a species quite unlike any other described plant of the genus, and very similar in habit to many species of *Polypodium*.

We have received specimens from Dr. Wallich in 1820, and again in 1826 from the Honourable the East India Company; but the exact place where the plants were gathered is not mentioned.



## TÆNITIS FURCATA.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *TÆNITIS*. Sorus linearis, continuus, quandoque interruptus, longitudinalis, inter costam et marginem exteriorem frondis situs. *Indusium* nullum. Willd.

*TÆNITIS furcata*; frondibus dichotomo-partitis pinnatifidisve, laciniis lineari-lanceolatis acutissimis, subtus squamuloso-punctatis.

*Tænitis furcata*. Willd. *Sp. Pl. v. 5. p. 136. Smith in Rees Cycl.*

*Pteris furcata*. Linn. *Sp. Pl. p. 1531. Swartz. Syn. Fil. p. 95.*

*Lingua cervina furcata*. Plum. *Fil. p. 122 et 141.*

. HAB. In sylvis Hispaniolæ. Plumier. Insula Sancti Vincentii. Rev. L. Guilding. Insula Trinitatis. D. Lockhart.

*Caudex* repens, ramosus, densissime squamoso-tomentosus, intense fuscus.

*Stipes* fere nullus.

*Frons* spithamæa ad pedalem, erecta, inferne indivisa, linearis, basi attenuata, superne vel dichotomo-partita vel pinnatifida; laciniis ultimis et nonnunquam lateralibus furcatis; omnibus lineari-lanceolatis vel linearibus, 3—6 vel ad 8 uncias longis, 6 lines (in specimine Plumieri unciam) latis, coriaceo-membranaceis, integerrimis, acutissimis, costatis et obscure venosis, facie superna viridibus, subnitidis fere nudis, subtus pallidioribus punctato-squamulosis, squamulis minutis, ovatis, reticulatis, peltatis.

*Sori* in duas lines longitudinales prope marginem frondis, et totam fere longitudinem laciniarum plerumque occupantes. *Indusium* omnino nullum.

*Capsulæ* pedicellatæ, annulo completo.

*Semina* oblonga vel subreniformia.

Fig. 1. Squamula. f. 2. Portio frondis cum soris. f. 3. Capsulæ. f. 4. Semina:—magn. auct.

If we are right in referring this undoubted species of *Tænitis* to the *T. furcata* of Swartz and the *Lingua cervina furcata* of Plumier, it would seem to be a species of very rare occurrence, and only hitherto known to Plumier. The figure in our plate indeed differs from that of Plumier in its much narrower fronds, and in the divisions being rather such as to give the character of pinnatifid than regularly dichotomous: but since the annexed engraving was finished, we have received specimens from His Excellency Sir Ralph Woodford of Trinidad, gathered by Mr. Lockhart, which have the fronds considerably broader, still narrower than Plumier's plant, and with some of the individuals (evidently the younger ones) simply dichotomously divided. The more perfect state of the plant is perhaps constantly pinnatifid with few segments, and the breadth of the frond is liable to much variation.

*Pteris australis*

PTERIS AUSTRALIS.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd.

GEN. CHAR. *PTERIS*, Linn. *Sori* lineares, marginales, continui; capsulis sinu involucri insertis.  
*Involucrum* marginale, continuum, scariosum, intus liberum. Br.

*PTERIS australis*; fronde dichotome radiata, laciniis linearibus acutis subfalcato-secundis, stipite frondem subæquante.

*Asplenium australe*. Swartz. *Syn. Fil.* p. 74 et 258. t. 3. f. 1. Willd. *Sp. Pl.* v. 5. p. 308.

*Acrostichum australe*. Linn. *Suppl.* p. 444. (non Vahl.)

HAB. Insulis Mauritiæ et Borboniæ.

“*Stipites* plures e cæspite squamis lineari-subulatis, membranaceis, ferrugineis, nitentibus congesta, radicales simplices villosiusculas fuscas inferne emittente,” erecti, flexuosi, 4—5-pollicares, filiformes, hiuc sulcati.

*Fronde*s lineari-filiformes radiatim dichotomæ, laciniis 3—4-pollicaribus, acutis, subfalcato-secundis, glabris nitidis, ubique dorso sulcatis, marginibusque introflexis.

*Indusia* e margine introflexo frondis continua, membranacea, initio fere ad costam attingentia.

*Capsulæ* numerosæ, fuscæ.

*Semina* spherica, minuta.

Fig. 1. Portio frondis horizontaliter secta, cum indusiis capsulisque. f. 2. Capsulæ. f. 3. Semina:—magn. auct.

If our figure of the structure of the frond of this plant, and especially of the indusia, be correct, —and we have examined it with considerable care,—we trust we shall be considered to have done right in removing it from *Asplenium* to *Pteris*.

Our specimens were gathered by Captain Carmichael in the Mauritius.





*Trichomanes floribundum*

## TRICHOMANES FLORIBUNDUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *TRICHOMANES*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. Br.

*TRICHOMANES floribundum*; frondibus pinnatis, pinnis lanceolatis spinuloso-serratis, superioribus decurrentibus.

*Trichomanes floribundum*. *Humb. et Bonpl. MSS. Willd. Sp. Pl. v. 5. p. 505. Humb. et Kunth Nov. Gen. Pl. Am. Æq. v. 1. p. 25. Kunth Syn. Pl. v. 1. p. 89.*

*Trichomanes pinnatum*. *Swartz. Syn. Fil. p. 142.*

*Trichomanes rhizophylla*. *Swartz. Syn. Fil. p. 142. "Cavan. Præl. 1801. n. 696."*

HAB. Ad ripam fluminis Rio Negro, prope San Carlos, in sylva opaca (Misiones del Orinoco). *Humb. et Bonpl.* In sylvis densis prope lacum Asphaltum, Insulæ Trinitatis.

*De Schach. Jamaica. Masson. Guiana. Herb. De Lessert.*

"*Radix* fusca fibrosa, fibris crassis." *Willd.*

*Stipes* longitudine variat 2—3 uncias ad 6—8-pollicares, filiformis, gracilis.

*Frondes*, circumscriptione ovatae, vel ovato-deltaeideæ, pinnatæ, pinnis nunc 3—4, nunc 16-jugis, cum impari, alternis, patentibus, lanceolatis, 3—6-pollicaribus, spinuloso-serratis, obtusiusculis, basi superiore truncata, inferiore subdecurrente, costatis, venis furcatis vasis transversalibus rete tenerimum includentibus confixis (f. 2):—summis confluentibus; terminali elongata;—in fronde sterili, loco pinnæ terminalis, *rachis* apice nuda, elongata, radicans.

*Sori* marginales, numerosissimi, serraturas terminantes.

*Indusia* cyathiformia, exserta, compressa, ore sub-bilabato.

*Receptaculum* indusio duplo triplove longius.

*Capsulæ* ad basin receptaculi, rotundato-compressæ sessiles, annulo completo transversali cinctæ.

*Semina* minuta subsphærica.

Fig. 1. Apex pinnæ fertilis. f. 2. Portio pinnæ. f. 3. Indusium, cum ejus receptaculo. f. 4. Receptaculi basis, cum capsulis tribus. f. 5. Capsula. f. 6. Semina:—*magn. auct.*

A beautiful and we believe very rare species of *Trichomanes*, remarkable for its numerous marginal fructifications, and, as Kaulfuss well observes, for the nature of its *venation*. The lateral parallel veins resemble those of many monocotyledonous plants; and from the extreme delicacy of the parenchyme between these veins, the pinnæ are frequently torn in the direction of them, as we see to be the case in the different species of *Musa*.

The late Baron de Schach favoured us with the specimens here figured, from the shores of the Asphaltum lake in Trinidad.



*Trichomanes lucens.*

TRICHOMANES LUCENS.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *TRICHOMANES*, Sm. Sori marginales. Capsulæ sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. Br.

*TRICHOMANES lucens*; subhirsutum, frondibus sub-bipinnatifidis pinnis horizontalibus lanceolatis acutis, laciniis brevibus sub-bidentatis, stipite rachique alatis.

*Trichomanes lucens*. Swartz. *Fl. Ind. Occ.* v. 3. p. 1734. *Syn. Fl.* p. 143. *Willd. Sp. Pl.* v. 5. p. 506.

HAB. Ad latera umbrosa cavernarum montium Jamaicae. Sw. In monte Sancti Andreae, Insulae Sancti Vincentii. Rev. L. Guilding. In Demerara, Americae Meridionalis. C. S. Parker.

*Caudex* repens, fibrosus, primum paleaceus, demum nudus.

*Stipes* 3—4-uncialis, basi teres, pilosus, senectute nudus, superne præcipue alatus.

*Frons* palmaris ad pedalem vel sesquipedalem, anguste oblongo-lanceolata, pellucida apice attenuata, sub-bipinnatifida. *Pinnæ* horizontales, approximatae, oblongo-lanceolatae, magis minusve acutae, venosae, reticulatae, venis nunc, et margine, hirsutis, laciniis rotundatis, brevibus, obtusis, bi-tridentatis.

*Sori* in partem superiorem frondis, et ad apicem pinnarum, in singula lacinia.

*Indusium* urceolato-cylindraceum, immersum, ore subcompresso truncato.

*Receptaculum* indusio triplo longius, filiforme.

*Capsulæ* ut in *Tr. alato*.

*Semina* sphaerica.

Fig. 1. Pinnæ portio cum soro. f. 2. Pars receptaculi, cum capsulis duabus. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

*Trichomanes lucens* varies much in size. Our specimens from St. Vincent are generally from six to ten inches in height, while those brought to us from Demerara on the continent of South America, by our valued friend C. S. Parker, Esq., are nearly two feet in length.



*Trichomanes alatum*



## TRICHOMANES ALATUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *TRICHOMANES*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiantè, textura frondis. Br.

*TRICHOMANES alatum*; pilosiusculum, frondibus bipinnatifidis, pinnis lanceolatis acuminatis, laciniis lanceolatis inciso-serratis, stipite (superne) rachique alatis.

*Trichomanes alatum*. Swartz. *Fl. Ind. Occ. v. 3. p. 1732. Syn. Fil. p. 143. Willd. Sp. Pl. v. 5. p. 506. (non Hook. in Fl. Lond.)*

Filicula tota translucens. Plum. *Fil. t. 50. f. D. (vix bona.)*

HAB. In montibus excelsis Jamaicæ australis, alibique in India Occidentali. Swartz. Hispaniola, et in Antillis minoribus. Willd. Insula Sanctæ Vincentii. Rev. L. Guilding.

*Caudex* repens.

*Radix* e fibris plurimis longis nigricantibus vix tomentosis.

*Stipes* 3—4-pollicaris, gracilis superne, e fronde utraque decurrente, alatus, primum hirsutus, demum glaber.

*Frondes* translucentes ovato-lanceolatæ, apice attenuatæ, bipinnatifidæ; pinnis vel segmentis primariis lanceolatis attenuatis, laciniis lanceolatis, acutis, inciso-serratis, omnibus nervosis, sub lente pulcherrime reticulatis, nervis margine pilosis, pilis raris nunc furcatis. *Rachis* alatus, plerumque pilosus.

*Indusia* urceolata, dentibus laciniarum immersa, ore aperto truncato.

*Receptaculum* indusio triplo quadruplo longius, ad basin capsulis tectum.

*Semina* globosa.

Fig. 1. Frondis laciniæ duæ. f. 2. Indusium verticaliter sectum. f. 3. Portio receptaculi cum capsulis duabus. f. 4. Capsula. f. 5. Semina:—*magn. auct.*

Excellent, in almost every respect, as is the description that Dr. Swartz has given us of this plant, yet, probably in consequence of the indifferent figure referred to in Plumier, it has had the misfortune of being little understood; the *Trichomanes lucens* having generally been sent to us by the name of *alatum*,—a larger and much finer plant, as will be seen by our figure.

This must not be confounded with the *Trichomanes alatum*\* of Hook. in *Fl. Lond.* (the *Hymenophyllum alatum* of *Engl. Bot.*) On referring that species to its proper genus, the old specific name was retained, without recollecting that it was preoccupied. It should now be called, after Smith in Rees's Cyclopædia, *T. europæum*.

Our finest specimens of the true *T. alatum* are from the Rev. Lansdown Guilding.

\* The two species are nevertheless very nearly allied. The European plant is much more divided, so as to be 3—4 pinnatifid, the ultimate segments never serrated.



*Trichomanes crispum*

*Desmod. & Schimper*

## TRICHOMANES CRISPUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *TRICHOMANES*, Sm. *Sori* marginales. *Capsulae* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. Br.

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*TRICHOMANES crispum*; subhirsutum, frondibus pinnatifidis inferne pinnatis, pinnis horizontalibus oblongis obtusis obscure denticulatis, soris ad apicem pinnarum.

*Trichomanes crispum*. *Lin. Sp. Pl.* p. 1560. *Swartz. Fl. Ind. Occ. v. 3. p.* 1731. *Syn. Fil.* p. 142. *Willd. Sp. Pl. v. 5. p.* 504. "*Hedv. Fil. t. 4. f. 2.*" *Smith in Rees Cycl.*

*Polypodium crispum calyciferum*. *Plum. Fil. p.* 67. t. 86.

HAB. In Jamaica, Martinica, Demerara, et in Insula Guadeloupe. C. S. Parker. Insula Sancti Vincentii. *Rev. L. Guilding.*

*Caudex* longe repens, squamosus.

*Radix* fibrosa, nigra.

*Stipes* 3—6 uncias longus, erectus, hirsutus, hinc subcanaliculatus.

*Frons* 6-uncialis usque ad sesquipedalem, oblongo-lanceolata, acutiuscula, pinnatifida, inferne pinnata. *Pinnæ* sesquipollicares, horizontales, parallelae, approximate, pellucidae, crispatae, oblongae, obtusae, nervis dichotomis margineque subhirsutae, brevissime et obscure denticulatae, reticulatae, areolis minutis.

*Sori* ad apicem, solummodo, pinnarum, venas terminantes.

*Indusia* fere omnino immersa, cylindracea, ore aperto, subdilato undulato.

*Receptaculum* indusio triplo quadruplo longius.

*Capsulae* ut in reliquis hujus familiae.

*Semina* parva, subsphaerica.

Fig. 1. Apex pinnæ, cum soris. f. 2. Ejusdem portio magis aucta. f. 3. Indusium verticaliter sectum. f. 4. Capsulae. f. 5. Semina:—*magn. auct.*

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This, like the *Trichomanes lucens*, is liable to vary much in size. Our largest specimens are from Guadeloupe, gathered by Mr. Parker. Those here figured are from St. Vincent, and are intermediate between the largest and the smallest size. We possess some small and apparently young specimens which are thickly clothed with ferruginous hair, but do not seem otherwise to differ from the more common state of the plant.





*Trichomanes sinuosum*

TAB. XIII.

TRICHOMANES SINUOSUM.

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kauf.* FILICES veræ. *Willd.*

GEN. CHAR. *TRICHOMANES*, Sm. *Sori* marginales. *Capsula* sessilis, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburcolatum, ore hiante, textura frondis. *Br.*

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*TRICHOMANES sinuosum*; pilosiusculum, frondibus lanceolatis sinuato-pinnatifidis in stipitem decurrentibus, laciniis ovato-lanceolatis obtuse sinuato-dentatis, soris ad apicem pinnarum.

*Trichomanes sinuosum*. "Richard in litt." *Willd. Sp. Pl. v. 5. p. 502. Lam. Illustr. t. 871. f. 1.*

*Trichomanes quercifolium*. *Desv. in Berl. Mag. v. 5. p. 328.*

HAB. In Guadeloupe. *Willd.* Insula Sancti Vincentii. *Rev. L. Guilding.*

*Caudex* repens, filiformis, gracilis.

*Stipes* 2—4-pollicaris, filiformis, compressa, superne e basi decurrente frondis, alata.

*Fronde*s 6—10-pollicares, lanceolatae, sinuato-pinnatifidae, tenerrimae, pellucidae, reticulatae, laciniis ovato-lanceolatis, obtusis, brevissime sinuato-dentatis, simpliciter venosis, venis marginibusque pilosiusculis, pilis prope basin articulatis, simplicibus vel bi-trifurcatis.

*Sori* ad apicem pinnarum, pauci.

*Indusium* cyathiforme, immersum, ore aperto.

*Receptaculum* filiforme, indusio triplo longius.

*Semina* sphaerica.

Fig. 1. Portio pinnae, cum soris duobus. f. 2. Indusium verticaliter sectum. f. 3. 3. *Capsulae*. f. 4. *Semina*;—*magn. auct.*

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A very delicate species, but, except in this greater degree of delicacy, smaller size and more obtuse segments, very nearly allied to *T. lucens*. Smaller specimens than those here figured are scarcely more than sinuated at the margin, and bear a single indusium upon each lobe; whilst larger specimens seem almost to have the character of the younger plants of *T. lucens*.



*Gleichenia Hermannii*

## GLEICHENIA HERMANNI.

FILICES.—GLEICHENEÆ. Br., Kaulf. SCHISMATOPTERIDES. Willd.

GEN. CHAR. *GLEICHENIA*. Capsule annulo completo striato subsessiles, in soris rotundis dorsalibus, sæpius definitæ. Indusium nullum.—Frondes *dichotoma vel furcate*.

*GLEICHENIA Hermannii*; stipitibus dichotomis proliferis, ramis ultimis tantum frondosis, frondibus lanceolatis pinnatifidis glabris subtus glaucis, pinnis linearibus integerrimis obtusis, capsulis numerosis pyriformibus subpedicellatis. Br.

*Gleichenia Hermannii*. Br. *Prodr. Fl. Nov. Holl.* p. 161.

*Mertensia dichotoma*. Willd. in *Act. Holm.* 1804. p. 167. Swartz. *Syn. Fil.* p. 163. Willd. *Sp. Pl.* v. 5. p. 71.

*Polypodium dichotomum*. Thunb. *Jap.* p. 338. t. 37?

*Dicranopteris*. Bernh. in *Schrad. neu Jour.* 1806. p. 38. (fide Br.)

*Filix Calmaria*. Rumph. *Amb.* v. 6. p. 85. t. 38.

HAB. In India Orientali, Japonia, Zeylona, Amboina, Java, Mauritio, Nepalia. Wallich. In Nova Hollandia. Br. Insulis Societatis et Sandvicentibus. In India Occidentali, Dominica, insula Sancti Vincentii. Rev. L. Guilding.

*Caudex* repens, tomentosus, fibrosus.

*Stipes* 3-pedalis, lævis, fuscus, nitidus, teres, repetitum dichotomus, ex axillis proliferus, foliaceo-bracteatus, ramis ultimis frondosis.

*Frondes* geminato-furcate; *singula* lanceolata apice attenuata, infra medium latiore, basi subangustiore, paululum falcata profunde pinnatifida, segmentis horizontalibus, linearibus, subatenuatis, apice obtusis, emarginatis, margine integro (nisi in speciminibus nostris e Nova Hollandia et Insula Mauritiæ, ubi segmentis inferioribus iterum pinnatifidis). *Color* partis superioris frondium viridis, subtus glaucus. *Rachis* costaque glabra, statu juniore non raro pubescentes. *Nervi* obliqui, obscuri, dichotomi.

*Sori* e capsulis 5—10, nervis, intra costam et marginem insertis, rotundato-pyriformibus, pallide flavo-fuscis, indusio destitutis, reticulatis, annulo lato distincto articulo integro cinctis, brevissime pedicellatis, superne hiantibus.

*Semina* minuta, oblonga, subreniformia.

Fig. 1. Portio frondis a parte inferiore visa. f. 2. Ejusdem portio cum soris. f. 3. 3. Capsulæ. f. 4. Semina: —*magn. auct.*

This is perhaps the species of this curious genus which is the most generally dispersed, being found in the West as well as the East Indies, in Japan, in the Society and Sandwich Isles, and in New Holland. All these countries, however, are intratropical, except Japan and Nepal. The plant is liable to considerable variation. The specimen figured in the *Flora Japonica*, and those which we have received from M. Bojer at the Mauritius, as well as our New Holland individuals, have the lowermost segments of the fronds pinnatifid, so as to appear like those of the original *Gleichenia*, with which we think Mr. Brown has justly united the *Mertensia*.

From the Prince of Wales Island we have a species which scarcely differs from this but in having the segments of the frond much longer and equally linear, so that each frond has almost exactly the appearance of that of *Polypodium pectinatum*. Probably the *Mertensia emarginata* of Raddi, from Brazil, is not really distinct from our plant. It has the lower segments of the frond shorter, the whole frond somewhat narrower: the emarginate apices are common to both. To this Raddi refers the *M. glaucescens* of Humboldt and Willdenow.



*Gleichenia immersa.*

## GLEICHENIA IMMERSA.

FILICES.—GLEICHENEÆ. *Br., Kaulf.* SCHISMATOPTERIDES. *Willd.*

GEN. CHAR. *GLEICHENIA*. Capsule annulo completo striato subsessiles in soris rotundatis dorsalibus sæpius definitæ. *Indusium* nullum. *Frondes* dichotomæ vel furcatæ.

*GLEICHENIA immersa*; fronde dichotoma ramosa, gemma primaria prolifera, pinnis geminatis profunde pinnatifidis, laciniis linearibus subtus costa utrinque ferrugineo-tomentosis, ramis semi-pinnatifidis, soris minutis tomento immersis. *Kaulf.*

*Mertensia immersa*. *Kaulf. Enum. Fil. p. 38.*

HAB. In Brasiliæ Insula St. Catharinæ. *Chamisso*. Insula Sancti Vincentii. *Rev. L. Guilding.*

Ex insula Guadeloupe communicavit *Cl. Torrey*.

*Stipes* repetitum dichotomus, primum pubescens, demum glaber, nitidus, fuscus, ex axillis proliferus, ramis ultimis (et antepenultimis, hinc) frondosis.

*Frondes* geminato-furcatæ, lanceolatæ, basi apiceque subattenuatæ, 6-unciales ad sesquipedalem longæ, supra glabræ, subtus ferrugineo-tomentosæ, profunde fere ad basin pinnatifidæ, segmentis linearibus horizontali-subfalcatis, marginibus omnino integerrimis. *Rachis* demum glabriuscula. *Costa* pubescens.

*Sori* tomento ferrugineo immersi, e capsulis quatuor radiatum dispositis, sphaericis, fere omnino sessilibus, oblique subverticaliter lato annulatis demum e vertice debiscentibus.

*Semina* oblongo-reniformia, parva.

Fig. 1. Portio frondis ab inferiore parte visa. f. 2. Ejusdem portio, cum soris. f. 3. Portio segmenti, tomento abraso, cum soro capsulis duabus. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

This seems to agree so well with the *Mertensia immersa* of Kaulfuss, that we can have little doubt of the two plants being the same. It is possible that it may be the *M. pubescens* of Humboldt and Willdenow; though that is said to be clothed beneath with white down. Again, the *M. bifida* of the same author has many points in common with this; but according to the figure in *Act. Holm.* the branch immediately below the ultimate one is pinnatifid on each side. May not this be the *M. decurrens* of Raddi?



*Adiantum adiantifolia* var. *B.*



ANEMIA ADIANTIFOLIA  $\beta$  ASPLENIFOLIA.FILICES.—OSMUNDACEÆ. *Br., Kaulf.* SCHISMATOPTERIDES. *Willd.*

GEN. CHAR. *ANEMIA*, Sw. *Capsula* ovata, vertice radiatim striata, in spicis compositis unilateralibus disposita, basi adfixa, longitudinaliter dehiscentes. *Indusium* nullum. *Kaulf.*

DIV. *Spicæ pedunculatæ geminatæ ad basin frondis.*

*ANEMIA adiantifolia*; fronde bi-tripinnatifida triangulari, laciniis ovato-cuneatis apice denticulatis, subtus rachique pubescentibus, stipite glabro.

$\alpha$ . fronde tripinnatifida, laciniis acutis.

*Anemia adiantifolia.* *Swartz. Syn. Fil. p. 157. Willd. Sp. Pl. v. 5. p. 94.*

*Osmunda adiantifolia.* *Linn. Sp. Pl. p. 1520.*

*Osmunda filiculæfolia major.* *Plum. Fil. p. 135. t. 158.*

*Lunaria elatior Adianti albi folio duplici spica.* *Sloane Jam. v. 1. p. 71.*

$\beta$ . *asplenifolia*, fronde bipinnatifida, laciniis obtusis. Tab. XVI.

*Anemia asplenifolia.* *Sw. Syn. Fil. p. 157.*

*Osmunda asplenifolia.* *Lam. Dict. v. 5. p. 652.*

HAB. In India Occidentali. Insulis Bahamensibus. *D. Swainson.*  $\beta$ . In Dominica. *Lamarck.* Jamaica.

VAR.  $\beta$ .

*Radix* cæspitosa, fibrosa, fibris ramosis.

*Stipos* 4—6-uncialis, erectus, glaber, hinc sulcatus, basi nigricans, superne pubescens.

*Frondes* 3—5 uncias longæ, ovato-triangularæ, bipinnatifidæ, pinnis lanceolatis, pinnulis ovato-cuneatis, coriaceis, tenuissime venosis, nitidis, inferioribus nunc bilobis, apice obtusis denticulatis, superne glabris, subtus rachique breviter pilosis.

*Spicæ* compositæ, bipinnatifidæ, pedunculatæ, geminæ, ad basin frondis insertæ, laciniis angustis, pilosis, hinc capsulis tectæ. *Pedunculi* magis minusve pubescentes.

*Capsulæ* obliquæ, ovatæ, sessiles, hinc gibbæ, reticulatæ, pallide fuscæ, paulo infra apicem radiato-annulatæ, extus longitudinaliter dehiscentes.

*Semina* parva, spherica, sub summa lente reticulata.

Fig. 1. Portio spicæ a dorso visa. f. 2. Ejusdem pars superior. f. 3. Capsula. f. 4. Eadem dehiscent. f. 5. Semina:—*magn. auct.*

We received our specimens of this plant from Jamaica. They entirely accord with the *Anemia asplenifolia* of Swartz; and we are of opinion, with Willdenow, that it can only be considered a variety of the *A. adiantifolia*.





*Schizaea dichotoma*

SCHIZÆA DICHOTOMA.

FILICES.—OSMUNDACEÆ. *Br.*, *Kauf.* SCHISMATOPTERIDES. *Willd.*

GEN. CHAR. *SCHIZÆA*, Sm. *Capsule* ovales, sessiles, apice radiatim striato, basi insertæ, in appendice divisa terminali frondis dorsales. *Indusium* e marginibus inflexis appendicis continuum, intus liberum. *Br.*

*SCHIZÆA dichotoma*; frondibus omnibus pluries dichotomis, laciniis linearibus costatis apice attenuatis, appendicibus pinnatis ascendentibus, involucris crinitis. *Br.*

*Schizæa dichotoma*. *Swartz. Syn. Fil.* p. 150. "*Willd. Act. Acad. Erford.* 1802. p. 30. t. 3. f. 2."

*Willd. Sp. Pl.* v. 5. p. 87. *Smith in Rees Cycl. Brown Prodr. Fl. Nov. Holl.* p. 162.

"*Ripidium dichotomum. Bernhardi in Schrad. Journ.* 1800. 2. p. 127. t. 2. f. 3."

*Acrostichum dichotomum. Linn. Sp. Pl.* p. 1525.

"*Filix cochine. Petiv. Gazoph.* t. 70. f. 12."

HAB. In India Orientali, China, insula Mauritii, Madagascar, Borbonia. *Carmichael. Nova Hollandia*, intra tropicos. *Brown.*

*Radix* e fibris paucis, nigris, flexuosis, simplicibus, crassinisculis.

*Stipites* 4—6-unciales, erecti, basi teretes, apice compressi.

*Frones*, circumscriptione subflabelliformes, repetitum dichotomæ laciniis linearibus, compressis, coriaceis medio costatis, glabris, plerumque levibus, nunc, præcipue in speciminibus e Nova Hollandia, marginibus costaque dorso asperis, apicibus obtusis.

*Appendices* fructificantes recurvæ, profunde pinnatifidæ, a tria ad decem paria; in tribus ad quinque paribus dispositæ, oppositæ lineares semiteretes, intus costa margineque pilosæ, ultime breviores.

*Capsule* duplici serje, costa utrinque, dispositæ, sessiles, ovales, pulcherrime reticulatæ, ad verticem radiatæ, longitudinaliter, ad latus inferius (i. e. versus basin segmentorum) dehiscentes.

*Semina* oblonga.

Fig. 1. Appendix fructificans. f. 2. Ejus lacinia cum capsulis. f. 3. Capsule. f. 4. Semina:—*magn. auct.*

Mr. Brown, in his admirable *Prodromus Floræ Novæ Hollandiæ*, mentions that this plant is liable to great variation both in regard to the number of pinnæ, of which the fructifying appendage is composed, and to the roughness of the frond. Sir James Smith, too, mentions an Otaheitan variety, or, as he is inclined to think, a distinct species, which he would call *S. fastigiata*, having "the segments of its fertile fronds level-topped and exceedingly numerous, the appendages uniformly four pair, as nearly as possible, in each spike, all of them erect and parallel, not divaricated, nor are the spikes recurved." We have received what we consider to be the same plant, from the East India Company, named by Dr. Wallich *S. dichotoma*: but here the appendages are not one-fourth the size of those we have figured.

The specimens here represented were sent to us from the Mauritius by M. Bojer.



*Dianon data*

## DANÆA ALATA.

FILICES.—MARATTIÆ. Bory. POROPTERIDES. Willd.

GEN. CHAR. *DANÆA*, Sm. *Sori* lineares, dorsales, transversi, paralleli. *Capsule* in series geminatas arcte connatæ, superne poro dehiscentes. *Indusium* superficialium soros cingens. (*Asplenii* Sp. *Linn.*)

*DANÆA alata*; fronde pinnata, rachi subnodosa superne alata; pinnis subsessilibus, *sterilibus* elliptico-oblongis acuminatis apice serratis, *fertilibus* anguste lanceolatis integerrimis.

*Danæa alata*. Sm. *Tracts*, p. 261. Sw. *Syn. Fil.* p. 167. Willd. *Sp. Pl.* v. 5. p. 68. Sm. in *Rees Cycl.*—*Kaulf. Enum. Fil.* t. 1. f. 3. (*pinna fertilis et sorus*.)

Lingua cervina nodosa minor. *Plum. Fil. Am.* p. 91. t. 109.

HAB. In Martinica. *Plumier*. Jamaica. *Swartz*. Insula Sancti Vincentii, non raro. *Rev. L. Guilding*.

*Caudex* longus, repens, carnosus, nigro-fuscus, supra reliquis stiptum vetustorum tectus, hic illic fibrosus.

*Frondes* bi-tripedales, simpliciter pinnatæ, erectæ;

*Steriles*, circumscriptione oblonga, basi attenuata, apice acuta. *Stipes* subpedalis, tres quatuor lineas longus, squamulis ferrugineis obsitus, basi teres, auriculatus, facie superna canaliculatus. *Rachis* compressa, ad pinnarum insertionem nodosa, superne membrana utrinque alata. *Pinnæ* subremotæ, breviter petiolatæ, oppositæ, 4—6-pollicares, inferiores multo minores, ovales, reliquæ oblongo-ellipticæ, apice attenuatæ, dentato-serratæ, basi inæquali subcordata, supra intense virides, glabriusculæ, subtus pallidiores, margine incrassato; *costa* subtus ferrugineo-squamosa, nervis numerosis parallelis distinctis fere horizontalibus, simplicibus, vel, rarissime, furcatis;

*Fertiles*, quoad formam, fere omnino ut in *sterilibus*, sed *pinnæ* multoties angustiores, lineari-lanceolatæ, acuminatæ, margine undulatæ potius quam serratæ. *Indusium* membranaceum, soros undique cingens.

*Capsule* 12—16, ovales, nervo, ut nobis videtur, in series geminatas et arcte connatas unitæ, massam (vel sorum) unicam linearem formantes, parallelæ, et totam fere inferiorem partem pinnarum occupantes, superne poro dehiscentes.

*Semina* minuta, spherica vel subreniformia.

Fig. 1. Portio pinnæ fertilis. f. 2. Indusium a quo sorus removetur. f. 3. Sorus lateraliter visus. f. 4. Sorus a dorso visus. f. 5. Portio frondis, cum duobus soris, longitudinaliter secta. f. 6. Sorus hinc longitudinaliter sectus. f. 7. Semina:—*magn. auct.*

We are not aware that any attempt has yet been made to cultivate this handsome and curious species of Fern: but now that we have been so successful with many other individuals of this graceful tribe of plants, we do not yet despair of seeing it flourish in our stoves.

It is probably a native of several of the West India islands, having been found in Martinique by Plumier, in Jamaica by Swartz, and in the fertile island of St. Vincent by our friend the Rev. Lansdown Guilding, whose inestimable botanical communications from that country, particularly of Ferns, have been one of the principal inducements for us to undertake the present publication.

The genus *Danæa* is a very distinctly marked one, having the under side of the *pinnæ* almost wholly covered with closely placed, parallel, immersed sori, formed of a double row (the rows joined by the lateral nerve upon which the sorus is inserted) of closely united capsules, each opening by a pore at the extremity. Upon removing a sorus, a deep cell or cavity remains; as at fig. 2.



*Ophiopogon pendulum.*

## OPHIOGLOSSUM PENDULUM.

FILICES.—OPHIOGLOSSÆ. Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *OPHIOGLOSSUM*. Linn. *Capsula* nudæ, in spicam articulatam disticham connatæ, uniloculares, transverse dehiscentes, bivalves. Willd.

*OPHIOGLOSSUM pendulum*; fronde pendula lineari dichotoma, spica pedunculata medio frondis inserta.

*Ophioglossum pendulum*. Linn. *Sp. Pl.* p. 1518. Swartz. *Syn. Fil.* p. 170. Willd. *Sp. Pl.* v. 5. p. 60. Smith in Rees *Cycl.* Sieber *Herb. Fil.* n. 16.

Scolopendria. Rumph. *Amb.* v. 6. p. 84. t. 37. f. 3.

HAB. In arboribus Amboynæ, ubi rarum. Rumphius. Mauritii. Carmichael, Sieber. Et in montibus excelsis insulæ Owhyhee. David Nelson.

*Parasiticum*. Frondes 2—3 ex eadem parva tuberculata radice, pendentes, bi-tripedales, usque ad quinque pedes longæ, basi angustæ, deinde lineares, tenues, siccitate coriaceo-membranacæ, 6 lineas ad pollicem latæ, simpliciter vel bis dichotomæ, virides, reticulatæ, areolis elongatis; segmentis apice obtusis, margine undique integerrimo.

*Spica* pedunculatæ, nunc basin versus, prope medium, vel infra apicem, frondis sita, digitum ad pedem longæ, pendula, linearis, compressa, marginibus utrinque capsulifera. Hæ *capsule* arcte connatæ, sphericæ, transversim dehiscentes.

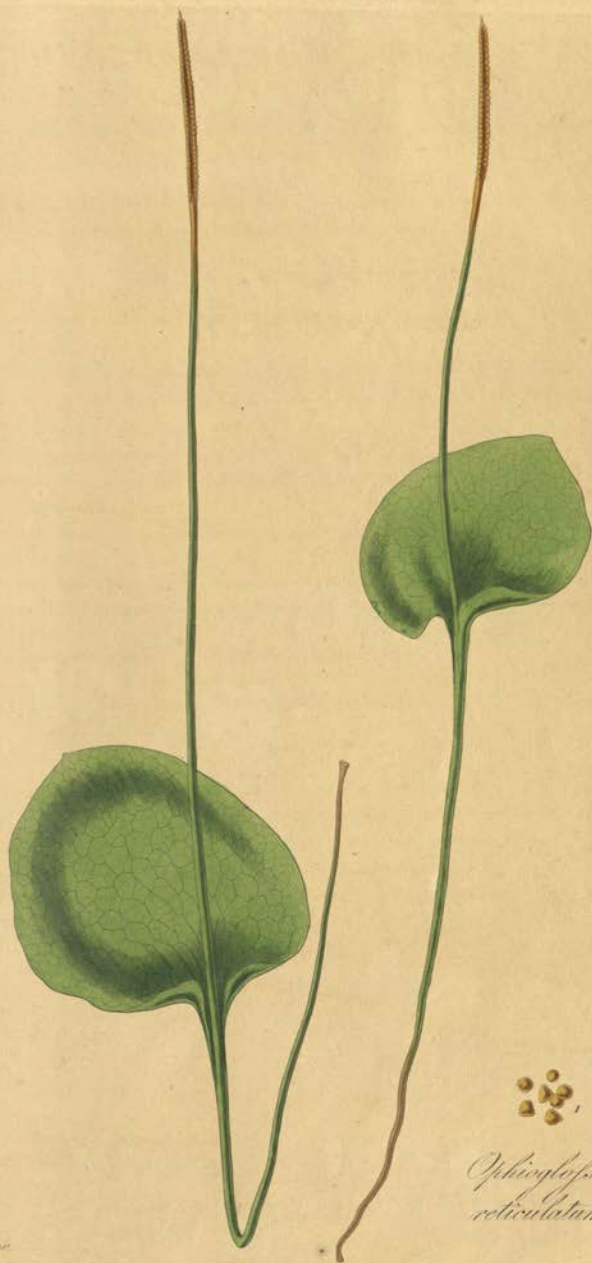
*Pedunculus* duas uncias longus, teres.

*Semina* parva spherica fusco-lutea.

Fig. 1. Capsula dehiscens. f. 2. Semina:—*magn. auct.*

This noble species of *Ophioglossum*, only perhaps exceeded in size by the South American *Ophioglossum palmatum*, has been sent to us from the Mauritius by Captain Carmichael (from whose specimens the accompanying figure has been drawn) and by Dr. Sieber. It is probably not uncommon there. In Amboyna, Rumphius says, it is exceedingly rare. In the Banksian Herbarium, Sir James Smith tells us, very fine specimens are preserved, gathered by Mr. David Nelson upon the high mountains of Owhyhee.

Leman, in the *Dictionnaire des Sciences Naturelles*, suggests that on more minute examination of the fructification, this species will be found distinct from the genus *Ophioglossum*: but we see no reason for entertaining such an opinion.



*Ophioglossum  
reticulatum.*

## OPHIOGLOSSUM RETICULATUM.

FILICES.—OPHIOGLOSSEÆ. Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *OPHIOGLOSSUM*, Linn. *Capsula* nudæ, in spicam articulatam disticham connatæ, uniloculares, transverse dehiscentes, bivalves. Willd.

*OPHIOGLOSSUM reticulatum*; spica caulina longissime pedunculata, fronde cordata apiculata reticulata "radice elongata."

*Ophioglossum reticulatum*. Linn. *Sp. Pl.* p. 1518. Swartz. *Syn. Fil.* p. 170. Willd. *Sp. Pl.* v. 5. p. 60. Smith in *Rees Cycl.*—Lam. *Illustr. t.* 864. f. 2. Sieber *Herb. Fil.* n. 19.

*Ophioglossum cordifolium*. Rob. MSS. cum Ic.

*Ophioglossum cordatum et reticulatum*. Plum. *Fil.* p. 141. t. 164.

HAB. In Insulis Mauritiæ et Borboniæ, Indiæ Orientalis. In Hispaniola, Jamaica, et Guiana, Indiæ Occidentalis.

*Radix* (fide Plumieri) descendens, elongata, carnosa, 2—3-pollicaris, fibris plurimis albidis simplicibus instructa. *Stipes* 4—6-pollicaris, erectus, teres, viridis.

*Frons* solitaria, ad apicem stipitis, lato-cordata, vel cordato-rotundata, carnosomembranacea, reticulata, areolis angulato-rotundatis, margine integerrimo, apice apiculata, basi profunde emarginata, marginibus in stipitem decurrentibus.

*Pedunculus* e sinu frondis, erectus, teres, gracilis, 6—7 uncias longus.

*Spica* terminalis, solitaria, biuncialis, lineari-compressa, mucrone terminata.

*Capsulæ* parvæ, arctissime connatæ, seminibus angulato-sphaericis repletæ.

Fig. 1. Semina:—magn. auct.

It is the case with this, as with many other tropical Ferns, that it is found equally in the New as in the Old World. Our specimens are all from the Mauritius; but judging from the figures of Plumier above quoted, and the testimony of other writers, there appears to be no difference between them and those that are natives of the West Indies.

The drawing was made from specimens gathered by Captain Carmichael in the Mauritius.





SALICOLMOR TESTES

*Acrostichum hybridum*

## ACROSTICHUM HYBRIDUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsule* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). Br.

*ACROSTICHUM hybridum*; frondibus oblongo-lanceolatis subacuminatis, margine costa stipiteque paleaceo-hirsutis, fertilibus multo minoribus glabris.

*Acrostichum hybridum*. Bory de St. Vinc. Voyage, v. 3. p. 95. Swartz. Syn. Fil. p. 11. Willd. Sp. Pl. v. 5. p. 107.

*Acrostichum ciliare*. Pet. Th. Trist. d'Acugn. p. 32? Carmichael in Descr. of the Island of Tristan da Cunha, in Linn. Trans. v. 12. p. 510. (fide specim. ejus.)

*Acrostichum villosum*. Sieber, Syn. Fil. n. 27. non Swartzii.

HAB. Insula Bourboniæ. Bory. Mauritio. Sieber, Bojer. Tristan da Cunha. Carmichael.

*Caudex* repens, brevis, squamis longis, numerosissimis, fuscis, lanceolato-subulatis dense obsitus, inferne fibris plurimis, ramosis, ferrugineo-tomentosis instructus.

*Stipes* 6—8-pollicaris, fusco-flavescens, squamis subulatis, fuscis, horizontalibus sparsim tectus.

*Frons* oblongo-lanceolata, 6—8 uncias longa, duas uncias et ultra lata, submembranacea, indistincte marginata, medio costata, nervis subhorizontalibus versus eorum basin bis terve dichotomis, costa, superficie raro, marginibusque dense squamoso-hirsutis. *Squamæ* subulatæ, purpureo-fuscae, duas vel tres lineas longæ, sub lente minute serrulatæ atque pulcherrime reticulatæ, areolis oblongis. *Frons fertilis* sterili triplo minor, squamis nullis.

*Capsulæ* totam inferiorem partem, costa excepta, tegentes, fuscae vel flavo-fuscae, pedicellatæ, annulo crasso incompleto cinctæ.

*Semina* oblonga, subreniformia.

Fig. 1. Capsulæ. f. 2. Semina. f. 3. Squama, e margine frondis:—*magn. auct.*

This seems in every essential particular to accord with the *A. hybridum* of Bory, who found the plant in the Isle of Bourbon, and whose name we have here adopted. We have received the same plant from Dr. Sieber, under the name of *A. villosum* of Swartz, which, besides being a native of Jamaica, is described as having the sterile fronds on both sides, and the fertile one on the upper surface, clothed with hairs; and so Plumier figures them. It is also the *A. ciliare* of Capt. Carmichael, and probably of Du Petit Thouars.



*Acrostichum obtusatum*

ACROSTICHUM OBTUSATUM.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ, Willd.

GEN. CHAR. *ACROSTICHUM*, Linn. Sori amorphi, seu *Capsule* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). Br.

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*ACROSTICHUM obtusatum*; frondibus simplicibus piloso-squamosis, squamulis subulatis sparsis; sterilibus oblongis, fertilibus ovatis, stipitibus hispidis. *Carm.*

*Acrostichum obtusatum*. *Carm. in Descr. of the Island of Tristan da Cunha, in Linn. Trans. v. 12. p. 510.*

HAB. In planitiis ad rupes excelsas montis Insulæ Tristan da Cunha. *D. Carmichael.*

*Radix*, nobis ignota.

*Stipes* erectus, flexuosus, triuncialis, inferne glaber, superne plerumque hispidus, pilis vel squamulis lineari-lanceolatis, horizontalibus, obscure reticulatis serrulatis fuscis.

*Frons sterilis* vix sesquiunciam longa, ovalis vel etiam elliptica, nunc ovata, subundulata, coriacea, integerrima, apice obtusiuscula, pilis vel squamulis sparsis, plerumque versus basin frondis, obsita: *fertilis* minor, plerumque ovalis, facie superna margineque squamuloso-pilosis.

*Capsule* totam paginam inferiorem frondis tegentes, intense fuscæ, sublonge stipitatae, annulatae, annulo lato, incompleto.

*Semina* numerosa, parva, subsphaerica, margine tuberculato.

Fig. 1. Plantæ, *magn. nat.* f. 2. Squamula. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

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Discovered in the Island of Tristan da Cunha by Captain Carmichael of Appin, to whom we are indebted for our specimens. We know not that it has been noticed by any other author.



*Acrostichum flagelliferum*

## ACROSTICHUM FLAGELLIFERUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, sen *Capsule* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). Br.

*ACROSTICHUM flagelliferum*; fronde pinnata, pinnis paucis remotis lanceolatis (magis minusve latis) breviter petiolatis, terminali longissima flagelliformi.

*Acrostichum flagelliferum*. Wallich MSS.

Panna Mara-maravara. Rheede, Hort. Malab. v. 12. p. 39. t. 19.

HAB. In India Orientali. Rheede. Wallich.

“*Caudex* ab una parte excurrit, curvus, nodosus, exterius fuscus, interius rufus, lignosus, plurimis fibris capillisque nigris, circa inferiorem partem coriaceus, hirsutie, cui se corticibus arborum affigit, obsessus, odoris gravis et ingrati, saporis amari.” Rheede.

*Stipes* altitudine variat, non raro pedalis, glaber, fuscus, hinc canaliculatus: *rachis* etiam glaber.

*Frons*, circumscriptione, lanceolata, pinnata, pinnis remotis, 5—9, nunc oppositis, nunc alternis, *sterilibus* ovali-lanceolatis, *fertilibus* lanceolatis, basi in petiolum brevem attenuatis, apice magis minusve acuminatis, costatis, simpliciter paralleli nervosis, marginibus undulatis nunc subrenatis, ubique glabris; *terminali* longissima non raro pedali, attenuata, recurva, et, ut nobis videtur, quandoque prolifera, radicante.

*Capsule* nunc totam inferiorem partem omnium pinnarum tegentes, nunc magis minusve interruptæ et intra nervos a margine decurrentes, intensæ, fuscæ, pedicellatæ, annulo fere completo.

*Semina* minutissima, oblonga, glabra.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. ouct.*

This highly remarkable Fern was communicated to us by Dr. Wallich from the Calcutta Botanic Garden, with the MS. name here adopted, and a reference to the very tolerable figure in the *Hortus Malabaricus*. It is there celebrated as a medicinal plant of no ordinary virtue: “Cum saccharo in syrupum redacta, tussim, morbum endemium, omnia pulmonum vitia, dispnceam, morbum lunaticum, phthisin curat.”



*Gymnogramma cheilanthoides*

**GYMNOGRAMMA CHEILANTHOIDES.**

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *GYMNOGRAMMA*, Desv. *Sori* oblongi venis frondis simplicibus furcatisve inserti. *Indusium* nullum. *Fronde* pinnatæ, bipinnatæ decompositæque; *radices* cæspitosæ. Desv.

*GYMNOGRAMMA cheilanthoides*; fronde pinnata, pinnis sub-bipinnatifidis, laciniis oblongis obtusis rachique pilosis.

*Gymnogramma cheilanthoides*. Kaulf. *Enum. Fil.* p. 71.

*Gymnogramma filipendulæfolia*. Desv. *Journ. de Bot.* 1813. p. 25.

*Grammitis cheilanthoides*. Swartz. *Syn. Fil.* p. 23. 219 et 419. Willd. *Sp. Pl.* v. 5. p. 143.

Carmich. in *Descr. of the Island of Tristan da Cunha*, in Linn. *Trans.* v. 12. p. 510.

*Asplenium filipendulæfolium*. Pet. *Th. Trist. d'Acugn.* p. 34. t. 4.

HAB. IN Insula Mauritiï. Swartz. Tristan da Cunha. Pet. *Thouars. Carmichael.*

*Stipes* gracilis, lævis, nitidus, hinc sulcatus, nigro-purpurascens, 4—5 uncias longus.

*Frons*, circumscriptione, lineari-lanceolata, pinnata, pinnis membranaceis, flavo-viridibus, arcte dispositis, ovato-cordatis, vix pollicem longis, profunde pinnatifidis; segmentis superioribus integris vel bifidis, inferioribus iterum pinnatifidis, omnibus oblongis obtusis subincurvis, dorso venisque subtus pilosis.

*Rachis* superne pilosus, inferne glaber.

*Sori* oblongi, venis lateralibus simplicibus vel furcatis inserti, indusio omnino destituti.

*Capsule* brevissime pedicellatæ, annulo incompleto.

*Semina* parva, triangularia.

Fig. 1. Pinna cum portione rachidis. f. 2. Portio pinnæ cum capsulis. f. 3. Capsula dehiscens. f. 4. Semina:—*magn. auct.*

In those *Grammitides* of Swartz and Willdenow, which have much divided fronds, the nerves are more decidedly furcate than in those with simpler fronds, and the sori have this forked character likewise. These species are removed by Desvaux, and we think with propriety, to the genus *Gymnogramma*. The present is one of the most rare and the most beautiful of the genus. Our specimens were received from Captain Carmichael, who gathered them at a considerable elevation on the face of the Table-land, and on a detached hill in the middle of the plain, in Tristan da Cunha.





*Gymnocarpium leptophyllum*

*Dr. Gussone del.*

## GYMNOGRAMMA LEPTOPHYLLA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd.

GEN. CHAR. *GYMNOGRAMMA*, Desv. *Sori* oblongi, venis frondis simplicibus furcatisve inserti. *Indusium* nullum. *Frondes* pinnatæ bipinnatæ decompositæque; *radices* cæspitosæ.  
Desv.

*GYMNOGRAMMA leptophylla*; frondibus bipinnatis, pinnulis cuneatis decurrentibus subtrilobis, lobis obtusis bifidis bidentatisve.

*Gymnogramma leptophylla*. Desv. *Journ. de Bot.* 1813. p. 26. Kaulf. *Enum. Fil.* p. 81.

*Grammitis leptophylla*. Swartz. *Syn. Fil.* p. 23 et 218. t. 1. f. 6. Willd. *Sp. Pl.* v. 5. p. 143.

Web. et Mohr *Fl. Crypt. Germ.* p. 26.

*Hemionitis leptophylla*. "Lagasca *Gen. et Sp.* p. 33."

*Polypodium*? *leptophyllum*. Linn. *Sp. Pl.* p. 1553. Schkuhr *Fil.* p. 26.

*Acrostichum leptophyllum*. DeCand. *Fl. Fr.* v. 2. p. 565.

*Asplenium leptophyllum*. "Cav. in *Annal. Sc. Nat.* v. 5. p. 13. t. 41. f. 3. mala."

*Osmunda leptophylla*. Lam. *Diet.* v. 4. p. 657.

HAB. In Europa australi, locis humidis.

*Radix* parva, cæspitosa, e fibris nigrescentibus arachnoideo-tomentosis.

*Stipites* erecti, glabri, nitidi, graciles, hinc sulcati, basi castanei, superne virides.

*Frondes* circumscriptione ovato-lanceolatae, bipinnatæ, teneræ, membranaceæ, pallide virides, pinnis ovatis, alternis, distantibus, patentibus, pinnulis cuneatis alternis decurrentibus trilobis, lobis nunc bifidis, plerumque emarginatis obtusis, pinnulis frondium sterilibus majoribus.

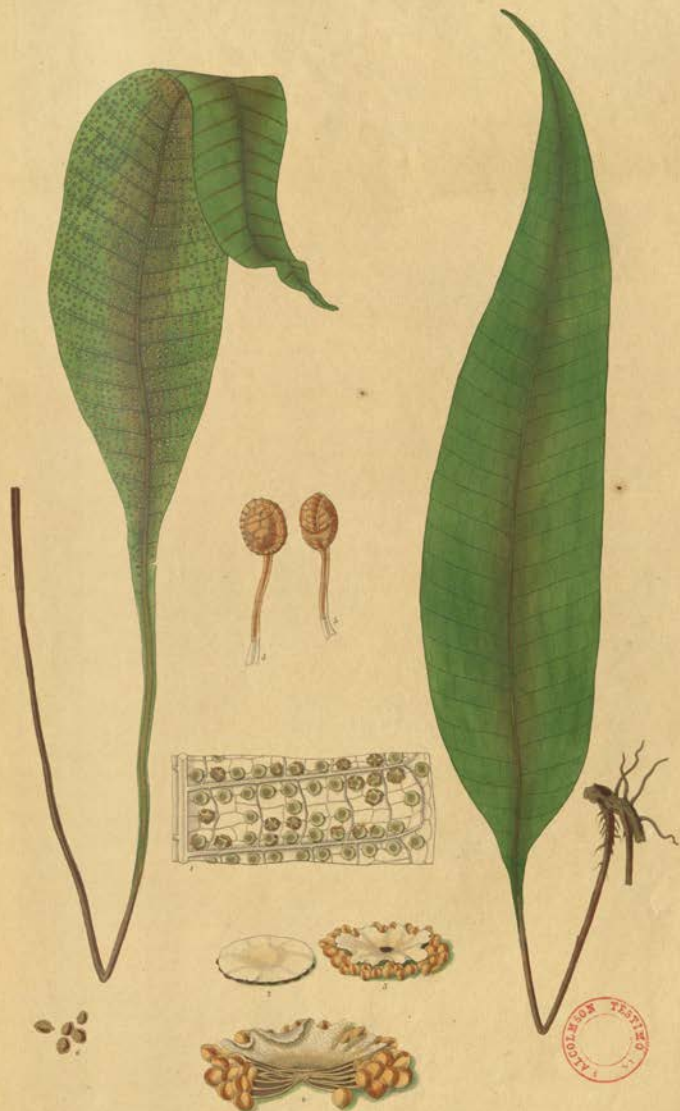
*Sori* in singulo segmento pinnularum venulis inserti, oblongi, non raro basi uniti, e capsulis numerosis fuscis, brevissime pedicellatis, annulo fere completo cinctis.

*Semina* numerosa, triangularia.

Fig. 1. Pinnula ab inferiore parte visa, cum lineolis fructificantibus. f. 2. Sorus, capsulis plurimis abductis.  
f. 3. Capsula debiscens, cum ejus seminibus. f. 4. Semina:—*magn. auct.*

A species confined, we believe, wholly to the South of Europe.

The specimens from which our figures and description were made, were gathered by M. Thomas, of Bex, in the Pyrænes.



*Apuleia Sapporiana*

ASPIDIUM SINGAPORIANUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *ASPIDIUM*, Br. *HYPOPELTIS*, Mich. *ASPIDI* species, Sw., Willd.  
*Sori* rotundi, dorsales. *Involucrum* orbiculare, peltatum, stipitatum, in medio sori insertum, undique liberum. Br.

*ASPIDIUM Singaporianum*; fronde simplici stipitata late lanceolata acuminata integerrima, basi decurrente, soris in venis ternariis, capsulis longe pedicellatis.

*Aspidium Singaporianum*. Wallich MSS.

HAB. In insula, Singapore dicta. Wallich.

*Caulis* repens, sublignosus, hic illic radiculosus.

*Stipes* erectus, 4—8-pollicaris, teres, glaber, nigro-fuscus, hinc sulcatus, inferne subsquamosus.

*Frons* octo uncias longa, late lanceolata, submembranacea, utrinque glabra, margine omnino integerrima, apice acuminata, basi decurrens, costata, venisque lateralibus rectis subobliquis instructa. Ex his venis aliae venae, venulis fructiferis reticulatae, ortæ sunt.

*Sori* numerosi, fusi, venis ternariis siti, parvi.

*Involucrum* exacte orbiculare, medio depressum, membranaceum, peltatum, vix stipitatum, demum, marginibus solutis, subrecurvis, undulatis.

*Capsulae* sphaerico-compressæ, annulo integro cinctæ, reticulatae, longe pedicellatae.

*Semina* subsphaerica, reticulata, limbo subpellucido marginata.

Fig. 1. Portio frondis, cum soris. f. 2. Sorus vix maturus. f. 3. Sorus maturus. f. 4. Ejusdem sectio. f. 5. 5. Capsulae. f. 6. Semina.

In the character we have here given of *Aspidium*, we have in view the adopting Michaux's and Mr. Brown's idea of separating the old *Aspidium* of Swartz into three genera, *Aspidium*, *Nephrodium*, and *Athyrium*. We have not yet ourselves had sufficient experience to determine how far their characters are well defined; but feeling the necessity of grouping into something more than divisional characters the overgrown genus *Aspidium*, we willingly follow such able botanists as those now quoted.

Of the original *Aspidia*, three only are described by Willdenow with "undivided fronds;" and they have all an articulated or jointed stipes. There is a fourth species with a stipes destitute of joint given in the Exotic Flora, *Asp. Wallichii*, Hook.: but that would be a *Nephrodium* of Brown, and has the sori confined to a line on each side the midrib; whereas here the fructifications are very numerous, arising, as in some *Polypodia*, from the ultimate divisions of the veins: and indeed the whole plant has much the appearance of a *Polypodium*.

We are indebted for our specimens to our liberal friend Dr. Wallich.



*Asplenium subinaudatum*

*L. Swartz del.*

ASPLENIUM SUBSINUATUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd.

GEN. CHAR. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. Br.

*ASPLENIUM subsinuatum*; fronde simplici longe stipitata lanceolata basi apiceque attenuata obscure nervosa, margine suberoso-sinuata.

*Asplenium rigidum*. Wallich MSS. (non Swartzii.)

HAB. In Nepalia. Wallich. In Zeylona (Herb. nostr.).

*Caudex* repens, subignosus, rigidus, fibrosus, nigrescens, setosus.

*Stipes* 4—6-pollicaris, flexuosus, gracilis, basi setaceo-squamosus.

*Frondes* 6—8-pollicares, coriaceæ, lanceolatæ, apice acuminatæ, basi in stipitem attenuatæ, margine leviter reflexæ, suberoso-sinuatæ, costatæ, obscure nervosæ, nervis patentibus parallelo-ramosis.

*Sori* lineares, transversales, fere ad marginem frondis attingentes.

*Involucra* pleraque superne aperientia; raro geminata (ut in *Diplazio*), et tunc alterum ad latus inferum dehiscet.

*Capsulæ* numerosæ, longe stipitatæ, annulo fere completo.

*Semina* spherica, subangulata.

Fig. 1. Frondis portio cum soris. f. 2. 2. Capsule. f. 3. Semina.

To the specimens with which we have been favoured by the Honourable the East India Company in 1825, the name *Asplenium rigidum* of Wallich is attached: and we should have adopted this, had it not been applied by Swartz to a very different species. Again, the name of *Aspidium erosum*, Wall., which accompanied Dr. Wallich's original specimens in 1820, is given by Linnæus to a West Indian species.

It is intermediate between *Asplenium* and *Diplazium*; the main central nerve of a fascicle of nerves, as it appears to us, bearing the involucre of a *Diplazium*, while the lateral nerves on branches have those of *Asplenium*.

*Pteris denticulata*

## PTERIS DENTICULATA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd.

GEN. CHAR. *Sori* lineares, marginales, continui; *capsulis* sinu involucri insertis. *Involucrum* marginale, continuum, scariosum, intus liberum. Br.

*Pteris denticulata*; frondibus pinnatis, pinnis decurrentibus suboppositis, duobus vel tribus paribus inferioribus margine exteriori (præcipue) pinnatifidis raro bipinnatifidis setoso-dentatis, fertilibus ad apicem solummodo denticulatis.

*Pteris denticulata.* Sw. *Fl. Ind. Occ. v. 3. p. 1600.* Sw. *Syn. Fil. p. 97.* Kaulf. *Enum. Fil. p. 187.*

*Pteris brasiliensis.* Raddi *Syn. Fil. Brasil. n. 111.* Raddi *Fil. Brasil. p. 47. t. 68 (bis).*

*Pteris quadrifida.* B. Presl. in *Del. Prag. 1. p. 182. num. 32* (fide Raddi).

*Pteris tristicula.* Raddi *Fil. Brasil. p. 46. t. 69?*

HAB. In lapidosis umbrosis Hispaniolæ. Swartz. In Brasilia. Chamisso, Raddi, Burchell, D<sup>e</sup> Maria Graham. CULT. In Hort. Bot. Liverpool.

*Caudex* non vidimus, sed teste cel. Raddi, "subnullus, radiculis numerosis filiformibus flexuosis rigidis instructus, apice dense squamuloso, squamulis lanceolato-acuminatis, denticulatis, nigris."

*Stipites* 6—8-pollicares ad pedalem, graciles, tetragoni, utrinque canaliculati, glabri, superne subalati.

*Fronde*s pedales, nunc, fide Raddi, bipedales, circumscriptione ovatæ, vel deltoideæ, pinnatæ. *Pinnæ* plerumque exacte oppositæ, lanceolatæ, acuminatæ, costatæ, reticulatæ; superiores decurrentes, reliquæ magis minusve petiolatæ; intermedie ad basin divisæ, infimæ margine exteriori (nunc interiore) pinnatifidæ, laciniis rarisime divisis. *Pinnæ* omnes, planta sterili, margine dentatæ, dentibus setosis, fertili, ad apicem, solummodo, dentato-spinulosis. *Rachis* petiolique alati, superiore parte præcipue.

*Sori* continui, omnem marginem, præter apices, occupantes.

*Capsule* in sinubus involucri numerosæ, sphericæ, annulatæ, longissime pedicelatæ, pedicello gracili, articulo, celluloso.

*Semina* triangularia, granulis minutissimis immixta.

Fig. 1. Frons fertili. f. 2. Frons sterilis. f. 3. Pinnæ portio cum soro. f. 4. Sorus, intus visus. f. 5. Capsula. f. 6. Semina cum granulis:—*magn. auct.*

If we are not deceived, this is a plant liable to considerable variation. We know, from specimens received from the author, as well as from the description and figure, that it is Raddi's *Pt. Brasiliensis*: but then we equally believe it to be the *Pt. denticulata* of Swartz and Willdenow. And we have in our own possession such a series of specimens, as almost make us believe that the *Pt. tristicula* of Raddi, and even his *Pt. spinulosa*, are states of the same plant.

The Messrs. Shepherds of the Liverpool Botanic Garden cultivate this plant in the stove: and it is well worthy a place in every collection.





*Cryptogramma acrostichoides*  
L. f. *acrostichoides* (L.) Hier.

J. S. Mill. del.

## CRYPTOGRAMMA ACROSTICHOIDES.

FILICES.—GYRATE. Br. POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd.*

GEN. CHAR. *CRYPTOGRAMMA*, Br. *Sori* lineares (vel subrotundi) venulis costæ (pinnulæ) obliquis insidentes. *Capsulæ* pedicellatæ, receptaculo communi elevato nullo. *Involucrum* commune (pinnulæ) marginale, continuum, disco venoso, margine scarioso libero sæpius induplicato; partiale nullum.

*Filicula glabella.* Frondibus *cæspitosis bi-tripinnatifidis*: *centralibus mutato-contractis fertilibus, exterioribus sterilibus.* *Involucris dorsum totum pinnulæ tegentibus.* *Capsulis breve pedicellatis, annulo incompleto*: *sporulis obtuse trigonis, levibus.* Br.

*CRYPTOGRAMMA acrostichoides*; frondibus bipinnatifidis, sterilium pinnulis ovalibus crenatis; fertilium demum explanatis, soris linearibus discum totum occupantibus. Br.

*Cryptogramma acrostichoides.* *Brown in App. to Franklin's Journ. p. 797.*

HAB. Apud Nootka Sound. *D. Menzies.* Regione subarctica Americæ Septentrionalis, in sylvis opacis scopulosis inter lat. Septentr. 56° et 60°. *Richardson.*

“*Filix 4—8-uncialis, glabra, late-virens, frondibus cæspitosis, stipitatis, crasso-membraneis opacis venis vix adversus lucem conspicuis.*”

“*Frones exteriores cæspitis steriles, circumscriptione lanceolatæ, bipinnatifidæ apice pinnatæ pinnis distinctis alternis brevissime petiolatis; pinnulis confluentibus, ovalibus, obtusis, crenatis, inferioribus passim dentatis, omnium venis e costa vix prominula acutangulis distinctis simplicibus bifidisve intra marginem crenaturæ desinentibus. Stipites pallidi, subtus semiteretes, antice bisulci, infra medium conspersi, squamulis linearilanceolatis acuminatis, disco fusco-stro, limbo pallido, supra glabri. Rachis epoleata, angusta, compressa, colore et fere substantia frondis. Frondes centrales fertiles stipite sterilium longiore alioqui simili insidentes bipinnatæ: pinnæ petiolatæ; pinnulæ omnes fructiferæ distincte inferiores brevissime petiolatæ; ante explationem involvendi lineares, limbo utrinque recurvo, efformante involucrum fornicatum discum totum operiens pallide viride venosum margine scarioso avenio sæpius induplicato: demum explanatæ angusto-oblongæ involucro quasi nullo: costa subtus particulis parvis flavis conspersa, venis costæ obliquis, alte bifidis, fere bipartitis distinctis.*”

“*Sori ramulos omnes venarum a basi ad apicem occupantes, lineares, distincti sed ita approximati ut discus totus pinnulæ explanatæ capsulis maturus tectus est et in hoc stadio filix species Grammitidis vel Acrostichi quasi evadit.*”

“*Capsulæ breve pedicellatæ, turgide lenticulares annulo incompleto, altero lateri infra annuli terminationem transversim dehiscentes, receptaculo communi elevato nullo sed venæ parum incrassatæ insidentes.*”

“*Sporulæ triangulares, læves, absque striis manifestis vel puncto opaciori, in cumulo dilute flavæ separatim hyalinae.*” Br.

Fig. 1. Pinnulæ duæ fertiles, involucris adhuc involutis. f. 2. Portio pinnulæ transversim secta. f. 3. Pinnula, involucris explanatis. f. 4. Portio pinnulæ, cum soris. f. 5. Capsulæ. f. 6. Semina vel Sporulæ:—*magn. auct.*

To so admirable a description of this plant as that here copied verbatim from Mr. Brown, we can add nothing. We believe the plant has never been found except in the stations above given. Mr. Brown has drawn up the character of the genus so as to include our *Pteris crispæ*; which he, nevertheless, considers a doubtful species of *Cryptogramma*. To us, however, there appears no generic difference; and the fertile fronds have the closest similarity, in almost every particular, except in the rather shorter *sori* of *capsules*. In the sterile fronds the pinnules are much broader and never wedge-shaped, in the plant now before us.



*Adiantum cuneatum*

29 Dec 1844 184

J. Van Swijck

## ADIANTUM CUNEATUM.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd.

GEN. CHAR. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo libero. Br.

ADIANTUM *cuneatum*; frondibus triplicato-pinnatis, pinnulis petiolatis cuneatis membranaceis apice rotundatis laciniato-bi-trilobatis, lobis profunde emarginatis segmentis falcato-incurvis, sinus soriferis, involucris reniformibus.

*Adiantum cuneatum*. "Langsd. et Fisch. Ic. Fil. p. 23. t. 26." Willd. Sp. Pl. v. 5. p. 450.

Raddi Fil. Brasil. p. 59. t. 78. f. 2. Kaulf. Enum. Fil. p. 206.

HAB. In Brasilia. Langsdorff et Fischer, Chamisso, D<sup>r</sup> M. Graham, Burchell. Insula Sancti Vincentii. Rev. L. Guilding. CULT. In Hort. Bot. Liverpool.

*Radix* subcaespitosa, fibrosa, fibris ramosis, tomentosis.

*Caudex* digitalis ad palmarem, erectus, gracilis, atropurpureus, nitidus.

*Frons*, circumscriptione, ovata vel subdeltoidea, triplicato-pinnata.

*Rachis petiolique* gracillimi, atro-purpurei, nitidi.

*Pinnule* breviter petiolatæ, duas ad quatuor lines longæ, membranacæ, glabræ, dichotomo-nervosæ, cuneatæ, lateribus nunc inæqualibus, apice inciso-lobatæ, lobis duobus vel tribus; in *frondibus sterilibus*, subdentatæ; in *fertilibus*, profunde emarginatis, segmentis falcato-incurvis, sinus fructiferis.

*Involucrum* exacte reniforme membranaceum, pallide fuscum, majusculum, arcte inflexum.

*Capsulæ* in disco involucri, sphericæ, fere sessiles, reticulatæ, annulatæ, annulo incompleto.

*Semina* oblongo-rotundata, vel subreniformia.

Fig. 1. Planta juvenis. f. 2. Planta adulta fructifera:—*magn. nat.* f. 3. Pinnula. f. 4. Involucrum, intus visum. f. 5. Capsula. f. 6. Semina:—*magn. auct.*

There appears to us to be great difficulty in determining the species of the genus *Adiantum* without the aid of figures; especially of that division which includes our European *A. Capillus Veneris*, and which division or group is characterized by having petiolated pinnules of a thin membranaceous texture, and more or less regularly cuneate in form.

The present plant is allied in general appearance to the species just mentioned, *A. Capillus Veneris*, but may be distinguished by its more compound frond, smaller pinnules, and, essentially, by the sori being placed in the bottom of the sinus of the notches. Still nearer does it approach to the *A. assimile* of New Holland (the *A. trigonum* of Billardière, *Nov. Holl. t. 248.*); and I scarcely know how they may be recognized, but by the more decided lobes of the pinnæ of our plant, and the much deeper notches, within which the fructification is inserted: add, too, that the segments of these lobes are so incurved and meet together in such a manner as to render the notch itself almost obsolete; so that at first sight the involucre seem to be intramarginal, or upon the disk of the pinnule.

In Brazil, the *A. cuneatum* appears to be not uncommon; and we have received an *Adiantum*, which we can in no way distinguish from it, from St. Vincent, sent by the Rev. L. Guilding. The Messrs. Shepherds received the plant from M. Otto of Berlin, under the name of *A. pendulinum*.



*Trichomanes reniforme*



TRICHOMANES RENIFORME.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kauf. FILICES veræ. Willd.

GEN. CHAR. *TRICHOMANES*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum subrecolatum, ore hiantè, textura frondis. Br.

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*TRICHOMANES reniforme*; frondibus reniformibus integerrimis stipitatis.

*Trichomanes reniforme*. Forst. Prodr. n. 462. "Hedw. Fil. fasc. 3." Swartz. Syn. Fil. p. 141. et p. 369. Willd. Sp. Pl. v. 5. p. 499.

HAB. In Nova Zeelandia. Forster. Menzies. In sylvis densis ad ripam fluminis "Thames" dicti: parasiticum. Fraser.

*Caudex* longe repens, gracilis, subtortuosus, ramosus, glaber, radiculosus, arboribus adnascens.

*Stipites* digitales, alterni, plurimi ex eodem caudice, remoti, subcurvati, superne paululum dilatati, omnino glabri.

*Frondes* simplices, fere exacte reniformes, duas tres ad quatuor uncias longæ, quatuor ad quinque uncias latæ, integerrimæ, coriaceo-membranacæ, diaphanæ, nervis pluries dichotomis, e basi divergentibus, seu fiabellatim dispositis.

4. *Sori* ad marginem frondis, arcte dispositi, ad apicem singuli nervi.

*Involucrum* turbinatum fronde immersum, margine integerrimum.

*Receptaculum* cylindraceum, in speciminibus exsiccatis sublonge exsertum, et capsulis undique tectum.

*Capsulæ* globosæ, pulcherrime réticulatæ, annulo lato completo cinctæ.

*Semina* globosa vel triangularia, singulo e tribus corpusculis composito.

Fig. 1. Planta:—*magn. nat.* f. 2. *Involucra* dua. f. 3. *Capsulæ*. f. 4. *Semina*:—*magn. auct.*

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This singular and very beautiful Fern is, we believe, entirely confined to New Zealand, where it climbs over the trunks of trees. We have received it from Mr. Menzies; but our finest specimens were recently sent to us by Mr. Fraser, the colonial botanist in New South Wales.

The substance of the frond is rather thick, and it is pellucid, and of that nature which would lead to the suspicion of its having, in a fresh state, been succulent. In drying, therefore, the specimens may have shrunk considerably, especially at the margins; and to this circumstance, perhaps, may be attributed the exserted state of the capsulsæ.



*Trichomanes reptans*

## TRICHOMANES REPTANS.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd.

GEN. CHAR. *TRICHOMANES*, Sm. *Sori* marginales. *Capsula* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. Br.

*TRICHOMANES reptans*; frondibus erectis simplicibus cuneato-ovatis incisissimis pinnatifidisve arcte venosis, involucri paucis terminalibus exsertis bilabiatis, receptaculo subincluso.

*Trichomanes reptans*. Swartz. *Fl. Ind. Occ.* v. 3. p. 1727. *Syn. Fil.* p. 142. *Willd. Sp. Pl.* v. 5. p. 501. "*Hedw. Fil.* t. 3. f. 4." (mala Willd.)

*Trichomanes minor reptans*, &c. *Brown Jamaica*, p. 86.

*Phyllitis scandens minima* &c. *Sloane Jam.* v. 1. p. 74. t. 27. f. 1?

HAB. In arborum truncis vetustis cortici adnascens Jamaicae. Swartz. *Insula Sancti Vincentii*. Rev. L. Guilding.

*Caudex* longe repens, gracilis, filiformis, radicibus tomentosis dense obsitus.

*Stipites* breves, vix semiunciam longi, ferrugineo-tomentosi.

*Frondes* plurimæ, pollicares, ovatae, obovatae nunc rotundatae, basi semper cuneatae, marginibus apiceque varie modo crenatis lobatis incisivis, hic illic fasciculatim pilosis, pilis minutissimis reflexis. *Substantia* tenera, membranacea, minutissime reticulata, pulcherrime venosa, vix costata, sed venis e basi versus margines radiatim, vel potius flabellatim ramosis. *Color* lacte viridis, nunc fuscescens.

*Involucra* solitaria vel bina, ad apicem frondis, plerumque in sinu lobulorum, fere omnino exserta, cylindracea, nuda, vel, inferne, marginibus utrinque alatis, apice bilabiata, labiis subrotundatis demum apertis.

*Receptaculum* filiforme, nostris speciminibus nunquam exsertum, medio capsuliferum.

*Capsula* oblique inserta, sessilis, annulo completo instructa.

*Semina* subsphaerica.

Fig. 1. Frondes duæ cum portione caudicis. f. 2. Involucrum. f. 3. Involucrum, verticaliter sectum. f. 4. Portio columellæ, cum capsulis duabus. f. 5. Pili marginis frondis:—*magn. auct.*

Numerous beautiful specimens, received from our friend the Rev. Lansdown Guilding, of this minute Fern, enable us to give what we trust will be found to be satisfactory figures of this little known, though we believe not uncommon, species. The only ones that exist, that we are aware of, are, that of the younger Hedwig, which is acknowledged by Willdenow and Smith to be bad; and that of Sloane, which, though usually (and even by Swartz) quoted under *Tr. muscoides*, we think is better referred to this.

We have reason, indeed, to believe that the *Tr. muscoides* and *reptans* have been confounded by botanists; but the former differs from the latter (as we propose on another occasion to show more clearly by a plate) by its narrower, more beautifully reticulated and less veined frond, in the substance of which the involucre are inserted. We have another nearly allied species from Guiana, gathered by Mr. Parker, in which there is a strong nerve, having only as many divisions as there are lobes to the frond.





*Trichomanes lanccum*

TRICHOMANES LANCEUM.

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd.*

GEN. CHAR. *TRICHOMANES*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindræo insertæ, intra *Involucrum* monophyllum, subrecolatum, ore hiantæ, textura frondis. *Br.*

*TRICHOMANES lanceum*; frondibus stipitatis linearibus pinnatifido-digitatis, laciniis linearibus inæqualibus elongatis obtusis setoso-serratis. *Willd.*

*Trichomanes lanceum*. "*Bory in Litt.*" *Willd. Sp. Pl. v. 5. p. 501. Sieber, Syn. Fil. n. 81.*

*Trichomanes digitatum*. *Swartz. Syn. Fil. p. 422 et 370.*

HAB. In Insula Borboniæ. *Bory de St. Vincent. Insula Mauritiæ. Sieber.*

*Caudex* tenuissimus, filiformis, setosus.

*Stipes* erectus, 3—4 lineas longus, setis horizontalibus sparsis obsitus.

*Fronde*s bipollicares di-trichotomæ, nunc subpinnatifidæ pinnis vel laciniis 4, segmentis linearibus costatis pulcherrime reticulatis, marginibus ciliatis, ciliis vel pilis remotis, articulatis.

*Sori* solitarii ad apicem segmentorum frondis.

*Involucrum* substantia frondis immersum, turbinatum, subcompressum, ore aperto.

*Receptaculum* involucri duplo longius, filiforme, ad basin capsuliferum.

*Capsulæ* rotundatæ, compressæ, annulo lato completo cinctæ.

*Semina* angulata, e granulis tribus nunc quatuor composita.

Fig. 1. Plantæ:—*magn. nat.* f. 2. Frons cum portione caudicis. f. 3. Apex frondis fertilis. f. 4. Pars inferior receptaculi, cum capsulis. f. 5. Capsulæ. f. 6. Semina:—*magn. auct.*

The specimens from which our figure and description of this pretty little Fern were taken are published in the *Synopsis Filicum* of Dr. Sieber, and were gathered by him in the Mauritius.



*Hymenophyllum marginatum*

**HYMENOPHYLLUM MARGINATUM.**

FILICES.—GYRATÆ. *Br.* POLYPODIACEÆ. *Kauf.* FILICES VERÆ. *Willd.*

GEN. CHAR. *HYMENOPHYLLUM*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, texturâ frondis, valvis planis, exterius liberis. *Br.*

*HYMENOPHYLLUM marginatum*; frondibus erectis di-trichotomis laciniis linearibus obtusissimis subundulatis marginatis integerrimis, involucris terminalibus solitariis rotundatis, marginibus incrassatis integerrimis.

HAB. In Nova Hollandia, prope Port Jackson, inter Muscos. *Fraser.*

*Caudex* gracillimus, filiformis, pilosus, repens.

*Stipes* duas tres lineas longus, erectus, filiformis, basi pilosus.

*Frondes* pollicares, sesquipollicares, di-trichotomæ, membranaceæ, pulcherrime reticulatæ, areolis minutis rotundatis, costatæ, basi attenuatæ, laciniis linearibus, subundulatis marginatis, integerrimis, apice, *frondium sterilium*, obtusis, *fertilium* emarginatis.

*Sori* in sinu, ad apicem laciniarum, solitarii.

*Involucrum* rotundatum, bivalve, valvis subconvexis reticulatis integerrimis, marginibus incrassatis pulcherrime rubris.

*Receptaculum* filiforme, involucro brevius, apice liberum.

*Capsulæ* rotundatæ, compressæ, peltatæ, annulatæ, annulo integro.

Fig. 1. Plantæ:—*magn. nat.* f. 2. Frons, cum portione caudicis. f. 3. Frondis apex cum soro. f. 4. Capsula:—*magn. auct.*

At first sight, and with the eye unaided by a microscope, this plant has very much the appearance of *Trichomanes lanceum*; but a more careful examination will show it to be very distinct, even as to its genus: the involucrum here being completely that of a *Hymenophyllum*, and the margin wants the ciliæ of that plant,—being furnished instead with a thickened margin.

We have only received specimens from Mr. Fraser, gathered in New Holland, and, we believe, in the neighbourhood of Port Jackson.



*W. Gooden del.*

*Hymenophyllum alatum*

*J. Swan Sculp.*

**HYMENOPHYLLUM CILIATUM.**

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd.*

GEN. CHAR. *HYMENOPHYLLUM*, Sm. *Sori* marginales. *Capsule* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

*HYMENOPHYLLUM ciliatum*; frondibus lanceolatis pinnatis pinnis bipinnatifidis laciniis linearibus obtusis, marginibus costaque ciliatis, ciliis bi-trifurcatis, rachi stipiteque alatis ciliatis.

*Hymenophyllum ciliatum.* *Swartz. Fl. Ind. Occ. v. 3. p. 1753. Syn. Fil. p. 147. Willd. Sp. Pl. v. 5. p. 519.*

*Trichomanes ciliatum.* "*Hedw. Fil.*"

HAB. In truncis arborum montium Jamaicae, inque Antillis minoribus et Pennsylvania. *Willd.*  
In Insula Sancti Vincentii. *Rev. L. Guilding.*

*Caudex* longe repens, gracilis, filiformis, hic illic radiculosus, ferrugineo-pilosus.

*Stipes* unciam ad duas uncias longus, superne alatus.

*Frondes*, circumscriptione, lanceolatae, nunc ovato-lanceolatae, attenuatae, membranaceae, pulcherrime reticulatae, pinnatae, pinnis ovato-lanceolatis costatis bipinnatifidis, laciniis linearibus, apice plerumque bifidis, marginibus costaque ubique ciliatis, ciliis remotis, simplicibus bifidis trifurcatisve. *Rachis* alata, ciliata.

*Involucra* ad apicem laciniarum, solitaria, at praecipue pinnis superioribus, orbicularia, bivalvia, valvis concavis marginibus ciliatis.

*Receptaculum* breve, inclusum, ad ejus apicem capsuliferum.

*Capsulae* 10—12 in singulo soro, rotundatae, subcompressae, sessiles, obliquae.

*Semina* minuta, subsphaerica, fusca.

Fig. 1. *Involucrum.* f. 2. *Involucrum*, valva unica desumpta, cum soro. f. 3. *Receptaculum* cum capsulis duabus.  
f. 4. *Semina.* f. 5. *Ciliae* vel *pili* marginales.

Our specimens of this plant are from the Rev. Lansdown Guilding; and they agree entirely with the descriptions of Swartz and Willdenow.



*Angiopteris erecta*



1870

1870

## ANGIOPTERIS ERECTA.

FILICES.—OSMUNDACEÆ. Div. II. *Bory.* MARATTIACÆÆ. *Kaulf.* SCHISMATOPTERIDES. *Willd.*

GEN. CHAR. *ANGIOPTERIS*, Hoffm. *Sori* oblongi, transversi, in lineam submarginalem confluentes. *Capsula* discretæ, circiter 10—14, duplici serie dispositæ, ellipticæ, subcompressæ, antice poro oblongo hiantes. *Indusium* nullum. *Kaulf.*

## ANGIOPTERIS erecta.

*Angiopteris erecta.* “*Hoffm. in Comm. Goett. 12. p. 29. t. 5. exclusis syn. præter Forsteri.*”

*Swartz. Syn. Fil. p. 166 et 395. Willd. Sp. Pl. v. 5. p. 69.*

*Angiopteris indica.* *Desv. Journ. Bot. t. 1813. p. 267?*

*Clementea palmiformis.* “*Cav. Prel. 1802. n. 1164.*”

*Polypodium erectum.* *Forst. Prodr. n. 438.*

HAB. In Insulis Societatis et Marianis. *Willd.* In insula Otaheite. *D. Menzies.* Apud Sylhet, Indiæ Orientalis. *Dr. Wallich.*

*Caudex*, fide Willdenovii, arboreus, quinquepedalis, diametro spithamali; sed, secundum Gaudichaudium, omnino subterraneus.

*Frondes* “sesquipedales (*Willd.*), decem ad duodecim pedales (*Gaud.*), bipinnatæ.”

*Rachis* lævis, teres, hinc, facie superna, sulcatus.

*Pinnule* 4—6-pollicares, alteræ, remotiusculæ, oblongo-lanceolatæ, subsessiles, basi magis minusve obtusæ, apice attenuatæ, marginibus serratæ, costatæ, venis numerosis parallelis simplicibus vel furcatis, supra intense virides, subtus pallidiores, ubique glabræ.

*Sori* oblongi, ad apicem fere omnium venularum (basi apiceque pinnularum exceptis) et ita arcte dispositi, ut lineam longitudinalem prope marginem efformant.

*Capsula* majusculæ, nudæ, circiter 10—14 in singulo soris; duplici serie dispositæ, erecto-patentes, obovatæ, obtusissimæ, sessiles, reticulatæ, dorso sulco depresso longitudinali notatæ, intus longitudinaliter dehiscentes.

Inter capsulas *pili* pauci articulati.

*Semina* minutissima, sphaerica, fusca.

Fig. 1. Portio pinnularum, cum ejus soris. f. 2. Sorus. f. 3. Sorus verticaliter sectus, interior visus. f. 4. Capsula, facie interiore visa. f. 5. Capsula a dorso visa. f. 6. Semina. f. 7. Pili e basi capsularum:—*magn. auct.*

The *Angiopteris indica* of Desvaux we have quoted as a synonym to the present species with a mark of doubt. All the character given is “*frondibus pinnatis, pinnis lanceolatis*,” and the observation is added, that it is easily distinguished from the already known species—“*n’étant point cordiforme-lanceolée.*” Our specimens are never cordiform at the base of the pinnules, but are generally obtuse, sometimes acute.

From Dr. Wallich again we have a plant marked “*Angiopteris, viz ab A. crassipeda, Wall. diversa.*” We are unacquainted with the *crassipeda* of Wallich; but of the plant just mentioned, except in its pinnules being narrower and considerably more attenuated than the figure here given, we do not see how it differs from *A. erecta*. Our Sylhet specimen exactly accords with Mr. Menzies’ from Otaheite.





*Lycopodium serratum*

D. G. Don del.

J. Smith sculp.

LYCOPODIUM SERRATUM.

LYCOPODINEÆ. Swartz., Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *LYCOPODIUM*, Linn. *Capsule* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

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*LYCOPODIUM serratum*; foliis undique sparsis patentibus lanceolatis submembranaceis costatis cuspidatis petiolatis sinuato-serratis, caule adscendente dichotomo.

*Lycopodium serratum*. Thunb. *Fl. Jap.* p. 341. t. 38. Swartz. *Syn. Fil.* p. 175. Willd. *Sp. Pl.* v. 5. p. 51.

HAB. In Japonia. Thunberg. Insula Borboniæ. Swartz. Ex India Orientali misit amicis. Wallich. 1820.

*Caulis* 8—10-pollicaris, basi repens, radiculosus, dein adscendens, bis-terve dichotomo.

*Folia* undique sparsa, subremota, superne sensim majora, omnia horizontaliter patentia, vel subreflexa, fere membranacea, subunciam longa, lanceolata, plana, luteo-viridia, costata, costa excurrente, et inde folia cuspidata, marginibus sinuatis profunde serratis, basi in petiolum brevem alatum attenuata.

*Capsule* majusculæ, flavæ, in axillis foliorum supremorum, reniformes, bivalves.

*Semina* minutissima, subsphærica, reticulata, medio linea notata.

Fig. 1. Folium. f. 2. 3. 4. *Capsule* magis minusve maturæ. f. 5. *Semina* vel *Granulæ*:—*magn. auct.*

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Thunberg's figure affords a very indifferent representation of this *Lycopodium*, which has the largest leaves of any species we are acquainted with. Our specimens are from Dr. Wallich; and coming to us at the same time with a collection of *Nepal* Ferns, although not marked as such, we judge they may be natives of *Nepal* also. If so, and being found, according to Swartz, in *Bourbon* as well as in *Japan*, this *Lycopodium* has a widely extended geographical range.



L. Hervey del.

*Lycopodium pulcherrimum*

J. G. Smith sculp.

**LYCOPODIUM PULCHERRIMUM.**

LYCOPODINEÆ. Swartz., Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *LYCOPODIUM*, Linn. *Capsule* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpuseulis 1—6, globosis. Br.

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*LYCOPODIUM pulcherrimum*; caule dichotomo, foliis remotiusculis undique sparsis exacte linearibus acutiusculis integerrimis obscure costatis erecto-patulis, siccitate subflexuosis, capsulis in axillis foliorum supremorum.

*Lycopodium pulcherrimum.* Wallich MSS.

HAB. In monte Hatouna, Nepaliæ, arboribus (?). Wallich.

*Radix* valde fibrosa, fibris ramosis tomentosis intertextis fuscis.

*Caules* plurimi ex eadem radice, ut videtur, pendentes, 8—10-pollicares, dichotome divisi, ubique foliosi.

*Folia* sparsa, subremota, semiuncialia, erecto-patula, exacte linearia, glabra, integerrima, medio obscure costata, apice acutiuscula, *inferiora* plerumque fusciscentia, *superiora* viridia; omnia siccitate flexuosa atque etiam subtortuosa.

*Capsulæ* axillares, solitariæ, ad basin foliorum versus apicem ramorum, reniformes, flavæ, bivalves, granulis minutissimis pallide flavis repletæ.

Fig. 1. Folium. f. 2. Folium cum ejus capsula. f. 3. Capsula aperta cum granulis:—*magn. auct.*

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Sent by Dr. Wallich from Nepal in 1820, marked as "*Cosca*" of the natives: and again we received it from the Honourable the East India Company with the MS. name of Dr. Wallich, which we have here adopted. It has the habit of our *Lyc. subulifolium*; but that has the leaves decidedly awl-shaped, and erect, and imbricated.



## LYCOPODIUM ATRO-VIRIDE.

LYCOPODINEÆ. Swartz., Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *LYCOPODIUM*, Linn. *Capsule* uniloculares axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

*LYCOPODIUM atro-viride*; foliis bifariis horizontalibus acinaciformibus integerrimis vel serrulatis subcostatis striatis, stipulis ovatis costatis serrulatis longe mucronatis, spicis tetragonis sessilibus, squamis ovatis acutissimis carinatis serrulatis.

*Lycopodium atro-viride.* Wallich MSS.

*Lycopodium cuspidatum.* Hook. MSS. apud Hort. Soc. Lond.

HAB. In Insula "Prince of Wales Island" dicta, Indiæ Orientalis. Wallich.

*Caulis*, ut videtur, repens, pedalis et ultra, bi-tripinnatim ramosus, pallide fuscus, flexuosus sulcatus, hic illic radicans.

*Folia* bifaria, horizontalia, facie inferiore caulis inserta, rigida, nitida, arcte disposita, acinaciformia, obtusa, lineis tribus longitudinalibus notata, linea centrali e costa obscura, integerrima vel serrulata, intense viridia, subtus pallidiora.

*Stipulæ* foliis quintuplo minores, facie superiore caulis insertæ, appressæ, liberæ, foliis alternantes, ovatæ, acutæ, tenuissime marginatæ, serrulatæ, costatæ, costa longe producta, cuspidatæ.

*Spicæ* ad apices ramorum, solitariæ vel binæ, vix unciam longæ, tetraquetræ, e squamis viridibus, rigidis, ovatis, acute carinatis, imbricatis, patentibus, acutissimis, serrulatis, costa ad apicem attingente, dorso serrulata.

*Capsulæ* ovato-rotundatæ, flavæ, squamis breviores, axillares, solitariæ.

*Semina* minutissima, quaterna, flava.

Fig. 1. Portio caulis, facie superna visa. f. 2. Eadem, a dorso visa. f. 3. Stipula. f. 4. Spica. f. 5. Squama. f. 6. Squama cum capsula. f. 7. Capsula. f. 8. Semina:—*magn. auct.*

This very handsome species of *Lycopodium* we were first acquainted with by means of a valuable collection of dried specimens which the Horticultural Society of London had received from Prince of Wales Island; and in that collection we named the species *L. cuspidatum*: but having since received the same plant from the Honourable the East India Company under the name of *L. atro-viride* of Wallich (in all probability gathered in the same island by that gentleman), we hasten to adopt this appellation of our liberal friend.



A. *Ophioxylum ellipticum*

B. *Oph. opacum.*

## OPHIOGLOSSUM ELLIPTICUM.

FILICES.—OPHIOGLOSSÆ. *Br.*, *Kaulf.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *OPHIOGLOSSUM*, Linn. *Capsule* nudæ in spicam articulatam disticham connatæ, uniloculares, transverse dehiscentes, bivalves. *Willd.*

*OPHIOGLOSSUM ellipticum*; spica caulina longe pedunculata, fronde elliptica obtusa reticulata medio costata, radice fibrosa.

HAB. In Demerara, Americæ meridionalis; legit et communicavit amiciss. C. S. Parker.

*Radix* e fibris numerosis, longiusculis, simplicibus, fusciscentibus.

*Stipes* unciam ad tres uncias longus, erectus, gracilis, fronde terminatus.

*Frons* bi-triuncialis, elliptica, membranacea, integerrima, apice obtusiuscula, inferne in stipitem sensim decurrens, reticulata, medio evidenter costata, costa versus apicem obsolotiore.

*Pedunculus* e basi frondis et ex apice stipitis, fronde duplo longior, erectus, teres.

*Spica* sub-biuncialis, lineari-compressa.

*Capsule* numerosæ, arcte connatæ.

Fig. 1. Capsula. f. 2. Semina:—*auct.*

This was discovered by our excellent friend C. S. Parker, Esq. of Liverpool, in one of the many herboring excursions he made during his visit to Demerara. In the shape of the frond it comes nearest to the Cape *Ophioglossum nudicaule*; but that is much smaller in size, and has no appearance of midrib, which is very observable in our plant. It is probably allied to the New Holland *Oph. costatum* of Mr. Brown.

## OPHIOGLOSSUM OPACUM.

*OPHIOGLOSSUM opacum*; spica caulina, fronde cordata opaca spica longiore, venis inconspicuis, radice bulbosa.

*Ophioglossum opacum*. *Carmichael in Descr. of the Island of Tristan da Cunha, in Linn. Trans. v. 12. p. 509.*

HAB. In locis elevatis montis Insulæ Tristan da Cunha. *Carmichael.*

*Ophioglossum reticulatum* valde affine: differt radice bulboso, fronde opaca, spica fronde brevior, et magnitudine quadruplo minore.

This may be called an alpine plant. Tristan da Cunha is situated in 37° 6' South latitude; and the plant is said to grow "high up on the dome" of that island. This *dome*, Captain Carmichael tells us, in his very interesting account of that island, above quoted, is in itself 5000 feet high, and placed upon the top of a cone itself 3000 feet high. It is certainly very nearly allied to the *O. reticulatum*; and may perhaps prove a variety depending upon place of growth and other circumstances.





*Polypodium acrostichum*



**POLYPODIUM OVATUM.**

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kauf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *POLYPODIUM*, Swartz. *Sori* subrotundi (seriati, sparsi v. conferti). *Involucrum* nullum. Br.

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*POLYPODIUM ovatum*; frondibus indivisis stipitatis membranaceis e basi decurrente ovatis acuminatis integerrimis costatis nervis parallelis, soris inter nervos simplici serie.

*Polypodium ovatum.* Wall. MSS.

HAB. In India Orientali. Wallich.

*Radix* e fibris numerosis, fuscis, ramosis, hic et illic ferrugineo-tomentosis.

*Caudex* teres, repens, nigro-fuscus, squamis membranaceis tectus.

*Stipes* digitalis ad palmarem, subflexuosus, rigidus, fusco-viridis, glaberrimus, inferne hispido-paleaceus.

*Frons* stipite subbreavior, e basi decurrente vel in stipitem attenuata, ovata, acuminata, omnino integerrima, membranacea, glabra, costata, venis lateralibus oblique patentibus parallelis, venulisque transversis has connectentibus instructa.

*Sori* simplici (rarissime duplici) serie dispositi, rotundati, nudi.

*Capsulæ* longe pedicellatæ, sphericæ, annulo lato incompleto cinctæ.

*Semina* ovalia, subangulata, reticulata.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

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We have no means of ascertaining in what part of India this curious and rare Fern was discovered. It approaches the character of *P. scolopendrium* of Hamilton in Don's *Flora Nepalensis*; and this may perhaps be a native of the same country.



*Elysiptium* *scythopenduloides*

## POLYPODIUM SCOLOPENDRIOIDES.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *POLYPODIUM*, Swartz. Sori subrotundi (seriati, sparsi v. conferti). *Involucrum* nullum. Br.

*POLYPODIUM scolopendrioides*; frondibus sublonge stipitatis subteneris lanceolatis sinuato-pinnatifidis, laciniis ovato-triangularibus obtusiusculis, basi apiceque attenuatis, soris sparsis biserialibus.

*Polypodium scolopendrioides*. Linn. *Sp. Pl.* p. 1544. Swartz. *Syn. Fil.* p. 33. Willd. *Sp. Pl.* v. 5. p. 181. Spreng. *Syst. Veget.* v. 4. p. 50.

*Polypodium incisum* Asplenii. Plum. *Fil.* t. 91.

Filix Jamaicensis simpliciter pinnatis Asplenii foliis. Pluken. *Atm.* t. 290. f. 1.

HAB. In Insula Martinicæ. Plumier. Jamaica. Plukenet. Swartz. D. Wiles.

*Radix* e fibris nigris, ramosis, hic et illic tomentosis.

*Caudex* repens, squamis lanceolatis membranceis fuscis dense obsitus.

*Stipes* digitalis et ultra, nigro-fuscus, nitidissimus, basi subpilosus.

*Frons* palmaris ad epithamæam sesquinciamp lata, lanceolata, costata, venisque obliquis ramosis, sinuato-pinnatifida, sinubus acutis, laciniis triangulari-ovatis, obtusiusculis, sub lente remote ciliatis, basi attenuata, apice acuminata, integerrima.

*Sori* parvi, subrotundi, venulis inserti, in duas lineas, venis primariis paralleli, dispositi.

*Capsulæ* longe pedicellatæ, fusæ, globosæ, annulo elastico lato fere completo.

*Semina* minutissima, spherica.

Fig. 1. Portio frondis hinc epidermide sublata, ut venæ internæ in conspectum veniant. f. 2. Frondis segmentum contra lucem sub lente visum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

The *Polypodium incisum* of Swartz, appears, as far as we can judge from the description, to be a species very nearly allied to this; and Linnæus is himself said to have confounded the two; the *P. scolopendrioides* of the first edition of *Sp. Pl.* being now considered as the *P. incisum*, and that of the last edition our true plant. Swartz tells us that the *P. scolopendrioides* has the smaller, but broader, fronds, and that the lower segments or divisions are remote from each other, so as to be there pinnate, as in Plukenet's figure. But the same author equally refers to Plumier's plant, which exactly, in this respect, resembles our own, having those segments coadunate.

In this Fern the cuticle or epidermis is easily removed by the aid of a dissecting knife; and then the nerves are rendered distinctly visible, with the dots or scars whence the sori have proceeded; as shown at fig. 1. of our plate.

We are indebted to A. B. Lambert, Esq. for our specimens, who received them from Mr. Wiles of Jamaica.



*Lycopodium lanceolatum*

## GRAMMITIS LANCEOLATA.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd., Spreng.*

GEN. CHAR. *GRAMMITIS*, Sw. *Sori* oblongi, lineares, recti, sparsi. *Indusia* nulla. *Willd.*

*GRAMMITIS lanceolata*; breviter stipitata, fronde simplici submembranacea costata subreticulata lanceolata acuta inferne attenuata, margine integerrima, soris costæ contiguæ subparallelisque supremis confluentibus.

*Grammitis lanceolata.* *Swartz. Syn. Fil. p. 22 et 212. t. 1. f. 4. Willd. Sp. Pl. v. 5. p. 139. Spreng. Syst. Veg. v. 4. p. 41. (not Schkuhr.)*

*Asplenium plantagineum* β. *Lam. Dict. p. 303. Illustr. t. 867. f. 1.*

HAB. In Insula Mauritiæ et Borboniæ. *Comnerson.* Repens, in sylvis umbris, ad arborum radices, et in locis siccis inter saxa in monte Pouce, insulæ Mauritiæ. *Bojer.*

*Radix* fibrosa, nigra, ramosa, dense ferrugineo-tomentosa.

*Caudex* longe repens, crassitie pennæ corvinæ, squamis nigrescentibus, ovatis longe acuminatis, reticulatis, serrulatis obsitus.

*Stipes* subnullus.

*Frons* spithamea, ubique glabra, submembranacea, indistincte reticulata areolis oblongis, plana, margine integerrima, basi in stipitem perbreve attenuata, apice acuta, vix acuminata, medio costata, costa vix prominula.

*Sori* in partem superiorem frondis plerumque dispositi, costæ contigui et ei paralleli aut rarius subobliqui, fere simplici serie, lineares, nunc duas ad tres lineas longi, nunc unciales, lineam lati, prominuli, basi apiceque obtusi, venulis inserti: supremis non raro confluentibus.

*Capsulæ* numerosæ, arctissime dispositæ, pallide fuscæ, annulo incompleto cinctæ.

*Semina* angulata, lævissime punctulata, opaca, albo-virescentia.

Fig. 1. Portio frondis, cum soro. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

We are indebted for our beautiful specimens of this little-known Fern to M. Bojer of the Mauritius, who took it for a *Tenitis*, and marked it *Tenitis simplicifolia* of his MSS. We think, however, that there is no doubt of its being the *Grammitis lanceolata* of Swartz: but it must be allowed that the fructification, especially in the upper part of the frond, has a good deal the appearance of that of a *Tenitis*.

Schkuhr (*t. 7.*) mistook a West Indian Fern (the *Grammitis elongata* of Sw. and Willd.) for this of the Mauritius; but that differs from our plant in its much smaller size, more rigid texture, in the presence of numerous stellated scales, and in the sori of fructification being short, uniform, and forming a regular series or single line between the margin and the midrib.



*Nephrolepis bicolor*

**NIPHOBOLUS BICOLOR.**

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *NIPHOBOLUS*, Kaulf. Sori subrotundi, congesti, terminales, pilis stellatis ob-  
tecti. *Involucrum* nullum.

*NIPHOBOLUS bicolor*; fronde lineari-lanceolata obtusa basi in stipitem attenuata, subtus stellulato-  
tomentosa incana, costa prominente, soris subdiscretis.

*Niphobolus bicolor*. Kaulf. *Enum. Fil.* p. 128. Spreng. *Syst. Veg.* v. 4. p. 44.

*Polypodium stellatum*. Vahl. *Symb.* 3. p. 104. Swartz. *Syn. Fil.* p. 25. Willd. *Sp. Pl.* v. 5.  
p. 151. Schkuhr, *Fil.* t. 8.

“*Polypodium serpens*. Forster, *Prodr.* n. 435.”

*Polypodium stoloniferum*. Gmel. *Linn.* v. 2. p. 1305.

HAB. In Nova Zeelandia. Forster.

*Caudez* repens, flexuosus, pennæ corvinae crassitie, squamis numerosis arcte appressis tectus, inferne hic et illic  
radiculosus.

*Stipes* duas ad tres uncias longus, pilis minutis radiatis obsitus.

*Frons* digitalis ad palmarem, coriacea, lineari-lanceolata, basi attenuata, apice obtusa, margine omnino integerrima,  
costata, costa subtus prominente, facie superna viridi pilis radiatis sparsa, subtus dense stellato- vel radiatim  
pilosa, albo-tomentosa. Hæ stellulae e pilis pellucidis 6—10.

*Sori* in parte superiore frondis numerosi valde convexi fere hemisphaerici, fuscii, approximati, vel discreti.

*Capsulae* longe pedicellatae, ovato-sphaericae, lato annulate, pilis radiatis longe stipitatis peltatis immixtae.

*Semina* reniformia, subangulata, flavo-virescentia.

Fig. 1. Pili stellati e dorso frondis. f. 2. Pili stellati stipitati e soris. f. 3. Capsulae. f. 4. Semina:—*magn. auct.*

Whether or not the genus *Niphobolus*, (so called from the snow-like covering of down which invests several of the species,) be founded in nature, we do not at present pretend to determine. Perhaps it may be better to incorporate its species, as well as those of *Pleopeltis*, as had previously been done, with *Polypodium*. Indeed, with *Pleopeltis* our genus has much affinity; the stellated or radiated hairs in *Niphobolus* being exactly analogous to the little peltate scales of that genus.





*Gymnogramma charophylla*

## GYMNOGRAMMA CHÆROPHYLLA.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd., Spreng.*

GEN. CHAR. *GYMNOGRAMMA*, Desv. *Sori* oblongi, venis frondis simplicibus furcatisve inserti. *Indusium* nullum. *Fronde* pinnatæ bipinnatæ, decompositæve; *radices* cæspitosæ. *Desv.*

*GYMNOGRAMMA chærophylla*; fronde tenera decomposita nuda, pinnulis fertilibus oblongis, sterilibus flabelliformibus pinnatifidis inciso-lobatis, segmentis linearibus acutiusculis, rachi alata.

*Gymnogramma chærophylla.* *Desv. Journ. de Bot.* 1813. p. 26. *Spreng. Syst. Veg.* v. 4. p. 40.

*Hemionitis chærophylla.* *Poir. in Lam. Encycl. Suppl.* v. 3. p. 39.

"*Hemionitis cicutaria.* *Herb. Banks.*" (Menzies MSS.)

HAB. In Paraguay. *Desvaux.* Brasilia. *Commerson.* Jamaica. *Menzies.*—CULT. In Hort. Bot. apud Liverpool. *Shepherd.*

*Radix* cæspitosa, fibrosa, fibris nigris ramosis.

*Stipites* plurimi, ex eadem radice, digitales ad palmares, graciles, nitidi, subtetragoni, flavo-virescentes, basi nigro-fusci.

*Frons*, circumscriptione, ovata, vel deltoidea, tenera, acuminata, tri-quadrupinnata, ubique glabra, nuda. *Pinna* primariae remotæ, ovato-lanceolatæ, vel in partem superiorem anguste lanceolatæ, bipinnatæ, inferioribus tripinnatis, pinnulis pinnatifidis, inciso-lobatis, segmentis linearibus, acutis; rachibus ubique alatis. *Pinnule steriles* multoties latiores, fere flabelliformes. *Color* pallide viridis.

*Sori* oblongi, furcati, in omnibus pinnulis dispositi.

*Capsula* laxè dispositæ, sphaerica, sessile, pulcherrime reticulatæ: annulo incompleto.

*Semina* triangularia, pallide viridi-flava.

Fig. 1. Pinna cum soris. f. 2. Capsulae. f. 3. Semina:—*magn. auct.*

This delicate and very beautiful Fern has, in a great degree, the habit and general appearance of *Cryptogramma leptophylla*; but it is much larger, more divided, and the pinnules are of a different figure.

The specimens here figured were communicated in 1826 by the Messrs. Shepherds, from the Liverpool Botanic Garden, whence it was received from M. Otto of Berlin. Our friend Mr. Menzies has given us a specimen which he gathered in Jamaica, and which he has marked as the *Hemionitis cicutaria* of the Banksian Herbarium; a name certainly equally applicable with that already published by Poiret and Desvaux.

Professor Raddi has not included this in his *Filices Brasilienses*.



*Antrophyum pruriens.*



**ANTROPHYUM PUMILUM.**

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ANTROPHYUM*, Kaulf. *Sori* lineares, continui, venis frondis reticulatis immersis.  
*Indusium* geminatum, medio dehiscens. Kaulf.

*ANTROPHYUM pumilum*; frondibus lanceolatis obtusiusculis basi in stipitem brevem attenuatis, soris longissimis lineari-filiformibus subreticulatim connexis immersis.

*Antrophyum pumilum*. Kaulf. *Enum. Fil.* p. 197. Spreng. *Syst. Veget. v. 4. p. 67.* (excl. syn. *P. coriaceæ*, Don.)

Hemionitis immersa. Bory MSS. Willd. *Sp. Pl. v. 5. p. 127.*

HAB. In rupibus Borboniæ. Bory. Insula Mauritiæ. D. Carmichael.

*Radix* fibrosa, densissime tomentosa, ramosa.

*Stipes* brevis, vix unciam longus, compressus.

*Frondes* subcæspitose, digitales et ultra, fere coriaceæ, ecostatæ, siccitate subrugosæ, nervis obsolete, margine integerrimo, basi in stipitem attenuatæ, apice obtusiusculæ.

*Sori* lineari-filiformes, longissimi, reticulatim ramosi, frondis substantia immersis.

*Involucrum* duplex e marginibus sulcorum fructificationis ortum.

*Capsulæ* numerosissimæ, sphericæ, reticulatæ, pedicellatæ, annulatæ.

*Semina* subsphærica, pallide flava.

Fig. 1. Portio frondis cum soris. f. 2. Portio frondis, cum soro, transversim secta. f. 3. Semina.

The genus *Antrophyum*, established by Kaulfuss in his valuable *Enumeratio Filicum*, is well distinguished from *Hemionitis* by the presence of an involucre, always, we believe, following the lines of the veins, although in some species the veins themselves are scarcely visible when not rendered so by the presence of the fructification.

The present plant, for specimens of which, from the Isle of France, we are indebted both to Captain Carmichael and to A. B. Lambert, Esq., is remarkable in having the lines of fructification immersed in the very substance of the frond.

Our specimens vary in size, but they are all larger than those described by Willdenow.

TAB. XLVIII



*Leontodon pusilla.*

## SCHIZÆA PUSILLA.

FILICES.—OSMUNDACEÆ. *Br., Kaulf.* SCHISMATOPTERIDES. *Willd.*GLEICHENIÆÆ. *Spreng.*

GEN. CHAR. *SCHIZÆA*, Sm. *Capsula* ovales, sessiles, apice radiatim striato, basi insertæ, in appendice divisa terminali frondis dorsales. *Indusium* e marginibus inflexis appendicis continuum, intus liberum. *Br.*

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*SCHIZÆA pusilla*; frondibus indivisis lineari-filiformibus sterilibus multo brevioribus siccitate tortuosius integerrimis, appendice pinnata subquinquejuga, laciniis oblongo-linearibus ciliatis.

*Schizæa pusilla*. *Pursh, Fl. N. Am. v. 2. p. 657. Nutt. Gen. of N. Am. Pl. v. 2. p. 249.*

*Eaton, Manual of Botany, p. 446. Spreng. Syst. Veg. v. 4. p. 30.*

HAB. Paludosis, inter sphagna, Americæ Septentrionalis, rarissime: in uno loco hucusque, ut videtur, lecta, Quaker-Bridge dicto, provincia Novæ Cæsareæ. *Eddy* (fide *Nuttallii*).

*Radix* fibrosa, fibris simplicibus fuscis sublonge inter muscos descendentibus.

*Caudex* omnino nullus.

*Fronde* cæspitose, subbiformes, lineari-filiformes, glabræ, integerrimæ; *steriles* vix duas uncias longæ, basi attenuatæ, sursum latiores, falcato-curvatae, rigidiusculæ, siccitate tortuosæ, glauco-virides, vix costatæ; *fertiles* duplo triplove longiores, digitales, erectæ, basi apiceque attenuatæ.

*Appendix fructificans* vix semiunciam longa, pinnata, pinnis per paria dispositis subquinquejugis, secundis, oblongo-linearibus, dorso convexis, medio costatis, costa hinc prominente, marginibus seu involucris ciliatis.

*Capsula* in duas lines dispositæ, majusculæ, ovatae, hinc gibbosæ, reticulatae, apice radiatim striato.

*Semina* reniformi-cylindracea, opaca, obscure pallide viridia.

Fig. 1. Planta:—*magn. nat.* in sphagna proveniens. f. 2. Eadem:—*magn. auct.* f. 3. Pinna appendicis fructificantis. f. 4. Capsula. f. 5. Semina:—*magn. auct.*

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Mr. Pursh seems to consider that the minuteness of this plant may have caused it in many cases to be passed by unobserved: but hitherto we believe no one has detected it except in the spot where it was originally discovered, as we learn from Mr. Nuttall, by Dr. Eddy of New York.

Our specimens were gathered by Dr. Torrey, who informs us that the spot (Quaker-Bridge, in Burlington County, New Jersey) is thirty-one miles N.W. from Philadelphia:—so that it grows further from the tropics than any species of the genus we are yet acquainted with.

*Schizaa rupestris*

## SCHIZÆA RUPESTRIS.

FILICES.—OSMUNDACEÆ. *Br.*, *Kaulf.* SCHISMATOPTERIDES. *Willd.*  
GLEICHENIÆÆ. *Spreng.*

GEN. CHAR. *SCHIZÆA*, Sm. *Capsula* ovales, sessiles, apice radiatim striato, basi insertæ, in appendice divisa terminali frondis dorsales. *Indusium* e marginibus inflexis appendicis continuum, intus liberum. *Br.*

*SCHIZÆA rupestris*; frondibus indivisis planis linearibus margine integerrimis, appendice pinnata 5—8-juga, involucris incisis. *Br.*

*Schizæa rupestris*. *Br. Prodr. Fl. Nov. Holl. v. 1. p. 162. Spreng. Syst. Veg. v. 4. p. 30.*

HAB. In Nova Hollandia; apud Port Jackson. *Brown.* In saxis udis Montibus Cæruleis (*Blue Mountains*) rarissime. *Fraser.*

*Radix* e fibris plurimis, rigidis, plerumque simplicibus constans.

*Caudex* repens, squamosus, squamis nitidissimis, fuscis, subulatis.

*Fronde*s ex eodem puncto caudicis plurimæ, subcæspitosæ, simplices, lineares, compressæ, costatæ, integerrimæ, omnino glabræ, flexuosæ, basi insigniter attenuatæ; *steriles* digitales, sursum latiores apice acuto; *fertiles* paululum longiores, angustiores versus apicem attenuatæ.

*Appendices fructificantes* terminales, pallide fuscæ, subunciam longæ, pinnatæ, pinnis per pariam approximatis 6—8- vel 9-jugis, magis minusve secundis, linearibus, nervosis, marginibus (seu involucris) incisis.

*Capsulæ* duplici serie dispositæ, pilis nullis, ovatæ, subgibbosæ, reticulatæ, vertice radiatim striato.

*Semina* opaca, pallide viridia, oblonga, subreniformia.

Fig. 1. Portio frondis, cum appendice fructifera. f. 2. Pinna seu lacinia appendicis, cum capsulis. f. 3. Capsula. f. 4. Semina:—*magn. auct.*

Four species of the curious and beautiful genus *Schizæa* are enumerated in the *Prodr. Fl. Nov. Holl.* of Mr. Brown. The present individual was first discovered by that eminent botanist, and seems to be only known to inhabit the vicinity of Port Jackson and the Blue Mountains.





*Lycopodium subulifolium*

## LYCOPODIUM SUBULIFOLIUM.

LYCOPODINEÆ. Swartz., Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *LYCOPODIUM*, Linn. *Capsula* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. Br.

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*LYCOPODIUM subulifolium*; caule dichotomo, foliis erectis imbricatis subulatis rigidis integerrimis vix nervosis, capsulis in parte superiore caulis axillaribus.

HAB. E Nepalia communicavit Cel. Wallich, anno 1818 lectum.

*Radix* densissime cæspitosa, fibrosa.

*Caulis* (pendens?) pedalis, dichotome divisus, ramis fructiferis elongatis flexuosis.

*Folia* undique inserta, sparsa, erecta, imbricata, nitida, viridia, rigida, exacte subulata, paululum curvata, siccitate etiam, medio vix nervosa, margine omnino integerrima.

*Capsula* numerosissimæ, in partem superiorem caulis, majusculæ, axillares, sessiles, solitariæ ad basin cujusque folii, flavæ, reniformes, basi profunde emarginatæ, bivalves. *Granule* vel *Semina* quaternatim conjuncta, demum libera, subangulata, flavæ.

Fig. 1. Folium. f. 2. 3. Folia cum capsulis. f. 4. Semina:—*magn. auct.*

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We have already stated under *L. pulcherrimum* how the present is to be distinguished from that species. We may here add that this is a much larger plant, and that the capsules have a much deeper sinus beneath.



*Lycopodium quictoides.*

## LYCOPODIUM GNIDIoidES.

LYCOPODINÆ. Swartz., Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *LYCOPODIUM*, Linn. *Capsulæ* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. *Br.*

*LYCOPODIUM gnidioides*; caule dichotome ramoso foliis subsexfariam imbricatis lineari-oblongis canaliculatis acutis, nervo ad apicem excurrente, capsulis in axillis foliorum acutiorum terminalium.

*Lycopodium gnidioides*. Linn. *Suppl.* p. 148. Swartz. *Syn. Fil.* p. 174. Willd. *Sp. Pl.* v. 5. p. 47. Spreng. *Syst. Veg.* v. 4. p. 20. Smith in *Rees Cycl.*

*Lycopodium funiculosum*. Lam. *Encycl.* v. 3. p. 649.

"*Lycopodium flagelliforme*. Schrad." (*vide Spreng.*)

*Lycopodium pinifolium*. Kaulf. *Enum. Fl.* p. 7.

HAB. In Insula Mauritiæ. Commerson? In Capite Bonæ Spei. (Willd.) Villet.

*Radix* densissime cæspitosa, fibrosa, fibris ramosis valde intricatis.

*Caulis* spithamæus, fere ad pedalem, flexuosus, repetitum dichotomus, ubique foliosus.

*Folia* subsexfariam disposita, erecta, imbricata, semiunciam longa, vix lineam lata, lineari-oblonga, nitida, canaliculata integerrima acutiuscula, nervo obscuro intus elevato, dorso depresso, ad apicem attingente instructa:—*suprema* (capsulifera) breviora, latiora, acutiora, spicam referentia.

*Capsulæ* in axillis foliorum supremorum sessiles, reniformes; bivalves, flavæ, granulis sphericis repletæ. Hæc *granulæ* vel *sporulæ* nunc videntur ternatim compositæ.

Fig. 1. Folium. f. 2. Folium cum capsula. f. 3. Sporulæ:—*magn. auct.*

It is difficult to say whether this *Lycopodium* should be arranged among those species which have a spicate fructification, or those whose capsules are simply placed in the axils of the leaves. The uppermost leaves, which mostly contain the capsules, are shorter and broader than the rest, and collectively form a terminal sessile *spike*; but by no means so distinct as in many species of the genus. Some authors have considered the fructification to be spicate, and others axillary; and hence botanists have differed about the species, which in reality is, in other respects, a very distinctly marked one, and very aptly named, from its resemblance to some individuals of the genus *Gnidia* or to *Daphne gnidioides*.

Our specimens were communicated from the Cape of Good Hope by M. Villet, who has sent us many excellent plants from that rich botanical country.



*Zonoc elliptica*



## DANÆA ELLIPTICA.

FILICES.—MARATTIÆÆ. Bory. MARATTIACEÆ. Kaulf. POROPTERIDES. Willd.

GEN. CHAR. *DANÆA*, Sm. *Sori* lineares, dorsales, transversi, paralleli. *Capsulae* in series geminatas arcte connatae, superne poro dehiscentes. *Indusium* superficialium soros cingens. (Asplenii Sp. Linn.)

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*DANÆA elliptica*; fronde pinnata, rachi nodosa vix alata, pinnis breviter petiolatis elliptico-oblongis acuminatis subintegerrimis basi oblique acutis, fertilibus oblongo-lanceolatis.

*Danæa elliptica*. *Smith in Rees' Cycl.*

Filix major, &c. *Sloane's Jamaica, t. 41. f. 1.*

HAB. India Occidentali. Jamaica. *Sloane. Smith. Insula Sancti Vincentii. Rev. J. Guilding.*  
*Stipes* vix pedalis, dorso convexus, facie superna canaliculatus, infra frondem nodosus, pubescens, demum glaber.  
*Frondes* pedales et ultra, erectae, circumscriptione ovatae, pinnatae, pinnis inferioribus exacte oppositis, superioribus nunc subalternis: *plante sterilis* semipedalibus, duas uncias latis, elliptico-oblongis, acuminatis, subundulato-crenatis, sed vix serratis, basi inaequaliter acutis, in petiolum brevem attenuatis, glabris, opacis, luride viridibus, subtus pallidioribus, costatis, costa subtus hic et illic fasciculato-pubescentibus, parallelo-venosis, venis numerosis transversalibus basi furcatis. *Rachis* ad insertionem pinnarum nodosa. *Planta fertilis, pinnae* oblongo-lanceolatae, sterilibus minores, basi apiceque acutae.

*Fructificatio* omnino ut in *D. alata* (Tab. XVIII.).

Fig. 1. Sorus. f. 2. Semina:—*magn. auct.*

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Our friend Mr. Guilding, who seems to live surrounded by the noblest of the tropical Ferns, marked this fine species of *Danæa* as distinct both from *D. alata* and *D. nodosa*. With the latter, indeed, there is no danger of its being confounded; and Sir James Smith, who certainly appears to have had the same plant in view, in describing his *D. elliptica*, well observes, that the greater breadth of the pinnae and their being acute, not cordate, at the base, will afford the distinguishing characters. This greater proportionate breadth exists in the fertile as well as the barren pinnae, and even in the fronds, so as to give a character to the plant at first view. Sloane's figure is very characteristic for the barren frond.

*Liana Mucosa.*

## DANÆA NODOSA.

FILICES.—MARATTIÆ. Bory. MARATTIACÆ. Kauf. POROPTERIDES. Willd.

GEN. CHAR. *DANÆA*, Sm. *Sori* lineares, dorsales, transversi, paralleli. *Capsulæ* in series geminatas arcte connatæ, superne poro dehiscentes. *Indusium* superficialium soros cingens. (Asplenii Sp. Linn.)

*DANÆA nodosa*; fronde pinnata, rachi nuda nodosa, pinnis breviter petiolatis lineari-ellipticis apice acuminatis subintegerrimis basi acutis, fertilibus lineari-lanceolatis.

*Danæa nodosa*. *Smith, Tracts. p.* 260. *Swartz. Syn. Fil. p.* 167. *Willd. Sp. Pl. v.* 5. *p.* 68. (excl. syn. Sloanii.) *Spreng. Syst. Veget. v.* 4. *p.* 24.

*Asplenium nodosum*. *Linn. Sp. Pl. p.* 1539.

*Asplenium simplex* assurgens, foliis longis oppositis, caule geniculato, lincis fructificationum serie contigua. *Browne Jam. p.* 93.

*Lingua cervina nodosa major*. *Plum. Fil. p.* 90. *t.* 108.

HAB. In locis umbrosis humidis Jamaicæ, Hispaniolæ, Martinicæ, et ad Caraccas. (*Willd.*)

In Insula Sancti Vincentii. *Rev. L. Guilding.*

*Stipes* bipedalis et ultra, 4—6 lineas latus, erectus, dorso convexo, facie superna canaliculata, squamulis minutis fuscis hic et illic tectus.

*Frons* bi-tripedalis, circumscriptione oblonga, pinnata, rachi ad insertionem pinnarum nodosa, dorso convexa, facie superna plana, marginata.

*Pinnæ* numerosæ, 15-pares cum impari, oppositæ, 8-pollicares, patentes, lineari-ellipticæ, supra medium parum latiores, apice acuminatæ, subintegerrimæ, basi acute, in petiolum brevem attenuatæ: *Substantia* rigida, subcoriacea: *Costa* subtus squamulosa: *Nervæ* parallelæ, transversales, numerosissimæ, ad basin sæpe furcatæ. *Color* pallide viridis, nitidus. *Pinnæ* fertiles, sterilibus minores, lineari-lanceolate, basi acutæ, apice subacuminatæ.

*Fructificatio* ut in *D. elliptica* et *D. alata* jamdudum descriptæ.

Fig. 1. Apex frondis sterilis. f. 2. Apex frondis fertilis. f. 3. Pinna cum rachi inferiore frondis sterilis. f. 4. Pinna inferior frondis fertilis. f. 5. Sorus. f. 6. Semina:—*magn. auct.*

Willdenow was only acquainted with the fructified state of the frond: but it is in the sterile fronds that the most striking differences are found to exist between this species and *D. alata* and *D. elliptica*. Some of the fronds which Mr. Guilding has sent us, including the stipes, measure not less than six feet in height, and almost a foot and a half in diameter in the widest part. The pinnæ are remarkable for their pale colour, their shining surface, and rigid texture. In drying, the knots at the insertion of the leaves, probably, in a certain degree, disappear, for they are by no means so visible in our specimens as in Plumier's figure.





*Grammitis involuta*

## GRAMMITIS INVOLUTA.

FILICES.—CYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *GRAMMITIS*, Sw. *Sori* oblongi, lineares, recti, sparsi. *Indusia* nulla. Willd.

*GRAMMITIS involuta*; breviter stipitata, fronde simplici lanceolata coriacea basi apiceque valde attenuata margine integerrima (siccitate involuta), soris obliquis prominentibus, capsulis pilis articulatis immixtis.

*Grammitis involuta*. Don *Prodr. Fl. Nepal.* p. 14. Spreng. *Syst. Veget.* v. 4. p. 41.

"*Scolopendrium revolutum*. Hamilton MSS."

*Grammitis*? *plantaginea*. Wallich MSS. in *Herb. nostr.*

*Grammitis*? *flavescens*. Wallich MSS. in *Herb. nostr.*

HAB. IN NEPALIA. Hamilton. Wallich.

*Radix* fibrosa, fibris ramosis, nigris, tomento ferrugineo dense obsitis.

*Caudex*, ut videtur, repens, crassus, squamis majusculis, imbricatis, ovatis, acuminatis, reticulatis, integerrimis tectus.

*Stipes* vix unciam longus, hinc sulcatus, dorso convexus, duas lineas latus, nudus.

*Frons* omnino glabra, subpedalis, lanceolata, valde acuminata, inferne in stipitem sensim attenuata, coriacea, costata, costa subtus prominente, enervis, margine tenui integerrimo, siccitate involuto.

*Sori* numerosi, unciam ad duas aut tres uncias longi, obliqui, paralleli, insigniter prominentes, fere semicylindrici, utrinque obtusi.

*Capsulae* pedicellatae, exacte sphaericae, flavescentes, annulo lato, fusco, fere integro cinctae. Inter has capsulas *pili* numerosi, articulati, pellucidi, iis longiores.

*Semina* oblonga, subangulata, pellucida.

Fig. 1. Capsulae. f. 2. Semina. f. 3. Pili e soris:—*magn. auct.*

We cannot say whether in a living state the margin of this Fern is involute: to us it appears to be the effect of drying, as we know to be equally the case in the *Polypodium pertusum*. There is too, on the surface of the present plant, as seen in the herbarium, a rugose or wrinkled appearance, the consequence of the drying and shrinking of the parenchymatous substance beneath the epidermis.

Our plants were gathered by Dr. Wallich in Nepal, and were sent to us with the name of *Grammitis*? *plantaginea*; whilst Dr. Hamilton seems previously to have given the MSS. specific name of *involutum*, which is adopted by Mr. Don. Again, we have received specimens from the Honourable the East India Company, bearing the name "*Grammitis flavescens*. Wall."



*Schizoa trilobata*

## SCHIZÆA TRILATERALIS.

FILICES.—OSMUNDACEÆ. *Br.*, *Kaulf.* SCHISMATOPTERIDES. *Willd.*GLEICHENIÆÆ. *Spreng.*

GEN. CHAR. *SCHIZÆA*, Sm. *Capsulæ* ovales, sessiles, apice radiatim striato, basi insertæ, in appendice divisa terminali frondis dorsales. *Indusium* e marginibus inflexis appendicis continuum, intus liberum. *Br.*

*SCHIZÆA trilateralis*; frondibus simplicissimis lineari-triquetris, appendicibus (6—10) linearibus digitatis falcato-secundis intus crinitis.

*Schizæa trilateralis.* *Schkuhr Fil. p. 137. t. 136. Spreng. Syst. Veget. v. 4. p. 30.*

*Schizæa incurvata.* *Meyer Fl. Esseq. p. 291. (excl. syn. Schkuhrii.)*

HAB. Locis udis Americæ Meridionalis; Esscquebo. *Schkuhr. Meyer. Demerara. Parker.*

*Radix* e fibris plurimis, subsimplicibus, ferrugineo-pilosis.

*Caudex*, ut videtur, repens, squamis fuscis, subulatis, nitidissimis dense obsitus.

*Fronde*s plurimæ ex eadem caudice, cæspitose, erectæ, pedales et ultra, basi teretes, fuscæ, scabriusculæ, superne compresso-triquetra, angulis acutis, viridi-fuscæ, glaberrimæ, lineam latæ, versus apicem attenuatæ.

*Appendices fructificantes* terminales, fasciculato-digitatæ, per pariam approximatae, sesquiuales ad biunciales, sex ad decem, lineares, primum virides, demum ferrugineo-fuscescentes, falcato-secundæ, acutæ, costatæ, dorso convexæ, vel semiteretes, intus canaliculatæ, capsuliferæ, atque medio (marginæque rarissime) paleis lineari-clavatis, flexuosis, intense fulvis, capsulis longioribus, crinitæ.

*Capsulæ* in series quatuor dispositæ, parvæ, intense fuscæ, laxè reticulatæ, vertice striatæ, longitudinaliter desiccantes.

*Semina* minutissima, oblonga, alba.

Fig. 1. Portio frondis cum appendicibus fructificantibus, ex sicco. f. 2. Portio appendicis, cum capsulis paleisque.

f. 3. Capsulæ. f. 4. Semina. f. 5. Setæ vel palcæ:—*magn. auct.*

We are indebted for the superb specimens of this truly elegant Fern to our excellent friend C. S. Parker, Esq. of Liverpool, who gathered them in Demerara in 1824. The same plant had been previously found in the neighbouring district of the Esscquebo in Dutch Guiana, and we believe no where else.

It certainly bears a very close affinity with the *Schizæa digitata* of the East Indies (the *Schizæa marginata* of *Wall. MSS.*): but that has broader, more compressed, almost winged fronds, and the capsules are not intermixed with the curious chaffy hairs which are so conspicuous in this species.



*Lycopodium dichotomum*

## LYGODIUM DICHOTOMUM.

FILICES.—OSMUNDACEÆ. *Br.*, *Kaulf.* SCHISMATOPTERIDES. *Willd.*GLEICHENIÆÆ. *Spreng.*

GEN. CHAR. *LYGODIUM*, Sw. *HYDROGLOSSUM*, Willd. *Capsula* sessiles, ovatæ, medio insertæ, apice radiatim striato: in spiculis (simplicibus e margine pinnæ, v. dichotomis in fronde mutata), dorsales, biseriatae. *Involucrum*: *Squamæ* capsulas distinguentes, e venis spiculæ ortæ, supra liberæ.

*Stipes volubilis*. Frondes *conjugatae, divisa v. compositæ*. *Br.*

*LYGODIUM dichotomum*; frondibus conjugatis dichotomis foliolis bi-tripartitis, laciniis sterilibus lanceolatis, fertilibus linearibus attenuatis, omnibus acutissimis integerrimis.

*Lygodium dichotomum*. *Swartz. Syn. Fil. p. 154. Spreng. Syst. Veget. v. 4. p. 29.*

*Hydroglossum dichotomum*. *Willd. Sp. Pl. v. 5. p. 82.*

*Ugena dichotoma*. "*Cav. Ic. v. 6. p. 74. t. 594. f. 2.*"

HAB. In Insulis Marianis et Philippinis. *Cav. Swartz.* In Insula Pulo Penang, seu "Prince of Wales's Island," dicta. (*D. Sabine.*)

*Stipes* longissimus, volubilis, teres, flavo-fuscus, subnitidus, glaber, tactu scabriusculus.

*Frondes* glabræ, geminatæ seu basi conjugatæ, petiolatæ. *Petiolus* duas ad tres uncias longus, basi incrassatus; superne subalatus, dichotomus, et, ita, bi-foliolatus, *foliolis* profunde bi-tripartitis, basi in petiolum brevem, subalatum attenuatis, lobis *sterilibus* duas ad tres uncias longis, lineari-lanceolatis, acutissimis, etiam subapiculatis, apiculo hirsuto, fertilibus duplo triplove longioribus, linearibus, valde attenuatis, omnibus integerrimis, costatis, furcato-parallelo-venosis, subnitidis.

*Spicæ* numerosæ, parvæ, ad marginem loborum, venas terminantes, e squamis subdecem subtus imbricatis, facie superiore coadunatis, valde concavis, singula capsulam unicam includente.

*Capsula* ovatæ, pulcherrime reticulatæ, vertice radiatim striatæ.

*Semina* parva, triangularia, pellucida.

Fig. 1. Spica, a dorso visa. f. 2. Spica junior subtus visa. f. 3. Eadem magis matura. f. 4. Capsula (læsione, ut videtur, rupta). f. 5. Capsula integra:—*magn. auct.*

We regret that our not being able to have access to *Cavanilles's Icones* prevents us from determining, by his figure, what we can now only conjecture from his descriptive character; namely, that this is the *Ugena dichotoma* of that author. It is said by Willdenow to be similar to the *Ugena macrostachya* of the same writer (*Lygodium longifolium* of Swartz); and our plant, we must confess, also comes very near to the *L. circinatum* of Authors, figured in *Rumph. Amb. t. 33*. Indeed, were the pairs of barren leaflets in our figure united by the membranaceous portion at their base (which is almost the case in some of our specimens), we should then have a plant perfectly corresponding with the figure of Rumphius, in which the fertile leaflets are actually compound. May not the three species therefore which we have just mentioned, be considered as mere varieties of each other? They are all inhabitants of the islands of the Indian Ocean; and, on account of their beauty, are employed by the natives of Amboyna for adorning the entrances of their houses on marriage festivals, whilst the larger stems are made into cordage for the purpose of binding different utensils.



*Polypodium Scouleri*



**POLYPODIUM SCOULERI.**

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *POLYPODIUM*, Swartz. Sori subrotundi (seriati, sparsi, v. conferti). *Involucrum* nullum. Br.

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*POLYPODIUM Scouleri*; fronde coriacea profunde pinnatifida, lobis subquinis oblongis obtusissimis obscure crenatis basi sublobulatis, terminali majore sorifera, soris approximatis biserialibus.

HAB. Prope flumen Columbiam, in plaga occidentali Americæ Septentrionalis. D. Scouler.

*Caudex* repens, squamoso-setaceus, squamis subulatis, fuscis.

*Stipes* uncialis, erectus, nudus, dorso semicylindræo, superne canaliculatus.

*Frons*, circumscriptione late ovata, profunde pinnatifida, coriacea, lobis plerumque quinque oblongis, obtusissimis, obscure crenatis, costatis, subnervosis, glaberrimis, basi sublobulatis, lateralibus sesquiuncialibus, terminali majori, biunciali et ultra, sorifero.

*Rachis* fusca, glabra.

*Sori* in duas lineas arcte dispositi, fuscii, rotundati, prope costam vel rachin inserti.

*Capsule* subrotundæ, fuscæ, longissime stipitatæ, stipite articulado.

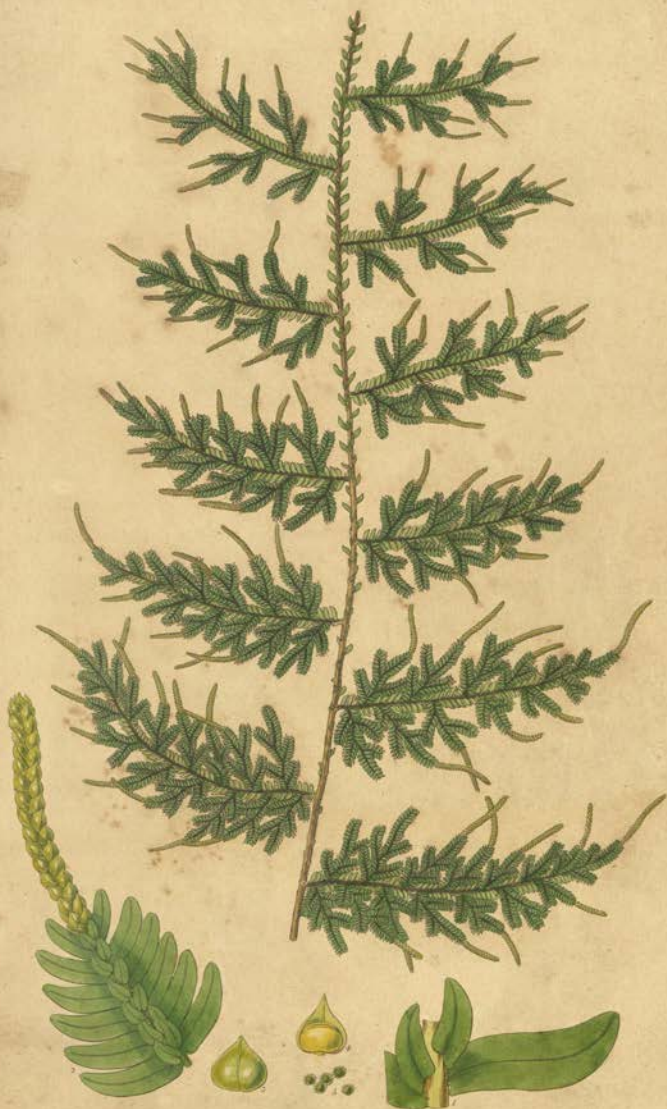
*Semina* oblonga, vel subreniformia, sub summa lente reticulata, flava.

Fig. 1. Capsule cum stipitibus. f. 2. Semina:—*magn. auct.*

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Among the interesting collection of plants which Dr. Scouler has recently brought from the North-West coast of America is the present very distinct species of Fern. It may perhaps rank next to *Polypodium vulgare*, but is distinguished from that, as from every other of the same division, by the small number of lobes, their relative breadth and length, their bluntness, and the large terminal one with its distinct and prominent spots of fructification.





*Lycopodium Willdenowii*

LYCOPODIUM WILLENOVII.

LYCOPODINEÆ. Swartz., Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *LYCOPODIUM*, Linn. *Capsule* uniloculares, axillares, sessiles; *aliæ* bivalves, farina repletæ; *aliæ* 2—3-valves, corpusculis 1—6, globosis. Br.

*LYCOPODIUM Willdenovii*; foliis bifariis horizontalibus oblongis subfalcatis costatis integerrimis, stipulis multoties minoribus subconformibus, spicis terminalibus elongatis, squamis lato-cordatis integerrimis uninerviis.

*Lycopodium Willdenovii*. "Desvaux."

*Lycopodium lævigatum*. Willd. *Sp. Pl.* v. 4. p. 45.

HAB. In India Orientali. Willd. Ex insula "Prince of Wales's Island" dicta, communicavit D. Sabine.

*Caulis* "scandens," filiformis, gracilis, sulcatus, subpaucifolius; *rami* distichi remoti bipinnatim divisi, ramulis subarcte insertis, foliosis.

*Folia* bifaria, disticha, horizontalia, plana, oblonga, subfalcata, obtusa, integerrima, costa medio percurrente fere ad apicem attingente.

*Stipula* cum foliis alternantes et iis subconformes, sed quintuplo minores, erectæ, appressæ.

*Spicæ* ad apices ramulorum, solitariae, vix unciam longæ, filiformes, flavæ. *Squamæ* quadrifariam imbricatæ, erecto-patentes, late ovato-cordatæ, acutæ, integerrimæ, concavæ.

*Capsule* axillares, solitariae, majusculæ, reniformes, bivalves, granulis vel seminibus minutis, sphericis, marginatis repletæ.

Fig. 1. Caulis portio, cum folio stipulisque. f. 2. Apex ramuli spica terminatus. f. 3. Squama spicæ a dorso visa. f. 4. Squama intus visa, cum capsula. f. 5. Granulæ vel Semina:—*magn. auct.*

We have no authentic specimen of Willdenow's *L. lævigatum*; but that author's description so well accords with this plant, that we have no hesitation in considering it to be that species. Lamarck had, however, previously given the name of *lævigatum* to a very different *Lycopodium*; and hence Desvaux has changed the name to *L. Willdenovii*. In habit it is nearly allied to the *Stachyogynandrum scandens*, figured by Palisot de Beauvois in his *Fl. d'Oware et de Benin*; but that plant has serrated leaves, whereas here both the leaves and stipules are quite entire.



*Blechnum alpinum*

## GLEICHENIA ALPINA.

FILICES.—GLEICHENIA. *Br.*, *Kauf.* SCHISMATOPTERIDES. *Willd.*

GEN. CHAR. *GLEICHENIA*. *Capsule* annulo completo striato subsessile, in soris rotundatis dorsalibus sæpius definita. *Indusium* nullum. *Fronde*s dichotomæ vel furcatæ.

*GLEICHENIA alpina*; frondibus dichotomis proliferis, ramis pinnatis, pinnis pinnatifidis, lobis orbiculatis subtus fornicatis; adultis denudatis, rachi communi tomentosa, partialibus squamosis. *Br.* *Gleichenia alpina*. *Br. Prod.* p. 161. *Spreng. Syst. Veget.* v. 4. p. 26.

HAB. In Insula Van Diemen (*D. R. Brown*); ubi in cacumine montis, "Wellington" dictæ, legit *D. Fraser*.

*Stipes* erectus, semicylindricus, flexuosus, 5- vel 6-pollicaris, inferne nudus, superne magis minusve tomentosus.

*Fronde*s cæspitose, circumscriptione subdeltoideæ, primum, ut videtur, dichotomæ, demum innovationibus e centro dichotomiarum ortis ramis pinnatis compositæ. Hi *rami* iterum pinnati, pinnis pinnatifidis, linearibus, viridibus, glabris, nitidis; *lobis* orbiculatis, approximatis, subtus insigniter fornicatis. *Rachis* communis tomentosa, subsquamosa, partialibus ramisque novellis insigniter paleaceo-squamosis, squamis subpeltatis pulcherrime reticulatis fimbriatisque, fuscis.

*Capsule* plerumque binæ, in singulo lobo, pilis articulatis immixtæ, orbiculari-hemisphericæ, oblique annulatæ, annulo dilatato completo.

Fig. 1. Pinna a dorso visa. f. 2. Pinna subtus visa. f. 3. Portio pinnæ fructiferæ. f. 4. Sectio transversalis lobi et rachis. f. 5. Capsula pilis immersa. f. 6. Squamula:—*magn. auct.*

The dichotomous ramification of this plant is scarcely observable, except in the young shoots; for it is remarkably proliferous; and, the young shoots originating from the centre of the dichotomies, the old branches then become pinnated in an opposite manner. In a young state too, we may observe, the whole plant is covered with a dense tomentum as well as with brown scales; but in age both disappear, except on the under side of the rachis of the ultimate pinnae. So closely are the lobes of the pinnae placed, and so remarkably convex on the upper side, that each pinna seems to be formed by two beaded lines. The deep concavity of the under surface is scarcely less remarkable, and can only be accurately seen when the scales of the rachis are removed; and if a transverse section be made through the rachis and lobes, the appearance is as if the lobes were jointed upon that rachis: indeed the whole structure of the plant is highly curious, and quite different from that of any Fern we are acquainted with. The substance of the fronds is remarkably thick, rigid, and coriaceous; and these are said by Mr. Fraser (to whom we are indebted for our specimens) to form large masses or beds on the summit of Mount Wellington.



*Aspidium chlorophyllum*

W. G. Smith del.

W. G. Smith sculp.

**ASPIDIUM RHIZOPHYLLUM.**

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES VERÆ. *Willd.*

GEN. CHAR. *ASPIDIUM*, *Br.* *HYPOPELTIS*, *Mich.* *ASPIDIUM species*, *Sw., Willd.*  
*Sori* rotundi dorsales. *Involucrum* orbiculare, peltatum, stipitatum, in medio sori insertum,  
 undique liberum. *Br.*

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*ASPIDIUM rhizophyllum*; frondibus pinnatis hirsutis decumbentibus, pinnis subovalibus terminali  
 longissime caudata radicante.

*Aspidium rhizophyllum.* *Sw. Syn. Fil. p. 44.* *Willd. Sp. Pl. v. 2. p. 219.* *Spreng. Syst. Veget.*  
*v. 4. p. 100.*

*Polypodium rhizophyllum.* *Sw. Prod. p. 132.* *Sw. Fil. Ind. Occ. p. 1657.*

HAB. In umbrosis montosis Jamaicae australis.

*Radix* fibrosa, fibris tenuibus, ramosis, fuscis, submentosis.

*Fronde* subcaespitosæ, digitales et ultra, lanceolato-acuminatæ, pinnatæ, pilis brevibus fuscis undique obsitæ.

*Stipes* brevis, vix duas uncias longus, gracilis, fuscus, nitidus, paleaceo-squamosus; *rachis* gracilis, hirta.

*Pinnæ* suboppositæ, semiunciam longæ, parum remotæ, oblongæ, obtusæ, subintegerrimæ, basi oblique cuneatæ,  
 terminali longissima, basi pinnatifida, lobis obtusis apice caudato—radicante, prolifera.

*Sori* sparsi in pinnam terminalem, in serie longitudinali prope costam inserti, rotundati.

*Involucrum* orbiculare, peltatum, umbilicatum.

*Capsulæ* numerosissimæ, in singulo soro pedicellatæ, fuscæ, annulo latiusculo fere completo cinctæ.

*Semina* fusca, margine tuberculato, pellucida.

Fig. 1. Portio pinnæ fructificantis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

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This interesting and very distinct species of *Aspidium* appears to be confined to the island of Jamaica. The specimens here figured were gathered by Mr. Wiles in that country, and presented to us by A. B. Lambert, Esq.



*Hymenophyllum dilatatum.*

W. G. S. 1827

1827

## HYMENOPHYLLUM DILATATUM.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *HYMENOPHYLLUM*, Sm. *Sori* marginales. *Capsula* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. Br.

*HYMENOPHYLLUM dilatatum*; glabrum, frondibus bi-tripinnatifidis, pinnis ovatis dichotome divisis decurrentibus, laciniis linearibus obtusis integerrimis, involucris orbicularibus inflatis, stipite superne rachique alatis.

*Hymenophyllum dilatatum*. Swartz. *Syn. Fil.* p. 149 et 373. Schkuhr. *Fil.* p. 131. t. 135.

Willd. *Sp. Pl.* v. 5. p. 533. Spreng. *Syst. Veg.* v. 4. p. 132.

*Trichomanes dilatatum*. "Forst. *Prodr.*"

HAB. In Insulis Maris Pacifici. Forster. In Nova Zealandia. D. Menzies. Brazil? (Sprengel.)

*Caudex* repens, horizontalis, gracilis, fuscus; lævis hic et illic radicans.

*Stipes* digitalis, erectus, glaber, basi teres, superne subalata.

*Frons*, circumscriptione oblongo-ovata, omnino glabra, pinnata, pinnis ovatis subattenuatis, basi in rachin alatum decurrentibus, bipinnatifidis, laciniis subdichotomis, linearibus, costatis, obtusis, integerrimis, terminali longiore; *Substantia* membranacea, sub summo lente minutissime reticulata, siccitate fusca, costa prominente, pallida.

*Sori* in laciniis terminales versus apicem frondis.

*Involucra* orbicularia, pallide fusca, bivalvia, valvis hemisphaericis integerrimis.

*Receptaculum* inclusum, clavatum.

*Capsula* peltatæ, sessiles, pulcherrime reticulatæ, annulo completo dilatato cinctæ.

*Semina* subangulata, flavescencia.

Fig. 1. Lacinia cum soro. f. 2. Portio frondis. f. 3. Involucrum apertum cum receptaculo capsularum.

f. 4. Capsula. f. 5. Semina:—*magn. auct.*

We know not upon what authority Sprengel considers this to be a native of Brazil. The specimens here figured were gathered by Mr. Menzies in New Zealand. It was originally discovered during the first voyage of Captain Cook, by John Reynold Forster.





*Acrostichum viscosum.*



## ACROSTICHUM VISCOSUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd.

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Indusium* nullum (nisi squamulæ, v. setæ in quibusdam capsulis interstinctæ). Br.

*ACROSTICHUM viscosum*; squamoso-hirsutum, subviscidum, frondibus lineari-lanceolatis acuminatis, basi in stipitem longiusculum squamosum attenuatis; fertilibus linearibus.

*Acrostichum viscosum*. Swartz. *Syn. Fil.* p. 10 et 193. Willd. *Sp. Pl.* v. 5. p. 103. Spreng. *Syst. Veget.* v. 4. p. 33.

*Acrostichum petiolatum*. Swartz. *Fl. Ind. Occ.* p. 1588.

*Acrostichum salicifolium*. Willd. *Herb. Kaulf. Enum. Fil.* p. 58. Sieber. *Syn. Fil.* n. 28. Spreng. *Syst. Veget.* v. 4. p. 33.

HAB. In truncos muscis repletos in montibus altis Jamaica; et in India Orientali. Swartz.

Insula Mauritiï. Sieber. Bojer. Borboniæ. Desfontaines. Insula Sancti Vincentii Indiæ Occidentalis. Rev. L. Guilding.

*Caudex* reyens, crassiusculus, dense fusco-squamosus, fibrosus, fibris numerosis, filiformibus, flexuosis, ramosis.

*Stipites* plurimi ex eodem caudice, subcongesti, graciles, castanei, hinc sulcati, inferne nigri, nitidi, squamis minutis lanceolatis, membranaceis, reticulatis, spinoso-ciliatis obsiti, demum nudi; *sterilium* duas ad tres uncias longi; *fertilium* duplo triplove longiores.

*Frondes* sex ad octo uncias longæ, erectæ, nunc subfalcatæ, coriaceo-membranacæ, lineari-lanceolatæ, basi apiceque attenuatæ, integerrimæ, utrinque, statu juniore præcipue, squamuloso-viscidæ, squamis minutissimis membranaceis reticulatis, magis minusve profunde ciliatis: *costæ* distincta; *venæ* parallelæ plerumque furcatæ: *frondes fertiles* lineares, sterilibus plerumque longiores.

*Capsulæ* totam paginam inferiorem frondis tegentes, fuscæ, sphericæ, stipitatæ; annulo subcompleto cinctæ.

*Semina* flavo-fusca, limbo tuberculato.

Fig. 1. Capsulæ. f. 2. Semina. f. 3. Squama stipitis. f. 4. Squama frondis:—*magn. auct.*

We have scarcely less pleasure in figuring a species of Fern which has been involved in obscurity, than in making known one which is altogether new. In the present instance we have, from the Island of St. Vincent, given what we believe to be the true *Acrostichum viscosum* of Swartz and Willdenow, of which no representation has hitherto been published. We think, however, that too much stress must not be laid upon the viscid nature of the plant, nor upon the scales of the frond; both of which are liable to vary: and the latter in particular, we know almost entirely disappear with age, remaining on the midrib, and at the margin, and on the underside of the frond, the longest. The scales, too, vary in size and in the relative length of the cilæ, which sometimes give the appearance of mere stellated hairs to the scales. This kind abounds more on the upper surface of the frond of our specimens from the Mauritius, which can by no fixed character be distinguished from the species of the West Indies



*Grammitis furcata.*

GRAMMITIS FURCATA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. GRAMMITIS, Sw. Sori oblongi, lineares, recti, sparsi. Indusia nulla. Willd.

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GRAMMITIS *furcata*; fronde lineari glabra furcata, apice obtusa, stipite nullo, soris oblongis oblique parallelis.

HAB. Guiana. C. S. Parker.

*Radix* parva, cæspitosa, e fibris plurimis fuscis descendentibus.

*Frondes* plurimæ ex eadem radice, erectæ, lineares, quatuor ad quinque uncias longæ, duas lineas latæ, medium versus simpliciter furcatæ, margine integerrimæ, subsinuatæ, apicibus obtusis, inferne attenuatæ, sed *stipes* nullus. *Substantia* coriacea, medio costata, nervis simplicibus obscuris, oblique parallelis, sorigeris.

*Sori*, in laciniis furcarum, oblongi, tumidi, simplici serie, costa utrinque, dispositi.

*Capsulæ* intense fuscæ, annulo lato incompleto cinctæ, longe stipitate.

*Semina* subrotunda, flavescencia.

Fig. 1. Portio frondis, cum soris. f. 2. Sorus. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

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We possess only the single specimen of this distinctly marked species of *Grammitis*, which was brought from Demerara by our valued friend C. S. Parker, Esq. It has the forked habit of some species of *Tenitis*, especially of *T. furcata*, and the divided state of *T. graminifolia*; but the fructification is decidedly that of a *Grammitis*.



*Fernis*  $\frac{L}{7}$  *interrupta.*

TÆNITIS INTERRUPTA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. TÆNITIS, Sw. Sorus linearis, continuus, quandoque interruptus, longitudinalis, inter costam et marginem exteriorem frondis situs. Indusium nullum. Willd.

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TÆNITIS *interrupta*; fronde pinnata, pinnis lineari-ellipticis obtusiusculis, soris interruptis.

Tænitis linearis. Wall. MSS. (non Kaulf.)

HAB. In India Orientali. Wall.

Stipes quatuor ad sex uncias longus, erectus, flavo-fuscus, hinc canaliculatus, basi subsquamosus, intense fuscus.

Frons stipite brevior, circumscriptione late ovata, pinnata, pinnis alternis remotiusculis subpatentibus, lineari-ellipticis, parum coriaceis, obscure reticulatim venosis, costatis, integerrimis, apice obtusiusculis, basi acutis, brevissime petiolatis, terminali petiolo sublongiore.

Sori longitudinales, interrupti, prope marginem frondis inserti, involucri nullo.

Capsulæ sphericæ, annulo lato fere completo cinctæ, pedicellatæ. Capsulæ plurimæ abortivæ (f. 3.).

Fig. 1. Portio frondis, cum soro. f. 2. Capsulæ. f. 3. Pedicelli cum capsulis abortivis:—*magn. auct.*

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Received from the Honourable the Directors of the East India Company; but from what part of India is not mentioned. Its affinity is evidently with *T. blechnoides* Sw. (*T. pteridioides* of Schkuhr); but that is a vastly larger plant, with the pinnæ remarkably attenuated. Of that species Swartz observes that the capsules are mixed with articulated setæ, terminated by a tornlose rounded club. These are doubtless analogous to what we here consider pedicels with abortive capsules—capsules indeed reduced to a portion of the annulus, which is all that is formed of them.



*Hemicnitis cordata*

## HEMIONITIS CORDATA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd.

GEN. CHAR. *HEMIONITIS*, Kaulf. *HEMIONITIDIS pars*, Linn., Sw., Willd. *Capsula*  
venis reticulatis frondis insidentes. *Indusium* nullum. *Kaulf.*

*HEMIONITIS cordata*; frondibus sterilibus cordato-oblongis fertilibus sub-triangularibus, subtus stipitibusque paleaceo-hirsutis.

*Hemionitis cordata*. *Roxb. MSS.*

HAB. IND. ORIENT. *Roxburgh. D. Shuter.* Ad loca depressa prope Calcuttam, Ind. Orient.  
*Dr. Wallich.*

*Radix* cæspitosa, e fibris numerosissimis, gracilibus, valde ramosis, fuscis.

*Stipites*, plurimi ex eadem radice, tres ad quatuor uncias longi, erecti, flexuosi, hinc canaliculati, atro-purpurei, nitidi, pilis membranaceis fuscis patentibus obsiti; *fertiles* reliquis duplo triplove longiores.

*Frondes* tres uncias longæ, fusco-virides, subcoriaceæ, obscure reticulatæ, costatæ, supra glabræ, subtus margine paleaceo-hirsutæ; *steriles* oblongo-cordatæ, obtusæ; *fertiles* magis triangulares, sinu lato, profundo.

*Capsulæ* numerosissimæ in venas reticulatas, areolis oblongis, demum confluentes.

*Semina* minutissima, fusca.

Fig. 1. Portio frondis venas capsulasque exhibens. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Desvaux first separated from the *Hemionitides* of Swartz and Willdenow the genus *Gymnogramma* (Tab. xxv.), and Kaulfuss, more recently, that of *Antrophyum* (see Tab. xlvii.); thus reducing *Hemionitis* to the single species *H. palmata*, which certainly had little or no natural affinity with its former associates. With that, however, our present plant entirely agrees, both in general habit and in essential characters. It was discovered many years ago by Dr. Roxburgh; and, in his unpublished Catalogue, is marked generally as an inhabitant of Bengal: and upon the ticket written by Dr. Wallich, which accompanied the specimens kindly communicated by the Honourable the Directors of the East India Company, it is described as flourishing in the rainy season in the neighbourhood of Calcutta. We find beautiful specimens of the same plant in a valuable botanical collection presented to us by the late excellent Dr. Shuter. These specimens, however, have the fronds more acute at the angles than is the case in our plant.





*Polypodium longifolium*

POLYPODIUM LONGIFRONS.

FILICES.—GYRATÆ. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES VERÆ. *Willd., Spreng.*

GEN. CHAR. *POLYPODIUM*, Sw. *Sori* subrotundi (seriati, sparsi v. conferti). *Involucrum* nullum. *Br.*

*POLYPODIUM longifrons*; stipite subnullo, frondibus lanceolatis acuminatis integerrimis membranaceis reticulatis tenuissime marginatis, basi longe attenuatis, soris ubique sparsis, caudice longissimo.

*Polypodium longifrons.* *Wall. MSS.*

*Polypodium normale?* *Don. Prodr. Fl. Nepal. p. 1.*

HAB. India Orientali. *Wall.* In Nepaliâ? *Hamilton.*

*Caudex* longissime repens, crassus, flexuosus, lignosus, hispido-squamosus, radiculosus, fibris filiformibus, ramosis, fusco-tomentosis.

*Stipes* subnullus, vel, si mavis, brevissimus, alatus, in frondem sensim superne dilatatus.

*Frondes*, plurimæ ex eodem caudice, ut videtur, pendentes, sesquipedales et ultra, lanceolatae, glabrae, membranaceae, subpellucidæ, reticulatæ, in areolis uniglandulosæ (fig. 1.), integerrimæ, margine subundulatæ, tenuiter incrassatæ, apice acuminatæ, inferne longe attenuatæ, costatæ; *costa* crassa, fusca.

*Sori* numerosi, hemisphærici, per totam inferiorem partem frondis sine ordine sparsi.

*Capsula* flavo-fuscæ, longe pedicellatæ.

*Semina* oblonga, subreniformia, pellucida vix colorata.

Fig. 1. Portio frondis, cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

For our knowledge of this fine species of *Polypodium* we are indebted to the Honourable the East India Company, from whom we have received it with the MS. name here adopted, but without any particular habitat being given. It is, however, probably from Nepal, and is perhaps the same as the *P. normale* of Mr. Don; but the character in the *Prodromus Floræ Nepalensis* of that author is too short to enable us to determine that point satisfactorily.



*Polypodium crinitum.*



## POLYPODIUM CRINITUM.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *POLYPODIUM*, Sw. *Sori* subrotundi, (seriati, sparsi v. conferti). *Involucrum* nullum. Br.

*POLYPODIUM crinitum*; fronde pinnata, pinnis lanceolatis pinnatifidis, lacinii oblongis obtusis sub-inequilateralibus integerrimis subtus costa nervisque subpubescentibus, stipite rachique setosis, soris minutis.

*Polypodium crinitum*. Poir. in *Encycl. Bot.* Spreng. *Syst. Veget.* v. 4. p. 57.

*Polypodium thelypteroides*? Desv. in *Berl. Mag.* 1811. p. 317. Spreng. *Syst. Veget.* v. 4. p. 56. (non Sieber, *Syn. Fil.* n. 50.)

*Polypodium fusco-setaceum*. Bojer. MSS.

HAB. In insula Mauritiæ: in montibus excelsis, locis umbrosis. Bojer.

*Caudex* subpalmaris, erectus, teres, hinc canaliculatus, nitidus, insigniter setosus, setis longis membranaceis, subulatis, fuscis.

*Rachis* etiam fusco-setaceus, versus apicem pubescens.

*Frons* pedalis, circumscriptione ovato-subpyramidalis, pinnata, pinnis plerumque oppositis, subhorizontalibus quadri- ad sex-pollicaribus, lanceolatis, breviter acuminatis, profunde pinnatifidis, fere omnino glabris, costa (setosa) nervisque pubescentibus, lacinii semiuunciam longis, paululum falcatis, obtusis, oblongis v. lineariblongis, inequilateralibus, basi subæqualibus versus apicem sensim minoribus, penninervis.

*Sori* biseriales, nervis ultimis seu venulis prope medium utrinque inserti, parvi.

*Capsula* sphaerico-subcompressæ, annulo crasso cinctæ, pedicellatæ.

*Semina* subreniformia, flavescens, pellucida.

Fig. 1. Pinnæ lacinia, a dorso visa, cum soris. f. 2. Capsulæ. f. 3. Semina:—magn. auct.

The difficulty of distinguishing many of the species of Fern by mere descriptions is, it must be acknowledged, very great. In looking simply at the short character of *P. thelypteroides* given by Desvaux above quoted, it is quite indicative of our present plant; but then he describes it afterwards as having "very few leaves (pinnæ), of two inches and a half in length, the frond only five inches long, and the stipes eight or nine inches in length:" in which respects, he tells us, it differs from the *P. crinitum* of Poir. Poir. description, again, perfectly agrees with our plant in every thing except in not having the sori inserted upon the extremities of the veins: they are evidently inserted near the middle.

Sieber's *P. thelypteroides* must not be confounded with our plant, similar as it is in the structure of its pinnæ; for it is pubescent on both sides, and the stipes, rachis, costa and nerves, are simply pubescent, quite destitute of setæ.



*Phacopsis perouana.*

## PLEOPELTIS PERCUSSA.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *PLEOPELTIS*, Humb. Sori subrotundi, sparsi. *Indusia* numerosa, peltata, squamæformia, subimbricata. Spreng.

*PLEOPELTIS percussa*; frondibus lanceolatis breviter stipitatis cuspidato-acuminatis margine integerrimis revolutis squamulosis, supra foveis a soris adversæ paginæ ortis instructis, soris solitariis pulvinatis, caudice repenti.

Polypodium percussum. "Cavan. *Prælect.* 1801. n. 594." Swartz. *Syn. Fil.* p. 27. Willd. *Sp. Pl.* v. 5. p. 151. Kaulf. *Enum. Fil.* p. 90. Langsd. et Fisch.  *Ic. Fil.* p. 8. t. 6. Spreng. *Syst. Veget.* v. 4. p. 47.

Polypodium avenium. Desv. in *Berl. Magaz.* 1811. p. 314. Desv. in *Journ. de Bot.* 1814. p. 259. t. 41.

Polypodium cuspidatum. "Presl." (fide Spr.)

HAB. In insulis Marjanis inque Para et insula Catharina, Brasiliæ. Willd. Apud Rio Janeiro. D<sup>a</sup> Maria Graham. Raddi.

*Caudex* repens, ramosus, flexuosus, arcte squamosus, crassitie pennæ corvinæ, hic illic fibroso-radiculosus.

*Stipes* duas ad tres uncias longus, subsquamosus.

*Frondes* spithamæ fere ad pedalem, erectæ, lanceolatæ, coriaceæ, virides, costatæ, oculo nudo omnino aveniæ, sub lente venis reticulatis notatæ, integerrimæ, minute squamulosæ, marginibus revolutis, apicibus longe cuspidato-acuminatis, basi in stipitem sensim attenuatæ: supra foveolatæ, foveis a soris in adversa facie positis. *Squamulæ* frondis minutæ, peltatæ, reticulatæ, margine dentatæ.

*Involucra* plurima in eodem soro, e squamulis peltatis dentatis.

*Sori*, pro ratione plantæ, magni, hemisphærici seriatim dispositi, solitarii.

*Capsulæ* numerosissimæ, longe pedicellatæ, sphericæ, annulatæ, fasciis annulorum rufis. Cum his capsulis pedicelli abortivi numerosi adsunt.

*Semina* oblonga, intense flava.

Fig. 1. Portio frondis, cum soris involucrisque. f. 2. Portio frondis cum soris vetustis. f. 3. Squamula. f. 4. Capsulæ. f. 5. Pedicelli abortivi. f. 6. Semina:—*magn. auct.*

No author appears to have noticed the scales which cover the younger state of the sori of this plant, constituting that kind of involucre which characterizes the genus *Pleopeltis* of Humboldt. Raddi states it to be an inhabitant of old walls in Brasil.



*Woodsia Pennsylvanica.*

## WOODSIA PERRINIANA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd., Spreng.*

GEN. CHAR. *WOODSIA*, Br. *Sori* dorsales, subrotundi. *Involucrum* calyciforme apertum laciniatum (margine crinitum *Br.*): includens *Capsulas* pedicellatas: receptaculo communi elevato nullo. *Br.* (paucis verbis mutatis.)

*WOODSIA perriniana*; minutissime glanduloso-pilosa, frondibus bipinnatis, pinnis ultimis pinnatifidis segmentis rotundatis bidentatis, soris submarginalibus, involucris subhemisphæricis demum laciniis patentibus dentatis, stipite subpaleaceo.

*Alsophila perriniana.* *Spreng. Syst. Veget. v. 4. p. 125.*

*Woodsia* sp. ? *Torrey MSS.*

HAB. Insula Sancti Thomæ. *Perrin.* In America Septentrionali. *Torrey* (prope Novam Eboracensem). *D. Barratt.*

*Radix?*

*Stipes* digitalis et ultra, glaber, nitidus, paleaceo-squamosus, paleis sparsis non raro deciduis.

*Frons*, circumscriptione lanceolata, ubique pilis minutissimis glandulosis subtus præcipue obsita, bipinnata, pinnis primariis deltoideo-lanceolatis, oppositis, remotiusculis, secundariis oblongis vel oblongo-lanceolatis, pinnatifidis, laciniis rotundatis bidentatis, vel inferioribus rarissime iterum subpinnatifidis, laciniis ultimis bidentatis.

*Color* pallide virens, *pinnarum rachi* glanduloso, *frondium* inferne paleaceo.

*Sori* submarginales, solitarii, in singula lacinia ad dichotomiam venarum insidentes.

*Involucrum* infra sorum insertum membranaceum album primum hemisphæricum capsulas involvens, sed vertice aperto, demum in laciniis inæquales, patentes, denticulatas delibescentes, laciniis subovatis, reticulatis, concavis.

*Capsulæ* sphericæ, breviter pedicellatæ, annulo incompleto.

*Receptaculum* commune nullum.

*Semina* oblongo-rotundata.

Fig. 1. Planta e D. Torrey. f. 2. Eadem e D. Barratt recepta:—*magn. nat.* f. 3. Portio pinnulæ, cum soris. f. 4. Sorus immaturus, involucro nondum expanso. f. 5. Sorus maturus. f. 6. Capsulæ. f. 7. Semina:—*magn. auct.*

We had the good fortune to receive from our valuable correspondent Dr. Torrey, of New York, an authentic specimen of the *Alsophila perriniana* of Sprengel, gathered in the island of St. Thomas, and specimens of a Fern gathered near New York, which upon comparison prove to belong to the same species. Afterwards Dr. Barratt sent it to us also from the United States.

Sprengel has in some degree altered the generic character of Mr. Brown's *Alsophila*, so as to include the present plant: but as the original species of *Alsophila* embrace a tribe of Ferns arborescent and quite different from our plant, as well in aspect as in generic character, we have considered it best to remove *A. perriniana* from that genus altogether.

It would be easy for us, seeing that it does not precisely accord with any described genus of the *Filices*, to have invented a new one. But as our design is rather by a series of well executed figures and descriptions to give a correct idea of the structure of the fructification of Ferns, which may be employed in future for the formation of genera, than too hastily to constitute new ones, we have preferred placing the present plant in the genus *Woodsia*. Its habit, we think, is sufficiently similar; and, except that the involucre is larger in proportion to the sorus, and that, in a young state, it covers more fully the capsules, and is not margined with hairs, there is not a difference even in the character of the fructification. And we are not without an idea, that had the learned Brown himself been acquainted with the present Fern, he might have framed the character so as to have included it also.





*Aspidium*

*Aspidium*

*Aspidium corymbosum*

H.B.K.

ASPIDIUM CARYOTIDEUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ASPIDIUM*, Br. *HYPOPELTIS*, Mich. *ASPIDIUM* species, Sw. *Sori* rotundi, dorsales. *Involucrum* orbiculare, peltatum, stipitatum, in medio sori insertum, undique liberum. Br.

*Aspidium caryotideum*; fronde pinnata glabra, pinnis sessilibus rhombico-lanceolatis valde acuminatis subfalcatis ciliato-serratis, infimis terminalique subtrilobis, intermediis basi superiore unidentato.

*Aspidium caryotideum*. Wall. MSS.

HAB. In India Orientali (Nepal?). Wallich.

*Caudex*, ut videtur, repens, squamosus, hic illic radiculosus.

*Stipes* pedalis et ultra, pallide fuscus, subteres, hinc sulcatus, basi parce paleacco-squamosus, superne nudus, glaber.

*Frons*, stipitis longitudine, circumscriptione oblongo-ovata, pinnata, *pinnis* remotis patentibus, inferioribus oppositis, reliquis alternis, sex pollicaribus, glabris, rhombico-lanceolatis, inaequalibus, longo acuminatis costatis, oblique venosis, venis, sub lente, reticulatis, marginibus tenuiter ciliato-serratis, basi cuneatis, brevissime petiolatis; *infimis* terminalique trilobis, lobis lateralibus brevioribus acuminatis, *intermediis* margine superiore versus basin dente unico instructo.

*Sori* in duas lines, inter venas laterales dispositi, parvi, rotundati.

*Involucrum* exacte orbiculatum, primum orbiculatum, centro depressum, demum, marginibus recurvis, umbilicatum, peltatum.

*Capsulae* subsphaericae, annulatae, pedicellatae, pedicello longissimo, articulo.

*Semina* minuta, sphaerica, marginata, margine tuberculato, flavo-viridia.

Fig. 1. *Aspidium caryotideum*,  $\frac{1}{2}$  diminutum. f. 2. Pinna:—*magn. nat.* f. 3. Portio frondis ut venae reticulatae videantur. f. 4. Sorus immaturus involucre tectus. f. 5. Sorus maturus, verticaliter sectus. f. 6. Capsulae. f. 7. Semina.

This is a very distinctly marked species of *Aspidium*, for which we are indebted to the Honourable the East India Company. The fronds, when seen through a good magnifying lens, present a very beautiful appearance, from the nature of the reticulation. Each areola has a branch of a vein, sometimes simple, sometimes forked, passing upwards, through the centre, but not reaching to the top. These veinlets, probably, though it is difficult to ascertain the fact, are what terminate in the sori.



*Nephrodium fragrans.*

## NEPHRODIUM FRAGRANS.

FILICES.—GYRATÆ. Br. POLYPODIACÆÆ. Kauf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *NEPHRODIUM*, Mich. *Sori* rotundi, dorsales. *Involucrum* reniforme, sinu affixum, marginibus liberis. Br.

*NEPHRODIUM fragrans*; frondibus bipinnatis, pinnulis oblongis obtusis pinnatifidis, segmentis subrotundatis eroso-crenatis, stipite rachique dense ferrugineo-paleaceis.

*Nephrodium fragrans*. Richardson in *App. to Frankl. Journ.* p. 753.

*Aspidium fragrans*. Swartz. *Syn. Fil.* p. 51. Willd. *Sp. Pl.* v. 5. p. 253. Hook. in Parry's *Second Voy. App.* p. . Spreng. *Syst. Veget.* v. 4. p. 105.

*Polypodium fragrans*. Linn. *Sp. Pl.* p. 1550. (excl. syn. *Hudsoni*.)

"*Dryopteris rubum idæum spirans*. *Ann. Ruth.* 251."

HAB. In Sibiria; Dahuria. Fischer. Kamtschatka. Chamisso. In regionibus arcticis et subarcticis Americæ Septentrionalis. Richardson. In insulis Americæ arcticæ. Parry.

*Caulis* brevis, crassus, lignosus, subrepens, radiculosus, frondes plurimas gerens.

*Stipes* unciam ad duas vel tres uncias longus, dense paleaceo-squamosus, squamis magnis, imbricatis, rufo-fuscis, membranaceis, pellucidis, integerrimis.

*Rachis* (universalis partialisque) subtus præcipue ferrugineo-squamosus, squamis densis, imbricatis.

*Erons*, circumscriptione lanceolata, palmaris fere ad spithamæam, bipinnata, pinnis primariis subarcte dispositis, sessilibus, cordato-lanceolatis, obtusis; pinnulis oblongis obtusis, pinnatifidis, segmentis subrotundis, eroso-crenatis. *Color* pulcherrime viridis, subtus pallidior.

*Sori* contigui, in singulo segmento pinnularum solitarii, majusculi.

*Involucrum* rotundato-reniforme, convexum.

*Capsula* breviter pedicellata, annulata.

*Semina* oblonga, pulcherrime flavo-fusca.

Fig. 1. Pinnula. f. 2. Eadem subtus visa, cum soris. f. 3. Sorus, Involucrumque. f. 4. Capsula. f. 5. Semina: —magn. auct.

Of this elegant and rare Northern species of Fern no figure has yet been published. The name is given from the fragrant scent of the species yielding an odour, even in the dried state, not unlike that of the common Primrose.

It is peculiarly an arctic plant; and our finest specimens, from which the accompanying figure is taken, are from the island of Igloolik, where they were gathered by Captain Parry.



*Asplenium ensiforme.*

A. HOOKER & G. VAUGHAN  
LONDON

J. Smith del.

## ASPLENIUM ENSIFORME.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ASPLENIUM*, LIND. Sori lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. Br.

*ASPLENIUM ensiforme*; fronde simplici lineari-lanceolata acuminata integerrima, basi in stipitem attenuata, soris costæ oblique parallelis, involucri denticulato reflexo.

*Asplenium ensiforme*. Wall. MSS.

*Asplenium Phyllitidis*. Don, Prodr. Fl. Nep. p. 7?

HAB. In arboribus Nepaliæ. Wallich.

*Radix* cæspitosa, e fibris numerosissimis, capillaribus, ramosis, nigro-fuscis.

*Frondes* plurimæ ex eadem radice, erectæ, magnitudine variantes, nunc 6—8 pollicares, nunc pedales sesqui-pedalesque, lineari-lanceolatæ, subcoriaceæ, margine integerrimæ, apice valde acuminatæ, inferne in stipitem bi-quadrunciam longam, sensim attenuatæ. *Stipes* fuscus, basi paleaceo-squamosus, squamis lanceolato-subulatis, intense fuscis. *Costa* frondis subtus prominens, nervis oblique parallelis, simplicibus furcatisve, obscuris.

*Sori* numerosi, frondis totum dorsum occupantes a basi fere ad apicem, costæ oblique paralleli, inferiores fere omnino paralleli, lineares.

*Involucrum* membranaceum, pallide fuscum, margine denticulatum, cito reflexum atque persistens.

*Capsulæ* numerosissimæ, sublonge pedicellatæ, intense fusce, annulo lato intense flavo.

*Semina* flavo-fusca, subovalia, nunc margine granulata.

Fig. 1. Portio frondis cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

We have received specimens of this very distinct *Asplenium* both from Dr. Wallich and the Honourable the Directors of the East India Company. It is probably Mr. Don's *A. Phyllitidis*; but we think ourselves bound to preserve the name given to the plant by its estimable discoverer, Dr. Wallich. There are but few species of the genus with entirely simple fronds; and those have all, except the present species, the sori arranged in a much more horizontal direction from the costa. Here they are in the lower part of the frond, at least, almost parallel with the midrib; and the rest form a very acute angle with it. Another remarkable character is, that the involucri (besides being denticulate), as soon as it opens, is reflected upon the frond, so as to expose the whole cluster of capsules; and it remains there even after the capsules are dispersed.



*Asplenium dentatum.*

ASPLENIUM DENTATUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *ASPLENIUM*, Linn. *Sori* lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. Br.

*ASPLENIUM dentatum*; fronde lineari-oblonga glabra pinnata, pinnis rhombo-ovatis dentatis crenatisque deorsum attenuatis integris.

*Asplenium dentatum*. Linn. *Sp. Pl.* p. 1540. Swartz. *Syn. Fil.* p. 80. Willd. *Sp. Pl.* v. 5. p. 324. Spreng. *Syst. Veget.* v. 4. p. 86.

*Trichomanes latifolium dentatum*. Plum. *Fil.* p. 58. t. 101. f. C.

HAB. In Jamaica. Swartz. Hispaniola. Plumier. Ex Insula Jamaicae communicaverunt D. Wiles et Bancroft.

*Radix* cæspitosa, fibrosa, fibris magis minusve longis, tortuosis, fuscis, plerumque hirsutis.

*Stipites* plurimi ex eadem radice, duas vel tres uncias longi, nonnunquam etiam palmates, fusco-virides, compressi, glabri, superne marginati.

*Frondes*, circumscriptione, oblongo-lineares, tri-quadrillicares et ultra, pinnate, pinnis remotis, glabris, rhombo-ovatis, obtusis, antice irregulariter crenato-dentatis, deorsum oblique cuneatis, attenuatis, integerrimis. *Rachis* compressa, alata.

*Involucra* in venis lateralibus, lineari-oblongis.

*Capsulae* sphaericae, sublonge pedicellatae.

*Semina* ovali-rotundata, limbata, limbo crenato.

Fig. 1. Pinna cum soris. f. 2. Capsulae. f. 3. Semina:—*magn. auct.*

Plumier, who appears to have first detected this Fern in the little island called *La Tortuë*, situated to the north of the *Port de Paix* in St. Domingo, tells us that this plant varies in size and luxuriance very much, according to its situation upon wet or dry rocks.

It will rank near to the *Aspl. viride* and *A. Trichomanis* of our country.





*Asplenium Lilliesianum*

ASPLENIUM GILLIESIANUM.

FILICES.—GYRATÆ. Br. POLYPODIACÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ASPLENIUM*, Linn. Sori lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. Br.

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*ASPLENIUM Gilliesianum*; frondibus anguste lanceolatis pinnatis, pinnis flabelliformibus antice laciniatis dentatisque, rachi lævi apice non radicante.

*Asplenium Gilliesii*. Hook. in *Ex. Flora*, p. 209. (sub descr. *Aspl. flabellifolii*, sine Ic.)

HAB. In fissuris rupium, apud Ceno Grande Uspallata, Andibus. D. Gillies.

*Radix* parva, fibrosa, fibris subsimplicibus, tortuosis, filiformibus, magis minusve hirsutis.

*Stipes* uncia ad duas uncias longus, gracilis, glaber, viridis, ad basin squamoso-hispidus.

*Frons* angusto-lanceolata, pinnata, pinnis remotiusculis, alternis, flabelliformibus, tenuissime membranaceis, pallide viridibus, antice sublobatis, lobis subtribus, inciso-crenatis, pinnis ultimis sensim minoribus. *Rachis* lævis, apice nunquam radicante.

*Involucra* linearia, membranacea, pallide fusca, fere albida.

*Capsulæ* sphericæ, articulatæ, pedicellatæ.

*Semina* ovalia, fusca.

Fig. 1. Pinna, cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

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Discovered by our excellent friend Dr. Gillies on the eastern side of the Andes, looking towards Mendoza. The species had been before noticed in Hooker's *Exotic Flora* under the description of *Asplenium flabellifolium*, a native of New Holland, and which has many points in common with the present. *Aspl. Gilliesianum* may, however, always be distinguished by its much smaller size, more slender and delicate habit, never throwing out roots from the extremity of a leafless rachis.



*Antrophyum Koryanum*

## ANTROPHYUM BORYANUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ANTROPHYUM*\*, Kaulf. Sori lineares, continui, venis frondis reticulatis immersi. *Indusium* geminatum medio dehiscens. Kaulf.

*ANTROPHYUM Boryanum*; frondibus oblongo-ellipticis obovatisve acutis, basi in stipitem longum attenuatis, "venis fructificantibus elevatis."

*Antrophyum Boryanum*. Spreng. *Syst. Veget. v. 4. p. 67.*

*Hemionitis Boryana*. Willd. *Sp. Pl. v. 5. p. 128.*

*Hemionitis reticulata?* Bory, *Voy. v. 1. p. 214.* Sieber, *Syn. Fl. n. 64.*

НАБ. Insula Mauritiæ, ad arborum radices, (*Bory, Sieber, Carmichael,*) et in campis sylvestribus locis umbrosis in monte *Pouce* dicta. *Bojer.*

*Radix* fibroso-ramosa, fibris densissime villosis fuscis, longe repentibus descendentibusque.

*Caudex*, ut videtur, nullus.

*Stipes* digitalis ad palmarem, compressus, basi paleaceo-setosus.

*Frons* palmaris ad pedalem, coriaceo-membranacea, oblongo-elliptica, non raro superne latior, margine ubique integerrimo, apice acuto, basi in stipitem attenuata, ecostata, pulcherrime venis elevatis reticulata, areolis oblongis angulatis 4—5 lineas longis.

"Venæ fructificantes prominentes." Willd.

We possess specimens of this noble Fern, of which we have only represented here some of the smaller states, from the late Captain Carmichael, from M. Bojer, and Dr. Sieber, all of them destitute of the fructification. In some parts of the frond, indeed, the veins are darker than in others; but on the most careful dissection, they contain no sori. Willdenow describes the fructification as elevated, not immersed, as it is in *Antr. pumilum* and *A. reticulatum*.

All the species seem to possess very thickly downy roots.

\* Nomen e Græco ἀντροφον antrum, et φων nascor.—Kaulf.



*Lindaea polymorpha.*

## LINDSÆA POLYMORPHA.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *LINDSÆA*, Dryand. *Sori* lineares, margine paralleli sæpiusque approximati.  
*Involucrum* ex apicibus venarum (rima plurium) ortum ducens, exterius liberum. Br.

*LINDSÆA polymorpha*; fronde lineari-lanceolata pinnata, pinnis ovato-oblongis basi oblique cuneatis flabelliformibusque margine superiore serratis, infimis nonnunquam pinnulatis, involucris denticulatis.

*Lindsæa polymorpha*. Wall. MSS.

HAB. In India Orientali. Wallich.

*Caudex* repens, squamulosus, penna corvinae crassitie, radiculoso-fibrosus, fibris flexuosis, subramosis, rigidis, fuscis.

*Stipes*, exemplaribus fructificantibus, digitalis ad palmarem, sterilibus multo brevior, erectus, glaber, nitidus, hinc canaliculatus, inferne atro-fuscus.

*Frondes* quadri-quinquepollicares, circumscriptione, angusto- vel lineari-lanceolatae, nunc apice attenuatae, pinnatae, pinnis inferioribus, statu adultiore, iterum pinnatae. *Pinnæ* vel *pinnulae* forma variantes, sterilium plerumque ovato-oblongae, margine superiore denticulatae, inferiore truncatae, integerrimae, basi cuneatae; *fertilium* flabelliformes; omnes radiato-nervosae, nervis dichotomis, soris terminatis, glabris, nitidis.

*Sori* lineares, ad marginem superiorem pinnae continui, exterius dehiscentes, pallide fusci, membranacei, sub lente reticulati, margine denticulati.

*Capsulae* sphaericae, annulo fere integro inaequali crasso cinctae, longe pedicellatae.

*Semina* opaca, subrotundo-angulata, flavescencia.

Fig. 1. Pinna cum soro. f. 2. Portio involucri cum capsulis. f. 3. Ejusdem portio, magis aucta. f. 4. Semina: —magn. auct.

So sportive are the forms of the pinnæ in many of the species of this genus, that it is difficult to characterize them in words. We have given the present plant under the name by which we received it from the Honourable the East India Company: at the same time we must observe that it comes very near to the *Lindsæa flabellata* of Dryander, in the third volume of the *Transactions of the Linnean Society*, p. 41. t. 8. f. 2. That species, however, differs from ours, in being more decidedly bipinnate, in having most of the pinnæ larger, regularly flabelliform, and in the apices of the fronds and compound pinnæ being obtuse.



*Hymenophyllum badium.*

W. Smith del.



**HYMENOPHYLLUM BADIUM.**

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd.*

GEN. CHAR. *HYMENOPHYLLUM*, Sm. *Sori* marginales. *Capsule* sessiles, receptaculo communi cylindraceo insertæ, intra involucrium bivalve, textura frondis, valvis planis, exterius liberis. *Br.*

*HYMENOPHYLLUM badium*; fronde lanceolata bipinnatifida, laciniis lineari-oblongis obtusis integerrimis glabris, inferioribus bifidis, soris raris in lacinia inferiori, involucri rotundatis.

HAB. In India Orientali. *Wallich.*

*Caudex* repens, filiformis, gracilis, ramosus, intricatus, fibroso-radiculosus.

*Stipes* etiam filiformis, bi-triuncialis, superne alatus.

*Frons*, circumscriptione, ovato-lanceolata, 4—5 pollicaris, bipinnatifida, segmentis primariis ovato-lanceolatis, laciniis lineari-oblongis, obtusis vel emarginatis, non raro inferioribus bifidis. *Textura* frondis ex areolis parvis. *Color*, siccitate, fusco-badius. *Costa* fusca.

*Involucra* rara, præcipue versus apicem frondium, in lacinia inferiore ad superiorem partem segmentorum, solitaria, terminalia, rotundata, bivalvia, valvis concavis, integerrimis.

*Sori* inclusi.

*Capsule* paucae, breviter pedicellatae, sphaerico-compressæ, columellam brevem terminantes, annulo integro, obliquo.

*Semina* angulata, et, ut videtur, ternatim congesta.

Fig. 1. Pars frondis cum involucrio f. 2. Portio laciniae. f. 3. Sorus. f. 4. Semina:—*magn. auct.*

Presented to us by the Honourable the East India Company, as discovered by Dr. Wallich in the Company's possessions, but sent without any specific name. We have named it from the singular colour of the frond, which is common to all our dried specimens.





*Hymenophyllum crispatum.*

**HYMENOPHYLLUM CRISPATUM.**

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *HYMENOPHYLLUM*, Sm. Sori marginales. Capsula sessiles, receptaculo communi cylindraceo insertæ, intra involucrium bivalve, textura frondis, valvis planis exterius liberis. Br.

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*HYMENOPHYLLUM crispatum*; fronde ovato-acuminata bi-tripinnatifida integerrima glabra, lacinii lato-linearibus obtusiusculis, involucris ovatis, stipite rachique alatis undulato-crispatis.

HAB. In Nepalia. Wallich.

*Caudex* repens, filiformis, radiculoso-fibrosus, fibris hirsutis.

*Stipes* biuncialis, basi teres, filiformis, superne alatus, alis insigniter crispatis.

*Frons* digitalis fere ad palmarem, ovata, acuminata, nunc lato-lanceolata, superne simpliciter pinnatifida, versus medium bipinnatifida, basi tripinnatifida, segmentis primariis circumscriptione lanceolata, ubique integerrima, atro-viridis, glabra, lacinii lato-linearibus, obtusiusculis, rachi late alata, ala undulata.

*Involucra*, præcipue versus apicem frondis, ovata, valvis concavis, integerrimis.

*Columnella* (vel receptaculum capsularum) perbrevis, ad apicem capsulas gerens.

*Capsulae* orbiculares, vix pedicellatæ, annulo integro subobliquo cinctæ.

*Semina* angulata, pellucida, subreticulata.

Fig. 1. Portio frondis cum involucris. f. 2. Valva involucris cum soro. f. 3. Semina:—*magn. auct.*

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Allied to the West Indian *Hymenophyllum undulatum* of Swartz and Willdenow; but that has the lacinie undulated, and the stipes destitute of wings.

*Tichomanes minus.*

**TRICHOMANES VENOSUM.**

FILICES.—GYRATÆ. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd.*

GEN. CHAR. *TRICHOMANES*, Sm. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

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*TRICHOMANES venosum*; frondibus pinnatis, pinnis linearibus venosis crenato-repandis: inferioribus basi lobatis v. pinnatifidis intusque unifloris. *Br.*

*Trichomanes venosum.* *Br. Prodr. Fl. Nov. Holl. p. 159. Spreng. Syst. Veget. v. 4. p. 129.*

HAB. Apud Port Jackson Novæ Hollandiæ: et insulam Van Dieman. *Brown.* In Nova Zealania. *A. Menzies.*

*Caudicem* non vidimus.

*Stipes* gracillimus, capillaris, subflexuosus, nudus, compressus, hinc canaliculatus.

*Rachis* filiformis, superne solummodo alatus.

*Frons*, circumscriptione, ovata vel lanceolata, pinnata, pinnis linearibus obtusis, glabris, pulcherrime reticulatis, crenato-repandis, inferioribus remotis basi superiore auriculatis, superioribus confluentibus, terminali elongata. *Costa* flexuosa, nervis dichotome ramosis.

*Involucra* solitaria, in singula pinna prope basin marginis superioris inserta, oblonga, margine alata, ore aperto, subdilata.

*Columella* longa, inserta, basi capsulifera.

*Capsulæ* rotundatæ, compressæ, peltatæ, annulo crasso integro.

*Semina* subglobosa, fusca.

Fig. 1. Pinna cum soro. f. 2. Portio frondis. f. 3. Columellæ pars inferior cum capsulis. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

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A very distinct species of *Trichomanes*, belonging to a small tribe of the genus, having truly pinnated fronds.



*Botrychium lanuginosum*

**BOTRYCHIUM LANUGINOSUM.**

FILICES.—OPHIOGLOSSEÆ. *Br., Kaulf.; Spreng.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *BOTRYCHIUM*, Sw. *Capsula* distinctæ, in spica disticha composita, respectu ejus transversim quoad insertionem longitudinaliter dehiscens. *Br.*

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*BOTRYCHIUM lanuginosum*; scapo superne unifrondoso, fronde ovato-deltaïdea bipinnatifida, pinnis ovatis inciso-pinnatifidis dentatis, bulbo lanigero.

*Botrychium lanuginosum.* *Wall. MSS.*

HAB. In India Orientali (Nepalia?). *Wallich.*

*Radix* e fibris plurimis, longis, simplicibus, carnosis, crassis, superne bulbifera.

*Bulbus* ovatus, subsquamosus, apice lanigerus.

*Scapus* 4—6 uncialis, erectus, teres, flavo-viridis, basi nigro-fuscus, frondem infra apicem gerens.

*Frons*, circumscriptione, late ovata fere deltaïdea, 3—4 uncias longa, bipinnatifida, glabra; pinnis inferioribus remotis segmentis iterum pinnatifidis, superioribus coadunatis, omnibus ovatis inciso-dentatis, dentibus acutis.

*Spica* composita, pinnata, pinnis distichis vel secundis.

*Capsulæ* plurimæ, sessiles, flavo-fuscae, ad unum latus spectantes, sphericæ, glabræ, demum transversim dehiscentes.

*Semina* pallide flavescencia, viridi-punctata.

Fig. 1. Portio frondis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

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The name of *lanuginosum* appears to have been given to this species by Dr. Wallich in consequence of a woolly substance which is attached to the upper part of the bulb; but this does not appear very distinctly on our specimens, which have been communicated by the Honourable the East India Company. In general aspect, the plant has much affinity with the North American *B. dissectum*; but there the frond is placed much lower down upon the stem or scape, and the foliage is much more compound or divided.



*Phlegmaria luteo-rosea*

## OPHIOGLOSSUM LUSITANICUM.

FILICES.—OPHIOGLOSSÆE. *Br., Kaulf., Spreng.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *OPHIOGLOSSUM*, Linn. *Capsula* nudæ in spicam articulatam, disticham connatæ, uniloculares, transverse dichiscentes, bivalves. *Willd.*

*OPHIOGLOSSUM lusitanicum*; spica caulina sublonge pedunculata, fronde lanceolata in petiolum attenuata.

*Ophioglossum lusitanicum*. *Linn. Sp. Pl. p. 1518.* "*Brot. Lusit. v. 2. p. 401.*" *Lam. Ill. t. 864. f. 3.* *Willd. Sp. Pl. v. 5. p. 59.* *Swartz. Syn. Fil. p. 169.* *Spreng. Syst. Veget. v. 4. p. 22.*

*Ophioglossum angustifolium minimum*. "*Barr. rar. 1280. t. 252. f. 2.*"

HAB. In Lusitania, Corsica. Circa Neapolim. *D. W. H. F. Talbot.* In agro Tingitano. *Salzman.* In Insula Madeiræ. *Rev. R. T. Lowe.*

*Radix*, tuber oblongus, solitarius, fibrosus, fibris crassiusculis, simplicibus ramosisque.

*Fronde*s plerumque duæ ex eadem radice, unciam vel duas uncias longæ, lanceolatæ, vel lineari-lanceolatæ, integerrimæ, virides, enerves, sub lente reticulatæ, inferne in stipitem subæque longum, flexuosum, flavum, ad basin squama membranacea, fusca, lanceolata instructum, attenuatæ.

*Pedunculus* ad basin frondis insertus, fronde plerumque longior, erectus, teres.

*Spica* parva, linearis, semiunciam longa, e capsulis sex vel octo, arcte connatis, flavis, composita.

*Semina* minuta, flava.

Fig. 1. Plantæ:—*magn. nat.* f. 2. Spica. f. 3. Semina:—*magn. auct.*

A small, and we believe very distinct species, which was supposed for a long time to be an inhabitant of Spain only. We have lately received specimens from Naples (the smaller specimen here figured), gathered near that city by Mr. Talbot; and from Tangiers (the larger specimen represented), collected by M. Salzman. Since our figure was engraved, we have received excellent specimens from the Rev. R. T. Lowe, gathered in the Island of Madeira.





*Phytoloba coccinea.*

## POLYBOTRYA CERVINA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *POLYBOTRYA*, Humb. *Capsula* pinnulas frondis disparis lineares undique dense tegentes. *Indusium* nullum. Kaulf.

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*POLYBOTRYA cervina*; frondibus sterilibus pinnatis, pinnis ovato-lanceolatis inæquilateralibus integerrimis marginatis, fertilibus bipinnatis, pinnis linearibus, pinnulis oblongis planiusculis.

*Polybotrya cervina*. Kaulf. *Enum. Fil.* p. 55. Spreng. *Syst. Veg.* v. 4. p. 33.

*Olfersia cervina*. Presl. in *Reliq. Hænk.* p. 14.

*Acrostichum cervinum*. Syn. *Fil.* p. 14. & 200. Willd. *Sp. Pl.* v. 5. p. 120.

*Osmunda cervina*. Linn. *Sp. Pl.* p. 1521.

*Osmunda*, Lingvæ Cervinæ foliis. Plum. *Fil.* p. 132. t. 154.

β. Foliis lanceolatis.

HAB. In India Occidentali, Jamaica, Martinica, locis umbrosis. Swartz. *Insula Sancti Vincentii*. Rev. L. Guilding. β. In sylvis Jamaicae. D. Bancroft.

*Caudex* repens, brevis, densissime fusco-squamosus, radiculosus, fibris ramosis, hirsutis.

*Stipites* plurimi ex eodem caudice, pedales vel bipedales erecti, semiteretes, facie anteriore sulcati, inferne squamosi, flavo-fusci.

*Frondes* sub-bipedales; steriles et fertiles distinctæ.

*Steriles* simpliciter pinnatæ (juniores lanceolatæ, simplices). *Pinnæ*, 11—13, fere sessiles, alternæ, spithamæ et ultra, ovato-lanceolatæ, coriaceæ, acuminatæ, marginatæ, integerrimæ; basi superiore gibbosæ; inferiore oblique cuneatæ costatæ; nervis numerosis parallelis, basi ramosis. Color læte viridis.

*Fertiles* bipinnatæ: *Pinnæ* lineari-lanceolatæ, fere horizontales, alternæ, 3 ad 6 uncias longæ; *Pinnulæ* suboppositæ, semiunciam longæ, patentæ, planiusculæ, capsulis undique tectæ.

*Capsulæ* numerosæ, fuscæ, annulo fere completo cinctæ, pedicellatæ, sphericæ.

Fig. 1. Frons juvenis. f. 2. Frondis adultæ sterilis portio. f. 3. Frondis fertillis portio. f. 4. Pinnæ cum capsulis. f. 5. Capsulæ.

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The genus *Polybotrya* was founded by Humboldt and Kunth upon the species *P. osmundacea*: and the character was made to depend upon the capsules occupying the whole circumference of the fertile pinnules. We possess, from Jamaica, a Fern that we can in no point distinguish from this of Humboldt; but in which the young fertile pinnæ have the capsules only on one side, while in their more advanced state the capsules appear on all sides of them. This difference in appearance, in all probability, arises from the revolution or reflexion of the margin of these pinnæ: and it perfectly accords with what Dr. Swartz says of the present plant, which he has seen in a growing state, and of which he observes, that "in an old state the fructification appears to be on both sides, in consequence of the revolution of the margin of the pinnæ." If such be really the case, and if it exists in all the species of *Polybotrya*, then the genus is scarcely distinguishable from *Acrostichum*.

No author, as far as we know, has noticed the young, quite simple, fronds of this species. The Rev. Mr. Guilding has sent them to us in that state.

*Botrychium simplex*

## BOTRYCHIUM SIMPLEX.

FILICES.—OPHIOGLOSSEÆ. Br., Kaulf., Spreng. STACHYOPTERIDES. Willd.

GEN. CHAR. *BOTRYCHIUM*, Swartz. *Capsula* distinctæ, in spica disticha composita, respectu cujus transversim quoad insertionem longitudinaliter dehiscentes. Br.

*BOTRYCHIUM simplex*; scapo unifrondoso, fronde ternata pinnatifidave, segmentis cuneato-obovatis incisis.

*Botrychium simplex*. Hitchc. in *Silliman's Journ. of Sc.* v. 6. p. 103. (Eaton). *Eaton's Manual of Botany*, p. 237.

HAB. Prope Deerfield, Massachusetts, America Septentrionali. Torrey. In Canada. Pursh. (fide specim. in Herb. Lambert.)

*Radix* e fibris paucis, simplicibus, brevibus, crassiusculis.

*Scapus* unciam ad tres uncias longus, erectus, subteres, basi subbulbosus, infra medium, vel nonnunquam versus apicem, frondem gerens.

*Frons* uncialis ad triunciam, exemplaribus *minoribus* ternata vel trifida, *majoribus* pinnatifida, segmentis obovato-cuneatis, ramis integris, plerumque bifidis vel magis minusve incisis. *Rachis* compressa, lata.

*Spica* composita, pinnata, pedunculata, pedunculo magis minusve elongata, pinnis distichis vel subsecundis.

*Capsula* secundæ, rotundata, compressæ, bifidæ, fere bipartitæ, flavo-fuscæ.

*Semina* sphaerica, parva, pellucida, flava.

Fig. 1. Capsulæ. f. 2. Semina.

*Botrychium simplex* seems to be a plant liable to much variation in regard to size. The smaller specimen here figured, which we received from our zealous friend Dr. Torrey, seems to be the state which gave rise to the specific name and character in Silliman's Journal:—but we have received a plant through the kindness of Mr. Lambert, gathered by Pursh in Canada, which we can by no means distinguish from that just mentioned, except that it is twice the size, has the frond decidedly pinnatifid, and the segments much cut. This is the larger specimen here represented. Both varieties are abundantly distinguished from any species with which we are acquainted.



*Lymnophyllum semiterrestris*

**HYMENOPHYLLUM SEMIBIVALVE.**

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *HYMENOPHYLLUM*, Smith. *Sori* marginales. *Capsulae* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. Br.

*HYMENOPHYLLUM semibivalve*; frondibus bipinnatifidis lanceolatis glabris, laciniis linearibus obtusis glabris immarginatis, involucris rotundato-urceolatis semi-immersis, parte superiore solummodo bivalvi.

HAB. In Insula Novæ Zealandiæ. *D. Menzies*.

*Planta* omnino glabra.

*Caudex* gracillimus, repens, filiformis, hic illic fibris minutis fuscis radicans.

*Stipes* longitudine variat, duas vel tres lineas longus ad bipollicarem, filiformis, fuscus.

*Frons*, circumscriptione, lanceolata, duas ad tres uncias longa, unciam lata, statu *juniore* simpliciter pinnatifida,

*adultæ* bipinnatifida, laciniis paucis subunilateralibus, linearibus, obtusis, omnino integerrimis. *Costæ* distinctæ.

Reticulationis *areolæ* parvæ, rotundatæ. *Color*, siccitate, olivaceo-fuscus.

*Sori* in laciniis præcipue versus apicem, vix infra medium, frondis, terminales, suburceolati, parte inferiore immersis, superiore solummodo bivalvi, valvis semiorbicularibus.

*Capsulæ* paucæ, fuscae, peltatæ, rotundatæ, compressæ, annulo integro cinctæ.

*Receptaculum* breve, inclusum.

*Semina* oblonga, subangulata, obscure reticulata, flavescentiâ, semipellucida.

Fig. 1. Portio frondis cum soris. f. 2. Involucrum. f. 3. Portio receptaculi, cum capsulis duabus. f. 4. Semina:—*magn. auct.*

We are indebted to Mr. Menzies for specimens of this New Zealand *Hymenophyllum*. The name of "*Hym. asplenioides*" was upon the label which accompanied them, written probably by mistake, since that is a West Indian species, and described amongst those which have *simple* fronds.

The present individual is remarkable for the structure of its involucre, which may be reckoned almost intermediate between that of *Trichomanes* and *Hymenophyllum*; the lower half, or even more, being sunk into the extremity of the frond, and the upper portion forming two short almost semi-circular lips or valves.



*Synnecophyllum hirsutum.*

## HYMENOPHYLLUM HIRSUTUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *HYMENOPHYLLUM*, Smith. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* bivalve, textura frondis, valvis planis, exterius liberis. Br.

*HYMENOPHYLLUM hirsutum*; (stellatim hirsutum); fronde pinnata, pinnis linearibus obtusis nunc bifidis digitatisve, stipite hirsuto.

*Hymenophyllum hirsutum*. Swartz. *Fl. Ind. Occ. v. 3. p. 1746.* *Syn. Fl. p. 146.* Willd. *Sp. Pl. v. 5. p. 517.* Spreng. *Syst. Veget. v. 4. p. 134.* Reliq. Hænk. p. 69. Raddi, *Fil. Brasil. p. 66. t. 79. f. 3.*

*Trichomanes hirsutum*. Linn. *Sp. Pl. p. 1561.*

*Trichomanes rigidum*. "Hedw. *Fil.* (in icone *T. fragile* est nuncupatum.)"

*Filicula digitata*. Plum. *Fil. p. 73. t. 50. B?*

HAB. In Hispaniola? Plumier. Ad truncos arborum in umbrosis montium altissimorum Jamaicæ. Swartz., *D. Luman.* In Insula Trinitatis. *D. Lockhart.* Brasil. Raddi. In montanis Peruvix ad Huanocco. Hænke.

*Caudex* gracillimus, filiformis, repens, radiculis fibrosis pilosis hic illic descendentibus.

*Stipes* quoque gracillimus, duas lineas etiam ad duas vel tres uncias longus, fuscus, superne subalatus, paululum hirsutus.

*Frons* forma variat, nunc, circumscriptione, ovata, et unciam vel sesquunciam longa, nunc bi-tripollicaris, circumscriptione lanceolata, pinnata, pinnis infimis solummodo liberis, reliquis decurrentibus, coadunatis, (et ita pinnatifida est frons,) linearibus, obtusis, inferioribus bifidis, palmatisve (Swartz.), vel etiam pinnatifidis (Hænke), omnibus costatis, costa tenui aterrima, et undique pulcherrime stellatim villosis.

*Sori* præcipue in pinnis laciniisve superioribus frondis, solitarii, terminales.

*Involucrum*, ad margines præcipue, stellato-pilosum; parte inferiore cuneata, immersa, superiore libera, bivalvi, valvis semiorbicularibus.

*Receptaculum* parvum, inclusum.

*Capsulæ* parvæ, fuscæ, peltatæ, annulo integro cinctæ.

*Semina* ovalia, subpellucida, pallide fusco-flavescentia.

Fig. 1. Pinnæ vel laciniæ frondis. f. 2. Portio apicis pinnæ fertilis cum soro. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Much as this plant is liable to vary in the length of the stipes and shape of the frond, we can still scarcely satisfy ourselves that the reference of authors to Plumier is correct. His plant is thrice the size of ours, every where deeply bipinnatifid, and having a distinctly winged stipes. Yet that is probably the original authority of Linnæus. Raddi is disposed to refer it to his *Hymenophyllum Boryanum*.

In our specimens the fronds might rather be called pinnatifid than pinnate; and the segments are never more than bifid, more frequently quite entire.





*Trichomanes humile.*

## TRICHOMANES HUMILE.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *TRICHOMANES*, Smith. *Sori* marginales. *Capsulæ* sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiantè, textura frondis. Br.

*TRICHOMANES humile*; fronde lanceolata bipinnatifida glabra marginata, laciniis linearibus obtusis integerrimis, involucris oblongo-cylindraceis, ore bilabiato.

*Trichomanes humile*. "Forst. Prodr. n. 464. Hedw. Fil. Ic. fasc. 3." Swartz. Syn. Fil. p. 143. et p. 371. Willd. Sp. Pl. v. 5. p. 507. Spreng. Syst. Veget. v. 4. p. 129.

HAB. In Societatis Insulis. Forster. Insula Otaheite. Menzies.

*Caudex* repens, gracilis, filiformis, tomentosus, hic illic radiculosus, radicibus capillaribus ramosis.

*Stipes* duas ad tres uncias longus, glaber, filiformis.

*Frondes* tri-, rarius quadri-pollicares, circumscriptione, lato-lanceolatæ, bipinnatifidæ, glabræ, atro-virides, pulcherrime reticulatæ (areolis suborbicularibus majusculis), costatæ, marginatæ, laciniis linearibus obtusis, nunc apice bifidis.

*Sori* marginales, subaxillares, solitarii.

*Involucra* oblongo-cylindracea, marginata, ore bilabiato.

*Receptaculum* filiforme, sublonge exsertum, basi incrassatum.

*Capsulæ* intra involucrum inclusæ, peltatæ, annulo magno, articulado, subplicato cinctæ.

*Semina* sub summo lente reticulata, subsphærica, pallide flava, hyalina.

Fig. 1. Portio frondis cum soris. f. 2. Portio frondis ut reticulationes et margo videantur. f. 3. Involucrum verticaliter sectum. f. 4. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

Hedwig and Willdenow describe the margin of this rare species of *Trichomanes* as serrated or serrulated. We find no such appearance in our specimens, gathered by Mr. Menzies in Otaheite; nor does its original discoverer Forster, nor Swartz (who seems to have described it from authentic specimens), notice such a peculiarity. The margined appearance of the frond arises not from a thickening of the very edge, but from a nerve running along, parallel with, but at a little distance from, the margin, and which is connected with the margin by means of transverse veins or bars.



*Acrostichum Swartzii*



## ACROSTICHUM JAMESONI.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ACROSTICHUM*, Linn. Sori amorphi, seu *Capsula* per totam paginam inferiorem frondis (interdum diversæ) vel ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ vel setæ in quibusdam capsulis interstinctæ). Br.

*ACROSTICHUM Jamesoni*; piloso-squamosum, frondibus simplicibus costatis, sterilibus oblongo-spathulatis, fertilibus ellipticis marginatis demum conduplicatis.

HAB. Rupibus prope basin montis Pichincha regno Quitensi. D. *Jameson*.

*Planta* cæspitosa.

*Stipes* duas ad tres uncias longus, erectus, paululum flexuosus, gracilis, squamosus, squamis lanceolatis, membranaceis, serratis, nervoso-reticulatis, fuscis.

*Frondes* vix unciam longæ, costatæ, enerves.

*Steriles* oblongæ, obtusæ, virides, utrinque margineque squamosæ, squamis brevioribus latioribusque quam in stipite.

*Fertiles* sterili breviores, ellipticæ, fuscæ, pellucido-marginatæ, dorso margineque fusco-squamosis: primum explanatæ, demum, capsulis maturis, longitudinaliter conduplicatæ.

*Capsula* numerosissima, intense fusca, globosæ, annulo lato cinctæ, breviter pedicellatæ.

*Semina* fusca, subrotundata, tuberculata.

Fig. 1. Squama e stipite. f. 2. Squama e fronde. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Communicated, with several other rarities of this family, from South America by William Jameson, Esq., resident at Guayaquil. The species is unquestionably very nearly allied to *Acrostichum obtusatum*, figured at Tab. 22. of this work: but that, besides its widely different geographical situation (the Island of Tristau da Cunha), has fewer and narrower scales upon the frond and stipes, a longer pedicel to the capsules, and a much less distinct costa or midrib; and it wants the pellucid margin to the fertile fronds, which is so distinct in this.

Mr. Jameson has remarked a curious property in the fertile fronds. "When the plant," he says, "is in a young and tender state, their fronds are invariably *expanded*; but as soon as the seeds begin to ripen, they *collapse*, as in the specimens sent;" and as the generality of those here figured.

The *Acrostichum piloselloides* of Presl. (*Reliq. Hænk.*), *A. Pilosella*, Spreng., a Peruvian plant, differs from this in its almost sessile and spatulate sterile fronds; and the *Acrostichum spathulatum* of Bory (from the Isle de Bourbon), by its much larger size and differently-shaped fronds. They should, however, all together, with our *Acrost. Raddianum*, rank next to each other in a natural system.



*Pinellia sagittata.*

LINDSÆA SAGITTATA.

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd.*

GEN. CHAR. *LINDSÆA*, Dryand. *Sori* lineares, margine paralleli sæpiusque approximati.  
*Involucrum* ex apicibus venarum (una plurium) ortum ducens, exterius liberum. *Br.*

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*LINDSÆA sagittata*; fronde simplici sagittata cordatave acuminata. *Dryand.*

*Lindsæa sagittata.* *Dryand. in Linn. Trans. v. 3. p. 40. Swartz. Syn. Fil. p. 118. Willd.*

*Sp. Pl. v. 5. p. 520. Spreng. Syst. Veget. v. 4. p. 79.*

*Adiantum sagittatum. Aubl. Pl. de Guian. p. 964. t. 366.*

HAB. In sylvis Guianæ, et in fissuris rupium. *Aubl.* In insula Guadaloupe. (*Sprengel.*)

*Caudex* repens, inferne radiculosus.

*Stipes* erectus, semiteres, aterrimus, nitidissimus.

*Frondes* 3—4 uncias longæ, cordatæ vel sagittatæ, apice acuminatæ, basi sinu profundo, angulis acutis, submembranaceæ, virides, radiato nervosæ, nervis dichotome ramosis, infra marginem terminantibus.

*Sori* dorsales, intramarginales, lineares, hic illic interrupti.

*Involucrum* membranaceum, extus liberum.

*Capsulæ* sphericæ, sablonge pedicellatæ.

*Semina* minutissima, flava, semipellucida, ternatim congesta.

Fig. 1. Portio frondis marginis cum soro. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

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The only specimens of this rare Fern that we have seen, were kindly communicated to us by the Baron Delessert, and they were gathered in French Guiana. Sprengel has given Guadaloupe as an additional station for the plant.



*Asplenium triphyllum.*

ASPENIUM TRIPHYLLUM.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ASPENIUM*, Linn. Sori lineares, dorsales, sparsi. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. Br.

*ASPENIUM triphyllum*; frondibus (non raro bulbiferis) linearibus bipinnatis, pinnulis binis vel ternis cuneatis obtusis costatis pellucidis integris vel bifidis, rachi discolori, soris subsolitariis.

*Asplenium triphyllum*. Presl. in *Reliq. Hænk.* p. 45. Spreng. *Syst. Veget.* v. 4. p. 88.

HAB. In rupibus umbrosis prope verticem montis Pichincha (regno Quitensi). D. Jameson.

In Cordilleris Peruvie? Presl.

*Plantæ* subsolitariae.

*Stipes* brevis, una cum rachi filiformis, nitidus, fuscus.

*Frons* plerumque simplex, nunc apice dichotome ramosa, nonnunquam bulbifera et prolifera, 4—6 uncias longa, circumscriptione linearis vel lineari-lanceolata, bipinnata, pinnis vix semiunciam longis, inferioribus ternatis, superioribus simplicibus, versus medium binis, pinnulis oblongo-cuneatis obtusis, costatis, pellucidis, teneris, integerrimis, apice emarginato vel bifido.

*Sorus* in singula pinnula solitarius, majusculus.

*Involucrum* membranaceum, pallide fuscum, lineari-oblongum.

*Capsulae* minutæ, longe pedicellatæ, annulo crasso cinctæ.

*Semina* subovalia, rugosa, intense fusca.

Fig. 1. *Plantæ*:—*magn. nat.* f. 2. *Planta* bulbifera:—*magn. nat.* f. 3. *Pinna*, cum soro. f. 4. *Capsulae*. f. 5. *Semina*:—*magn. auct.*

In habit the present very delicate species of *Asplenium* is allied to our *Aspl. Gilliesianum*, to the *Aspl. stoloniferum*, *tenuè* and *ternatum*, of Presl. in *Reliq. Hænk.*: but besides the different shape of the pinnæ, those species have the stipes and rachis of the same colour with the frond. Here it is dark-brown, almost black.





*Cyrtosplenium Loevi*

*W. Smith del.*

*W. Smith sc.*

## GYMNOGRAMMA LOVEII.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *GYMNOGRAMMA*, Desv. Sori oblongi, venis frondis simplicibus furcatisve inserti. Indusium nullum.—Fronde pinnate, bipinnate decompositæque. Desv.

*GYMNOGRAMMA Loveii*; frondibus pinnatis, pinnis oblongo-lanceolatis pinnatifidis summis confluentibus undique pilosis, laciniis ovalibus obtusis integerrimis, stipite rachique pubescentibus.

HAB. In rupibus madidis Insulæ Madeiræ; montibus, ad alt. 2000 ped. legit Rev. R. T. Lowe.

Caudex longo repens, teres, glaber, nigro-fuscus, hic illic fibras ramosas tomentosas emittens.

Stipites plurimi ex eodem caudice, spithamæ et ultra, semiteretes, hinc sulcati, basi dilatati, undique pubescentes, fusci.

Fronde, circumscriptione, ovato-lanceolata, spithamæ, fere ad pedales, pinnatæ, pinnis lato-lanceolatis, acutis, sessilibus, pinnatifidis, utrinque hirsutis, inferioribus remotiusculis alternis, superioribus confluentibus, costatis, pinnatim nervosis, laciniis ovalibus obtusis integerrimis, ciliatis, pilis ad marginem sæpe basi unitis. Rachis pube fusco oblecta.

Sori numerosi, lineari-oblongi, in singulo nervo, simplices, omnino nudi.

Capsulæ globosæ, fuscae, reticulatæ, annulo articulo lato, fere completo cinctæ, breviter pedicellatæ.

Semina subglobosa oblongaque, lavia, fusca.

Fig. 1. Portio pinnae, cum soris. f. 2. Pili e margine laciniarum. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

In the autumn of last year (1827), together with many other excellent plants we were favoured with specimens of this Fern by the Rev. Mr. Lowe, gathered in the Island of Madeira, "near P<sup>to</sup> Pargo, in a narrow ravine, and in other places in the interior, growing at an elevation upon the mountains of more than 2000 feet\*, upon rocks, and steep and moist banks, where there is but a thin stratum of vegetable mould:—the root or caudex creeping extensively just beneath the surface." The plant is assuredly not described in any work to which I have had access: but Mr. Lowe suggests, that it may probably be the *Aerostichum pilosum* of Von Buch's List of Plants of the Canary Isles; and that the same name (but equally without description or character) likewise exists in a manuscript catalogue of Madeira Plants, which he has seen in the island, purporting to be taken from the Banksian Library, and probably left there by Masson: but the identity of the two plants we have no means of determining. An *Aerostichum* the plant assuredly is not; and though we have placed it in the genus *Gymnogramma*, it seems to form a connecting link between it and *Grammitis*, having the habit of the former, and the constantly simple sori of the latter.

The species we have named in compliment to the gentleman who sent us such fine specimens, and who has accompanied them by some valuable observations: and we feel that he is justly entitled to this honour, not merely because he has brought so interesting a plant under our notice, but because, still resident in Madeira, he is furthering the cause of science by collecting materials, which he will soon be enabled to give to the world, for a *Flora* and *Fauna* of the island. Already he possesses many novelties in the different departments of natural history; and perhaps no spot could be pointed out, whether its geographical situation or its geological features and structure be considered, which better deserves to have its productions described, than that island.

We have only very recently received Schlechtendal's *Adumbrationes Plantarum*, in which we find a species of *Cryptogramma* from the Cape of Good Hope, represented and described, which has a very near affinity with this, *Gymnogramma totta*, Schlecht. That, however, has very much longer and narrower pinnae, and the lower laciniæ erose; whereas they are quite entire in our plant.

\* Since the above was written, we have received more specimens of the same plant, gathered in the Ribeiro d'Ametade, at an elevation of 3000 feet above the level of the sea. It scarcely descends below 2000 feet.



*Gymnogramma rutifolia*

## GYMNOGRAMMA RUTÆFOLIA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *GYMNOGRAMMA*, Desv. Sori oblongi, venis frondis simplicibus furcatisve inserti. Indusium nullum.—Fronde *pinnata, bipinnatæ decompositæque*; radices *cæspitosæ*.  
Desv.

*GYMNOGRAMMA rutæfolia*; fronde pinnata pubescente, pinnis cuneiformibus integris incisivæ. Br.  
*Grammitis rutæfolia*. Br. *Prodr. Fl. Nov. Holl. p. 146.* Spreng. *Syst. Veget. v. 4. p. 41.*

HAB. Insula Van Dieman. Brown. D. Fraser.

Radix nigro-fusca, cæspitosa, e fibris plurimis ramosis.

Tota planta, subtus stipes rachisque præcipue, hirsuto-pubescent, pilis pellucidis, rigidiusculis, acutis.

Stipites breves, vix duas uncias longi, flexuosi.

Fronde pinnatæ, vix duas uncias longæ, pinnis 6—9, alternis, remotiusculis, ovato-cuneatis, rigidiusculis, integris vel inciso-lobatis, summis confluentibus.

Sori venis furcatis inserti, demum in unam massam, pinnarum dorsum omnino tegentes, congesti.

Capsulæ sphericæ, fuscæ, sublonge pedicellatæ.

Semina intense fusca, limbo semipellucido.

Fig. 1. Portio stipitis. f. 2. Pili. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

As *Grammitis* now stands in the recently published *Systema Vegetabilium* of Professor Sprengel, it contains none but species with simple fronds. At Tab. 6. of our *Icones Filicum* we have, however, given a species which has the fronds pinnatifid; and at Tab. 89. one with the fronds bipinnatifid. In those species which have compound fronds, we find the nerves to be more ramified; and by the union of two sori at the forking of a nerve, the sori themselves appear to be divided. This at least is the character of M. Desvaux's *Gymnogramma*; and hence it may be considered as intermediate between *Grammitis* and *Hemionitis*, where the nerves are much branched and reticulated, and the sori form a continued series. If the genus should prove permanently distinct from *Grammitis*, we think that this and the following species *Gymn. subglandulosa* will be rightly placed in it.



*Gymnogramma subglandulosa.*



## GYMNOGRAMMA SUBGLANDULOSA.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *GYMNOGRAMMA*, Desv. *Sori* oblongi, venis frondis simplicibus furcatisve inserti. *Indusium* nullum.—Fronde *pinnatæ, bipinnatæ, decompositæque*; radices cæspitosæ.

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*GYMNOGRAMMA subglandulosa*; fronde pinnata pubescenti-subglandulosa, pinnis pinnatifidis, lobis rotundatis integris vel incisis.

HAB. In Nova Hollandia. *D. Fraser*.

*Radicem* nondum vidimus.

*Tota planta* pilis succulentis, pellucidis, pallide fuscis ubique tecta. Hi *pili* semper obtusi sunt, et, ad apicem, *glandula* abortiva vel imperfecta terminati: infra apicem, etiam, non raro constricti. (f. 2.)

*Stipes* unciam vel duas uncias longus.

*Frons*, circumscriptione, lanceolata, 4, fere ad 6 uncias longa, pinnata, pinnis oppositis remotis submembranaceis, plerisque ovatis (basi apiceque subcuneatis, minus divisis) breviter petiolatis, pinnatifidis, lobis rotundatis subincisis.

*Sori* pallide fusci, simplices vel furcati.

*Capsulæ* sublonge pedicellatæ.

*Semina* parva, obscure limbata.

Fig. 1. Portio stipitis. f. 2. Pili. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

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In what part of New South Wales this curious species of *Gymnogramma* was found we are not informed. We at first took the specimens for very luxuriant states of *Gymn. rutafolia*: but a more careful examination soon convinced us of our error. The plant is more than twice the size of that species, the pinnae are distinctly pinnatifid, of a more membranaceous texture, and (what will afford a still better character,) the nature of the pubescence, although it may appear to the naked eye the same in both, is here not composed of short setiform hairs, but of obtuse linear ones, having what appears an abortive gland at the extremity; that is, irregular in its shape, and not filled with any secreting fluid. Below the apex, too, are not unfrequently a contraction and a brown mark.



*Asplenium feniculaceum.*

## ASPLENIUM FŒNICULACEUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *ASPLENIUM*, Linn. Sori lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. Br.

*ASPLENIUM fœniculaceum*; frondibus triplicato-pinnatis, pinnulis anguste linearibus acutissimis, soris solitariis.

*Asplenium fœniculaceum*. Humb. et Kunth, *Nov. Gen.* v. 1. p. 13. *Ejusd. Syn. Pt. Æq.* p. 80. *Spreng. Syst. Veget.* v. 4. p. 90.

*Asplenium delicatulum*. Presl. *Reliq. Henk.* p. 47. t. 7. f. 3?

HAB. In umbrosis Novæ Andalusæ, locis temperatis. Humboldt. In Cordilleris Quitensibus? Hanke. In truncis arborum locis sylvestribus ad declivitatem occidentalem montis Pichincha, regno Quitensi. D. Jameson.

*Caudex* repens, filiformis, pilosus, hic illic radiculosus, fibris capillaribus ramosis hirtis.

*Stipites* plurimi, ex eodem puncto, digitales et ultra, erecti, graciles, glabri, basi fuscæ, subteretes, dein virides, hinc canaliculati, superne marginati.

*Frondes*, circumscriptione ovato-acuminatæ, basi truncatæ, triplicato-pinnatæ, glabræ, pallide virides, segmentis ultimis seu pinnulis angustis, linearibus, acutissimis, superne bipinnatæ. *Rachis* universalis partialisque ubique glabræ, margine alatæ.

*Sori* oblongo-lineares, solitarii, et, ob angustatem laciniarum, non raro prope marginem siti, ut in subgenere

*Darea*, Sm. (*Cœnopteridis*, Swartz.)

*Involucrum* membranaceum, albidum.

*Capsulæ* sphericæ, longe pedicellatæ.

*Semina* subsanguata, intense fusca.

Fig. 1. Portio pinnæ cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

Sent to us by our valued correspondent Mr. Jameson, who gathered the specimen on the western declivity of the mountain Pichincha, where Humboldt and Bonpland discovered some of their most valuable plants. We find it to agree entirely with the *Aspl. fœniculaceum* of Humboldt and Kunth; and we scarcely know whether to consider the *Aspl. delicatum* of Presl. in *Reliquia Hankeana*, to be otherwise than a starved variety of it. It is also nearly allied to *Asplenium fragrans* of Swartz (a Jamaica plant), and to the East Indian *Asplenium concinnum* of Wallich, but has narrower and more distantly placed pinnæ. The sori are almost exactly as in the *Darea* of Smith, (*Cœnopteris* of Swartz).





*Nephrolepis rupestris.*

## NIPHOBOLUS RUPESTRIS.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *NIPHOBOLUS*, Kaulf. Sori subtrotundi, congesti, terminales, pilis stellatis obtecti. Spreng.

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*NIPHOBOLUS rupestris*; frondibus integerrimis tomentosissimis subtus incanis, sterilibus obovatis oblongisve, fertilibus linearibus, soris sparsis parum confluentibus, surculo squamoso radicante ramosissimo. Br.

*Niphobolus rupestris*. Spreng. *Syst. Veget.* v. 4. p. 44.

*Polypodium rupestre*. Br. *Prodr. Fl. Nov. Holl.* v. 1. p. 146.

HAB. Apud Port Jackson, Nov. Holl. Br., D. Fraser. In Nova Zeelandia. CULT. in Hort. Bot. Glasg.

*Radix* e fibris numerosis nigro-fuscis ramosis.

*Caulis* repens, "ramosissimus," squamis minutis dense obsitus.

*Stipes* biuncialis, basi squamosus, dein nudus.

*Fronde*s coriaceæ, ubique densissime piloso-stellate, tomentosæ, dorso virides, subtus incanæ; *steriles*, nostris specimenibus, nunc fere exacte ovales, obovatæ vel oblongæ, integerrimæ, vix sesquiunciam longæ; *fertiles* lineares, vel lineari-lanceolatæ, sterilibus duplo longiores, integerrimæ, basi attenuatæ, apice obtusiusculæ; omnes costatæ, costa subtus prominente.

*Sori* præcipue versus extremitatem frondis prominentes, fusi, approximati et subconfluentes.

*Capsula*, *pili stellati stipitati* et *semina* fere omnino ut in *N. bicolor*.

Fig. 1. Pili frondis. f. 2. Pili e soris. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

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Mr. Brown has already observed, that this plant is allied to *Polypodium stellatum* (*N. bicolor* of this work) and to *P. adnascens*; and all are downy with the same curiously stellated pubescence.

We are indebted to Mr. Lindley for some of our specimens of this plant, and which are marked as coming from New Zealand; but we know not by whom gathered.



*Asplenium platyneuron*

## NIPHOBOLUS SPHÆROCEPHALUS.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *NIPHOBOLUS*, Kaulf. *Sori* subrotundi, congesti, terminales, pilis stellatis obtecti. *Spreng.*

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*NIPHOBOLUS sphærocephalus*; frondibus simplicibus coriaceis, sterilibus oblongo-lanceolatis acutis, basi subrotundatis petiolatis glabris, fertilibus linearibus acuminatis basi in petiolum attenuatis subtus stellatim tomentosis, soris ovalibus distinctis.

*Polypodium sphærocephalum.* *Wallich MSS.*

HAB. Ex India Orientali (e Nepalia?) misit *D. Wallich.* In arboribus, ut videtur, crescit.

*Caudex* longus, flexuosus, ramosus, crassitie pennæ corvinæ, squamis ovatis, acutis, imbricatis, scariosis tectus, hic illic radiculosus.

*Fronde* steriles fertilibus dissimiles, coriaceæ.

*Steriles* breviter stipitatæ, 4—5 uncias longæ, lato- vel oblongo-lanceolatæ, integerrimæ, utrinque glabræ, siccitate margine revolutæ, costatæ, penninerviæ, nervis obscuris, apice acutæ, basi rotundatæ.

*Fertiles* pedales, lineares vel lineari-lanceolatæ, integerrimæ, margine subrevolutæ, superne glabræ, subtus (costa prominente excepta) lana compacta alba e pilis pulcherrime stellatis, ubique tectæ, apice acuminatæ, basi in petiolum bi-triuncialem sensim attenuatæ.

*Sori* numerosi, magni, convexi, oblongi, lineatim dispositi, primum pilis stellatis pedicellatis albis omnino tecti.

*Capsulæ* longe pedicellatæ.

*Semina* oblonga, subreniformia, non raro, ad utramque extremitatem, appendiculo aucta, flava.

Fig. 1. Portio frondis cum soro statu juniore, atque pilis stellatis tectæ. f. 2. Eadem cum soro, capsulis maturis.  
f. 3. Pili stellati e soro. f. 4. Pili stellati e frondis pagina inferiore. f. 5. Capsulæ. f. 6. Semina:—*magn. auct.*

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Whether or not the sterile fronds of this plant are in a young state clothed on the underside, like the fertile frond, with pubescence, I am not able to say. In our specimens they are quite glabrous. The species is, in any case, abundantly distinct from all of the genus with which we are acquainted, and the texture is remarkably thick and coriaceous.



*Acrostichum vellosum*

## ACROSTICHUM VILLOSUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kauf. FILICES veræ. Willd.

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). Br.

*ACROSTICHUM villosum*; ubique ferrugineo-villosis, frondibus simplicibus oblongo-lanceolatis acuminatis membranaceis, fertilibus multo minoribus villosissimis.

*Acrostichum villosum*. Swartz. *Syn. Fil.* p. 10. *Fl. Ind. Occ.* p. 1592. Willd. *Sp. Pl.* v. 5. p. 103. Lam. *Ill.* t. 865. f. 4. (mala.) Spreng. *Syst. Veget.* v. 4. p. 34.

Lingua cervina villosa minor. Plum. *Fil.* p. 110. t. 127. (vix bona quoad marginem et hirsutiem.)

HAB. Ad latera muscosa depressa montium Jamaicae Australis. Swartz. Ex Jamaica etiam D. Bancroft et Wiles communicaverunt. In Hispaniola. Plum.

*Caudex* brevis, subrepens, piloso-squamosus. *Radices* plurimæ, filiformes, ramosæ, fuscæ, hirsutæ.

*Stipites* aggregati, 4—6 uncias longi, ferrugineo-villosi, pilis longis horizontalibus.

*Frondes* oblongo-lanceolatae, membranaceæ, acuminatae, utrinque margineque pilis numerosis longis patentibus rufo-ferrugineis vestitæ, costatæ, penninerviæ, nervis ad marginem attingentibus, in nostris exemplaribus omnino integerrimæ (margine subcrenulatæ l. fere integræ, leviter undulatæ Sm.). *Pili*, sub lente visi, subulati, membranacei, concavi, reticulati, apice serrulati. *Color* fusco-viridis. *Frondes fertiles* sterilibus duplo minores, utrinque, superne præcipue, pilis numerosis ferrugineis villosissimæ.

*Capsulæ* fuscæ, pedicellatæ.

*Semina* parva, ovalia, reticulata.

Fig. 1. Portio frondis sterilis. f. 2. Capsulæ. f. 3. Semina. f. 4. Pilus:—magn. auct.

We are the more anxious to figure this species of Fern, because it has, by Dr. Sieber, been confounded with an East Indian species of the same genus, namely *Acrostichum hybridum* (*Je. Fil.* t. 21.); but from that it is distinguished by its much smaller size, more acuminate apex; and especially by the numerous reddish hairs, which spring not only from the margin, midrib, nerves, and stipes, but also from the whole superficies of the frond, both above and below, giving the entire plant a very singular appearance.

The Plumierian figure, which Dr. Swartz mentions with approbation, is by no means good as to the margin of the fronds and in the glabrous upper sides; nor is the representation given by Lamarck at all more satisfactory.



*Aspidium prolyserum.*



## ASPIDIUM PROLIFERUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ASPIDIUM*, Br. *HYPOPELTIS*, Mich. *ASPIDII species*, Sw., Willd.  
*Sori* rotundi, dorsales. *Involucrum* orbiculare, peltatum, stipitatum, in medio sori insertum, undique liberum. Br.

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*ASPIDIUM proliferum*; frondibus simplicibus, glabris, sterilibus lanceolatis longe acuminatis radican-  
 tibus, fertilibus linearibus obtusis.

HAB. In Insula Jamaicæ?

*Radix* caspitosa, fibrosa, fibris ramosis hirsutis fuscis.

*Stipes* perbrevis, vix semiunciam longus, sensim in frondem dilatatus.

*Frondes* pluriimæ ex eadem radice, digitales ad spithamæam, simplices, decumbentes, lanceolatæ, basi attenuatæ,  
 apice longissime acuminatæ, radican-tes, proliferæ, utrinque glabræ, medio costatæ, margine integerrimo:

*Fertiles* sterilibus angustiores, erectæ, lineares, apice obtusæ.

*Sori* serie simplici ad utrumque latus costæ dispositi, magni; venis obscuris inserti.

*Involucrum* orbiculare, peltatum, medio umbilicatum.

*Capsulæ* fuscæ, sublonge pedicellatæ.

*Semina* intense fusca, oblonga, rugosa, margine limbo pellucido flavescente cincta.

Fig. 1. Portio frondis fertilis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

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We regret that we are not able to say what is the native country of this plant. It was given to us some time ago by our friend Mr. Lindley, with several West India Ferns, which had formed part of the Herbarium of the late Mr. Donn, of Cambridge. The Fern to which it is most nearly allied in the mode of growth and prolific habit, and in the structure of the sori and seeds, is the *Aspidium rhizophyllum*, figured at Tab. 59. of this work: but that has, except in the very youngest state of the plant, decidedly pinnated fronds; whereas here, both in the sterile and fertile fronds, there is not the slightest approach to a compound, or even to a divided appearance. The whole plant, too, is quite glabrous.





*Pinus pteridoides*

## PARKERIA PTERIDOIDES.

FILICES.—Div. PARKERIAEÆ. (*Capsula* sparsæ, omnino sessiles, annulo lato brevissimo fere obsoleto, nonnunquam distincto subcompleto, notatæ. *Semina* magna, trigona, striata.) GLEICHENEÆ. *Bory, Spreng.*

GEN. CHAR. *PARKERIA*, Hook. *Capsulae* irregulariter dehiscentes, annulo, vel disco, striato, minuto, fere obsoleto.

*PARKERIA pteridoides*; frondibus sterilibus pinnatifidis, laciniis subternis late ovaris incis, fertilibus tripinnatifidis laciniis linearibus, stipite inferne tumido.

*Parkeria pteridoides.* Hook. in *Exot. Fl.* t. 147. (ubi capsulae seminaque male representantur,) et t. 231.

HAB. In aquis stagnantibus Guianæ, apud Demerara. *D. Parker.*

*Radix* e fibris longis, descendentibus, numerosissimis, fusco-purpureis, villosis.

*Stipites* plurimi ex eadem radice, crassi, teretes, inferne tumidi, et quasi inflati, venosi, subsquamosi, virides, dein fusci, valde cellulosi; frondium *sterilium* horizontales, breves; *fertilium* erecti, 4—5-pollicares.

*Frondes* steriles et fertiles dissimiles.

*Steriles* natantes, stellatim dispositæ, tres ad quinque uncias longæ, circumscriptione deltoideo-ovata, carnosomembranaceæ, pallide virides, costatæ, costa ramosa, reticulatæ, pinnatifidæ, laciniis late ovatis, subternis, fere trilobis atque incis; sinibus proliferis.

*Fertiles* semipedales et ultra, erectæ, circumscriptione subtriangulares, tripinnatifidæ, sinibus proliferis, laciniis linearibus, attenuatis, tereti-compressis, ultimis furcatis, primum viridibus dein flavo-fuscis, costatis, venis utrinque parallelis, capsuliferis, reticulatim connexis. *Rachis* hinc sulcata.

*Involucrum* e margine lato frondis, tenui, membranaceo, subdiaphano, reticulatim venoso, replicato, totum dorsum tegens.

*Capsula* venis costæ parallelis insidentes, pro ratione plantæ majusculæ, pallide fuscæ, omnino sessiles, sphericæ, quasi tuberculatæ (ob seminum pressuram), tenuissime membranaceæ, diaphanæ, irregulariter dehiscentes, sub summo lente reticulatim venosæ, (venis flexuosis,) et hinc, prope basin, obsoletissime annulatæ, annulo lato, paululum gibboso, transversim striato, striis subquinque.

*Semina* pauca (15—20) in singula capsula, magna, trigona, pallide fusco-flavescentia, subpellucida, angulis striis concentricis pulcherrime notatis; intus materie oleosa repleta.

Fig. 1. Frondes steriles. f. 2. Frons fertilis:—*magn. nat.* f. 3. Portio lacinie frondis fertilis a dorso visa. f. 4. Eadem, facie anteriore visa. f. 5. Eadem, involucro aperto, ut receptacula capsularum videantur. f. 6. Ejusdem pars:—*magis aucta.* f. 7. Capsulae cum annulo obsoleto, seu disco striato. f. 8. Portio membranae capsulae cum annulo:—*magis aucta.* f. 9. Capsula dehiscentis. f. 10. Semina. f. 11. Eadem:—*magis aucta.* f. 12. Integumentum seminis, cum ejus materie oleosa (f. 13.):—*omnes magis minusve magnitudine aucta.*

The kindness of our friend C. S. Parker, Esq. (after whom this singular and beautiful genus had previously been named in the *Exotic Flora*), by putting into our possession numerous specimens in all stages of growth, and the opportunity we have enjoyed of seeing the noble individual here figured flourishing in the stove of the Liverpool Botanic Garden under the skilful management of the Messrs. Shepherds,—have enabled us to correct some very important errors which appear in the work just mentioned, and to lay before the public, we trust, a complete analysis of the plant.

The Figure above referred to at Tab. 231. of the *Exotic Flora*, represents the sterile fronds of the plant, of the very existence of which we were not aware, when the first Figure in that work (t. 147.)

appeared. But the point that needs most correction is, where it is said that the capsule is altogether destitute of a ring. It is so minute, however, as to have wholly escaped the notice not only of the author of *Exotic Flora*, but also of that of other and very acute botanists, who examined the specimens. An *annulus* indeed does exist; but so small, and so unlike that part in other Ferns, that we may well be pardoned for having overlooked it: nor should we now probably have detected it, were we not led to suspect its presence by knowing that some other Ferns now in our possession, most closely allied to this, are furnished in their capsules with a *remarkably* large, very broad, and almost complete ring. The Ferns we allude to are the *Ceratopteris thalictroides* of Brongniart (*Ellebocarpus oleraceus* of Kaulf.), from the East Indies;—what we take for *Ceratopteris Gaudichaudii* of Brongn., said to be from St. Vincent;—and one, if not two, nearly allied plants, from New Holland. There could not be a question of all these belonging to the same natural group; and upon examining with the high power of the microscope the capsules of our *Parkeria*, we find on one side, near the point of insertion, a small oblong transversely striated spot or disk, which may indeed be compared with a very reduced annulus of *Ceratopteris*, but which can on no account be assimilated to that of the *Filices Gyrate* of Mr. Brown.

Since we have now ascertained an annulus to be present, or something analogous to it, we can no longer allow the genus to be separated from the *Filices*: but it becomes a question, to which of the Divisions it should belong. Brongniart (see *Dict. Classique*, v. 3. p. 350.) and Bory de St. Vincent have ranked the *Ceratopteris* with the *Gleichenææ*; the former indeed, doubtfully,—and he expressly points out a difference in the nature of the annulus; broad and flat and incomplete\* in *Ceratopteris*, narrow and projecting and complete in the *Gleichenææ*. Indeed the whole nature of the capsules is different in the two, though that difference is not easily expressed in words. They are large in *Ceratopteris* and *Parkeria*, quite sessile, of so thin and membranous and pellucid a texture, that the seeds are visible through the coat; and, even in *Ceratopteris*, the ring does not appear to have any elastic property, nor are these capsules arranged in *sori*, but scattered upon longitudinal veins beneath the *involute*. The seeds (incorrectly given in the *Exotic Flora*, but well defined by Mr. Brown) are large, and when seen under the high power of a microscope exhibit a most beautifully striated appearance. Their integument is comparatively thick and tough, and, when broken, it is found to contain a transparent oily substance, which floats upon the table of the microscope. In *short*, the whole habit of the plant, its place of growth, the situation of the capsules, their structure and that of the seeds,—all point out a group or tribe which cannot well be associated with any hitherto established. On this account we have formed a new one.

The *PARKERIACEÆ* are exclusively tropical plants, inhabiting Asia, Africa and America; and we are at present acquainted with but two genera,—*Ceratopteris*, distinguished by its very large and distinct annulus; and our *Parkeria*. Of the latter we possess two species, *Parkeria pteridoides* and *P. Lockharti*†.

M. Brongniart attributes a double covering to the capsule of *Ceratopteris*; but such a structure we have never found to exist in any of our specimens.

\* We are aware that Mr. Brown attributes to his *Teleozonia* (Brongniart's *Ceratopteris*) a complete annulus: but we have not found it to be so in any of our specimens.

† *P. Lockharti*; frondibus fertilibus pinnatis, pinnis pinnatifidis incisis, stipite aequali cylindraceo.

HAB. In lacubus prope Arima, Insula Trinitatis. *D. Lockhart*.



*Adiantum pentadactylon*

## ADIANTUM PENTADACTYLON.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ADIANTUM*, Linn. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo, libero. Br.

*ADIANTUM pentadactylon*; fronde tripinnata, pinnulis petiolatis teneris ovato-rhombeis acuminatis inciso-lobatis, lobis serratis, basi oblique cuneatis, soris oblongis solitariis ad apicem loborum.

*Adiantum pentadactylon*. "Langsd. et Fischer, Ic. Fil. t. 25." Kaulf. Enum. Fil. p. 206. Willd.

Sp. Pl. v. 5. p. 448. Spreng. Syst. Veget. v. 4. p. 114.

*Adiantum*, n. 1817. Burchell Mss.

HAÆ. In Insula St. Catherinæ Brasiliæ. Langsdorf. Chamisso. Prope Rio de Janeiro.

D. Burchell. D<sup>a</sup>. Maria Graham.

*Stipes* spithamæus et ultra, aterritus, nitidissimus.

*Frons* fere longitudine stipitis, circumscriptione deltoidea, bipinnata, pinnis inferioribus longis iterum divisis, pinnulis alternis remotiusculis, petiolatis, petiolo gracillimo, sesquiunciam ad duas uncias longis, teneris, opacis, ovato-rhombeis, acuminatis, inciso-lobatis, lobis oblongis serratis, basi inæquali et oblique cuneatis, integris. *Nervi* numerosi, repetitum dichotome divisi, e basi radiatim expansi. *Color* intense viridis. *Rachis* universalis partialisque aterritæ, nitidæ.

*Sori* ad apicem loborum, solitarii.

*Involucrum* transverse oblongum, subtile capsuliferum.

*Capsula* fusca, sphericæ, sublonge pedicellatæ.

*Semina* triangularia, pellucida, pallida.

Fig. 1. Pinna cum soris. f. 2. Apex lobi fertilis. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Our friend Mr. Burchell, as well as Mrs. Graham, have been so obliging as to communicate this very handsome species of Fern to us. Willdenow, correctly enough, compares it with the *Ad. trapeziforme*: but that has shorter, less acuminated *pinnules*, never deeply inciso-lobate at the margin as in our plant, which appears to be truly distinct from that and every other of the genus, and confined to the neighbourhood of Rio, in Brazil.



*Hemistichum apiculatum*

## ACROSTICHUM APODUM.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulae* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). Br.

*ACROSTICHUM apodum*; frondibus simplicibus oblongo-lanceolatis teneris sessilibus, basi longe attenuatis apice acuminatis, utrinque margineque (præcipue) squamuloso-pilosis, fertilibus multo minoribus.

*Acrostichum apodum*. Kaulf. *Enum. Fil.* p. 60. Spreng. *Syst. Veget.* v. 4. p. 34.

HAB. In Insula Montserrat. "Ryan in *Herb. Vahl*." Insula Sancti Vincentii. Rev. L. Guilding.

*Caudex* brevis, crassus, horizontalis, superne squamis numerosissimis, fulvis, lineari-lanceolatis, serratis obsitus, inferne radiculis filiformibus ramosis pilosis obtectus.

*Stipes* nullus.

*Frondes* plurimæ fere ex eodem puncto caudicis, subpedales, erectæ, oblongo-lanceolatæ, teneræ, membranacæ, costatæ atque furcatim parallelo-nervosæ, apice breviter acuminatæ, basi longe attenuatæ, utrinque sed margine costaque præcipue squamuloso-pilosæ, squamulis subulatis fuscis. *Color* læte viridis. *Frons fertilis* sterili duplo triplove minor.

*Capsulae* numerosissimæ, dorsum frondis totum tegentes; fuscæ, sphericæ, pedicellatæ.

*Semina* pallida, fusca, pellucido-reticulata, ovali-oblonga, vel subreniformia.

Fig. 1. Squamula e caudice. f. 2. Squamula e fronde. f. 3. Capsulae. f. 4. Semina:—*magn. auct.*

This very beautiful and distinct species of *Acrostichum* seems to have been described only by Kaulfuss from specimens gathered at Montserrat. We are indebted for our plants to our most liberal friend the Rev. L. Guilding, who has so sedulously collected the Ferns as well as other plants of St. Vincent.

One of our specimens has the upper half contracted, and clothed on the underside with capsules; whilst the lower half is of the usual breadth, and sterile.



*Adiantum Menziesii.*





ASPLENIUM MENZIESII.

FILICES.—GYRATÆ. Br. POLYPODIACÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ASPLENIUM*, Linn. Sori lineares, sparsi, dorsales. *Involucrum* e vena lateraliter ortum ducens, margine superiore libero. Br.

*ASPLENIUM Menziesii*; fronde lineari pinnata, pinnis rhombeo-oblongis obtusissimis coriaceis glabris, margine superiore dentatis, soris inferioribus solitariis horizontalibus, superioribus valde obliquis.

HAB. Insula Owyhee. D. *Menzies*.

*Caudex* brevis, subrepens, basi radicibus paucis ramosis donatus, paleaceo-setaceis, setis atro-fuscis.

*Stipes* duas ad tres uncias longus, atro-purpureus, nitidus, glaber, inferne teres, superne hinc læviter canaliculatus. *Rachis* huic similis.

*Frondes* spithamæ, fere ad pedales, erectæ, circumscriptione lineares, pinnatæ, pinnis approximatis horizontaliter patentibus, inferioribus rhomboideis, superioribus oblongis vel oblongo-quadrangulatis, angulo inferiore affixis, basi superiore truncata, una cum latere inferiore integerrimis, margine superiore, apiceque obtusissimo crenato-serratis, obscure costatis penninerviis; costa prope marginem inferiorem, ubi nervo solitario parallelo, soro unico, gerente, ad latus superius nervi plurimi, obliqui, fere horizontales, soriferi.

*Sori* lineari-oblongi.

*Involucra* albo-fuscescentia, membranacea.

*Capsula* fusca, longe pedicellata, annulo fere completo cincta.

*Semina* oblonga angulata sub summo lente subreticulata.

Fig. 1. Pinna, e medio frondis, fertilis. f. 2. Capsula. f. 3. Semina.

Communicated by our good friend Archibald Menzies, Esq., who found it in the Island of Owyhee. It was marked by that gentleman, "*Asplenium, nova species*;" and we entirely agree with him in its being so. Its near ally is, unquestionably, *Asplenium monanthemum* of Linnæus, and of Smith *Icones*, Tab. 73, an inhabitant of the Cape of Good Hope; and as we know, from specimens we have received from the Rev. R. T. Lowe, of Madeira also. That plant is always much broader in its circumscription near the middle, more attenuated at the base and at the extremity, having the pinnae of a more delicate texture, much longer and narrower, more disposed to be caniculated in the upper margin at the base, and with fewer sori, and those (mostly indeed solitary) confined to the lower side of the pinna.

Sprengel describes the *Aspl. monanthemum* as an inhabitant of New Spain, Martinique, Peru, &c.; and he makes the *Asplenium nanum* of Willdenow to be synonymous with it. Now this latter plant is indeed an inhabitant of Martinique, and is figured in Plumier; but, as that figure shows, it is quite a different species from *A. monanthemum*.



*Adiantum Fraseri*

## TODEA FRASERI.

FILICES.—OSMUNDACEÆ. *Br.*, *Kaulf.* OSMUNDACEÆ. *Spreng.* SCHISMATOP-  
TERIDES. *Willd.*

GEN. CHAR. *TODEA*, Willd. *OSMUNDÆ*, Pars., Thunb., Sm., *Br.* *ACROSTICHI* species, Linn. *Capsula* globosæ, pedicellatæ, reticulatæ, gibbere (vel annulo) dorsali pellucido, lateraliter dehiscentes, venulis frondis infer. insidentes. *Spreng.*

*TODEA Fraseri*; frondibus bipinnatis membranaceis glabris, pinnulis oblongis profunde serratis, pinnarum rachi alata.

HAB. In rupibus madidis apud "*Bougainville Cataract*," in montibus cæruleis Novæ Hollandiæ. *D. Fraser.*

*Caudex* erectus, brevis? crassus, subsquamosus, vestigiis frondium vetustarum cicatricatus, ad apicem frondosus.

*Stipites* subquadruplicares, semiteretes, glabri, hinc sulcati, inferne squamis fuscis latis membranaceis instructi.

*Frondes*, circumscriptione, ovato-lanceolatæ, bipinnatæ, pinnis patentibus lanceolato-acuminatis, sessilibus, iterum pinnatis, pinnulis oblongis, obtusis, pellucido-membranaceis, (siccitatè) olivaceo-fuscis, miute reticulatis, costatis, parallelo-venosis, venis simplicibus rarissime furcatis. *Rachis primaria* nuda, nisi extremitatem versus frondis, ubi, *secundaria* vel pinnarum, membranaceo-alata.

*Capsula* in venas pinnularum, præcipue basin versus, in parte inferiori frondis sparse, pallide fusca, sphericæ, pedicellatæ, reticulatæ, rima verticali a basi ad gibberem dorsalem vel annulum reticulatum, albedo-pellucidum dehiscentis.

*Semina* parva, subglobosa, pellucida.

Fig. 1. Pinnula cum capsulis. f. 2. Portio pinnulæ. f. 3. 4. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

We have here followed Swartz, Willdenow, Kaulfuss, and Sprengel, in retaining the genus *Todea*, as distinguished from *Osmunda*, with which Brown, as Thunberg has done, unites it.

There is a difference of habit in the two genera, mainly however arising, we must confess, from the circumstance of the fructifications being placed on the back of the *unchanged* frond in *Todea*; whilst in *Osmunda* they are situated on the altered and contracted pinnules. In *Osmunda regalis*, however, we find the ring or gibbous portion distinctly striated; in *Todea* it is reticulated.

The very interesting species here represented,—the second only of the genus now described,—was communicated to us by Mr. Fraser, who observes, that he found it but in one spot, below moist rocks, at Bougainville's Cataract, in the Blue Mountains of New Holland. It differs remarkably from *T. africana*, which is equally a native of New Holland, by the delicate and subpellucid texture of its frond. A third species of *Todea*, but not probably an Australasian plant, is known to Mr. Brown, having a frond of a similar habit with that of *T. Fraseri*, as may be inferred from his observations, under the genus *Osmunda*, Prodr. p. 163: "Quoniam in *Todeâ Willd.* capsulæ vere pedicellatæ, et cum porro *alia species* existit, *iusdem pariter dorsalibus*, at *fronde pellucidâ Trichomanis instar donata*, consultiùs duxi ambas ad *Osmundam* amandare."



*Hephestium Goldianum?*

## NEPHRODIUM GOLDIANUM.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *NEPHRODIUM*, Br. *NEPHRODII* species, Mich. *ASPIDI* species, Sw.  
Sori rotundi, dorsales. *Involutrum* reniforme, sinu affixum, marginibus liberis. Br.

*NEPHRODIUM Goldianum*; frondibus pinnatis, pinnis profunde pinnatifidis breviter petiolatis, laciniis oblongis acutiusculis subfalcatis, mucronato-serratis, soris centralibus intra marginem et costam.

*Aspidium Goldianum*. *Hooker in Goldie's Acc. of rare Canad. Pl. in Edin. Phil. Journ. v. 6. p. 333.*

HAB. America Septentrionali. In Canada præcipue. *D. Goldie. D. Holmes. D<sup>o</sup> Percival. D. Sheppard.* Prope Novam Eboracensem. *Torrey.*

*Stipes* pedalis, erectus, semiteres, hinc sulcatus, pallide fuscus, nitidus, squamis deciduis paleaceus.

*Frons* pedalis ad-sesquipedalem et forsitan ultra, circumscriptione ovato-oblonga, pinnata, pinnis remotiusculis breviter petiolatis, inferioribus præcipue, lanceolato-acuminatis, profunde pinnatifidis, laciniis subuncialibus, oblongis, acutiusculis, paululum falcatis, serratis, serraturis obtusis, mucrone vel spinula minutissima terminatis. *Color* totius frondis, statu siccò, flavo-virescens, subtus pallidior. *Sori* in lineis duabus dispositi, singula costam intra et marginem quasi intermedia, disposita. *Involutrum* rotundato-reniforme, sinu profundo affixum.

*Capsula* longe pedicellatæ, fuscæ.

*Semina* subangulata, reniformi-rotundata, fusco-flavescentia, limbo pallidiorè cincta.

Fig. 1. Lacinia pinnæ cum soris. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

That this species must have been known to the writers on American Botany, I cannot for a moment doubt: but if it be included in any of their Floras, it is confounded with some other species, perhaps with *Nephrodium cristatum* by Michaux, or with *N. Filix Mas* by Pursh, judging from a specimen sent me by Professor Torrey from New York; and it is very certain that both these authors consider their respective plants to be different from those of the same name in Europe.

The present is indeed a very handsome and a very decidedly marked species, coming, perhaps, nearest to the North American *Nephrodium marginale*, in which, as the name implies, the fructifications are altogether marginal.



*Adiantum amenum*

D. Gouan del.

J. Tournefort sculp.

## ADIANTUM AMÆNUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd

GEN. CHAR. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo libero. Br.

ADIANTUM *amœnum*; fronde triplicato-pinnata, foliolis rigidis lato-cuneatis breve petiolatis apice serratis (frondium sterile ovatis obtusis basi oblique cuneatis), stipite rachique glaberrimis hinc solummodo piloso-scabris.

Adiantum amœnum. Wallich MSS.

HAB. In India Orientali (e Nepaliâ?). Wallich.

*Rachis*, ut videtur, omnino fibrosa, fibris flexuosis, ramosis, fuscis.

*Stipites* plurimi ex eadem radice, palmares, erecti, flexuosi, aterrimi, nitidi, hinc sulcati et piloso-scabri, pilis fuscis, ad basin paleaceo-squamosi.

*Frondes* digitales et ultra, circumscriptione suborbiculares, triplicato-pinnatæ, pinnis elongatis, oblongo-lanceolatis, obtusis.

*Rachis* subgracilis, atra, nitida.

*Foliola* semiunciam longa, brevi-pedicellata, pedicello hinc superne piloso-scabro; frondium sterile ovata, obtusa, basi oblique cuneata, fertile late cuneata, apice lobata, lobis plerumque tribus, dentato-serrata, coriacea, rigida, glabra.

*Sori* transversim oblongi, in singulo lobo folioli.

*Involucra* membranaceo-coriacea, fusca, arcte inflexa, majuscula, approximata.

*Capsulæ* sublonge pedicellatæ, annulo lato donatæ.

*Semina* angulata, subreticulata, pellucida, flava.

Fig. 1. Pinna sterilis e fronde fertili. f. 2. Foliolum fertile, subtus visum. f. 3. Involucrum, subtus visum, cum capsulis. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

Communicated by the Honourable the East India Company as a native of the East Indies; but of which particular district of the Indian possessions is not stated:—probably Nepal. It differs from every species hitherto described, in many points; yet in the decidedly cuneate form of the foliola, it approaches the tribe with the membranaceous leaflets, to which *A. Capillis Veneris* belongs. Here, however, the foliage is remarkably rigid and coriaceous; and on looking at the upper side of a frond, the stipes, rachis, and pedicels will be found to be rough with short close-set harsh brown hairs, whilst the rest of the plant is quite glabrous.



*Adiantum punctatum?*



## ADIANTUM LUNULATUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd.

GEN. CHAR. *Sori* marginales, punctiformes vel lineares. *Involucrum* e margine frondis replicato, disco venoso capsulifero, limbo membranaceo, libero. Br.

*ADIANTUM lunulatum*, glabrum; frondē pinnata, pinnis sublonge petiolatis lunulato-oblongis obtusissimis, suprema cuneata, margine superiore lobato.

*Adiantum lunulatum*. *Burm. Fl. Ind. p.* 235. *Sw. Syn. Fil. p.* 121. *Willd. Sp. Pl. v.* 5. p. 430. *Don Prodr. Fl. Nepal. p.* 16. *Kaulf. Enum. Fil. p.* 205. *Spreng. Syst. Veget. v.* 4. p. 110. *Reliq. Hænk. p.* 62.

*Pteris lunata*. " *Retz. Obs. 2. p.* 28. t. 4."

*Adiantum lunatum*. *Cavan. Prælect. 1801. n.* 676.

*Adiantum arcuatum*. *Swartz. Syn. Fil. p.* 122. *Willd. Sp. Pl. v.* 5. p. 431.

*Capillaris malabarica* non ramosa, folio rotundato dentato. *Petiv. Gazoph. t.* 54. f. 10.

*Avenka*. *Hort. Malab. v.* 12. p. 73. t. 40.

HAB. In India Orientali:—arenosis humidis in Malabar. *Rheede*. Brasilia. *Swartz*. Insula Java. *Burman*. In Nepalia legerunt *Hamilton* et *Wallich*. Insulis Philippinis, Marianis, et ad Acapulco. *Cavan*. *Willd. Chamisso*. In Mexico. *Henke*.

*Radix* caespitosa, fibrosa, fibris tenuibus, valde ramosis, flexuosis, tomentosis.

*Stipites* plurimi ex eadem radice, graciles, paululum, ut videtur, decumbentes, atro-fusci, nitidi, compressi, glabri.

*Frons* digitalis ad spithamæam, circumscriptione oblonga, obtusa, simpliciter pinnata, pinnis alternis, remotiusculis, petiolatis, petiolo semiunciam longo, tenui, gracillimo, unciam longis, lunulato-oblongis, obtusissimis, radiato-venosis, basi truncatis membranaceis, pallide viridibus, suprema cuneata, margine superiore semicirculari, lobato, lobis contiguis non raro confluentibus, fructiferis. *Rachis* gracilis, atterima, nitida, quandoque (fide *Kaulfuss*) apice radicans.

*Sori* lineares, marginem loborum occupantes, nunc confluentes.

*Capsulæ* numerosæ, longe stipitate. *Semina* triangularia, pallida.

Fig. 1. Pinna. f. 2. Capsulæ. f. 3. *Semina*:—*magn. auct.*

*Adiantum lunulatum* appears to have a very extended geographical range, being found both upon the continent\* and the islands of India, as well as in Mexico.

The editor of the *Reliquiæ Hæmkeanae*, on the authority of specimens in Willdenow's herbarium, has referred the *A. arcuatum* of that author and Swartz (the *A. lunatum* of Cavanilles) to our plant, as a very trifling variety with the lobes of the pinnæ more deeply cut than usual.

\* As far north as Nepal, where the specimen here figured was gathered by Dr. Wallich.



*Davallia Emarginata*

DAVALLIA EMERSONI.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *DAVALLIA*, Sm. *Sori* subrotundi (vel in lineola verticali) margini plerunque approximati. *Involucrum* superficialium, ex apice venæ unicæ ortum, lateribus vel latâ basi adnatum, exterius et verticaliter liberum. Br.

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*DAVALLIA Emersoni*; fronde parce pilosa simplici pinnatifida, segmentis oblongis obtusis integerrimis, soris in apicem loborum.

HAB. In Zeylona. *Emerson, M.D.*

*Radix* fibrosus, fibris ramosis, nigris, pilosis.

*Frondes* aggregatæ, pedales, subcoriaceæ, lanceolatæ, sessiles, simplices, superficie margineque remote pilosis, pilis brevibus rigidis, atro-fuscis, basi apiceque attenuatæ et integerrimæ, reliquæ pinnatifidæ, pinnatim ramosæ, lacinis oblongis obtusis, integerrimis.

*Involucra* oblongo-cucullata, coriacea, extus dehiscentia.

*Capsulæ* subduodecim in singulo soro, pedicellatæ, pedicellis longitudine involucri, et in ejus fundo insertis.

*Semina* sphærica, reticulata, flavo-fusca.

Fig. 1. Lacinia frondis superne visa. f. 2. Portio frondis, cum soris. f. 3. Portio lacinie fructificantis, epidermide in partem sublata, ut venæ capsularum in conspectum veniant. f. 4. Capsulæ. f. 5. Semina:—*magn. auct.*

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This very curious species of *Davallia* is evidently allied to the *D. pectinata* of Smith, and the *D. contigua* of Hedwig, as far as can be judged from the very imperfect account we have of the latter; both being natives of the islands of the Pacific Ocean, and both differing from ours in the shape and structure of the lacinie of the frond.

The only specimens we have were gathered by Dr. Emerson in Ceylon; an island which, were it properly investigated, would perhaps yield as abundant a harvest of interesting Ferns as any spot of the like extent on the surface of the globe.



*Cyathia sinuata?*

## CYATHEA SINUATA.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *CYATHEA*, Sw. Sori globosi dorsales distincti, divisura vel medio venæ insidentes.  
*Involucrum* infra sorum insertum, transversim æqualiter vel laceratim dehiscens.

*CYATHEA sinuata*; frondibus simplicibus lanceolatis sinuatis costatis venosis, soris in medio venarum lateralium.

HAB. In Zeylona, ubi *Pas-dum-Karle* dicta. *Emerson, M.D.*

*Caudex* —? erectus.

*Stipites* breves, versus apicem caudicis inserti, sparsi, nigro-fusci, nitidi, glabri, paululum muricati, inferne dilatati.

*Frondes* plurimæ, versus apicem caudicis congestæ, pedales, sesquipedales, coriaceo-membranaceæ, glabræ, lanceolatae, basi apiceque attenuatæ, margine sinuato-lobatæ, lobis superioribus obsolete, ad summum apicem serratæ, costatæ, venosæ, venis pinnatim ramosis, ramis soriferis.

*Sori*, semper in venis lateralibus et medio versus, inserti.

*Involucrum* infra sorum insertum, exacte globosum, membranaceum, reticulatum, transversim sed irregulariter dehiscens, parte inferiore persistente pateriformi, margine magis minusve lacerato.

*Receptaculum* capsuliferum, hemisphæricum.

*Capsulæ* sphericæ, annulo fere completo cinctæ, pedicellatæ.

Fig. 1. Portio fructificans frondis. f. 2. Sorus dehiscens. f. 3. Pars inferior persistens pateriformis involucri, cum receptaculo capsulisque. f. 4. Capsulæ:—*magn. auct.*

The old genus *Cyathea* of Sir J. E. Smith has been divided by Mr. Brown; and the true *Cyathea* are by him considered to be *C. arborca*, *dealbata*, *medullaris*, *affinis*, &c., in all of which, as well as in four other undescribed species, there is a spherical involucre, bursting transversely and equally, in a lacerated manner, inserted upon the forking of a vein;—but, observes Mr. Brown, in a fifth species from the Molucca Isles, the involucre arises from the *middle of a vein*, “at quoniam hæc a congeneribus differt pinnis integerrimis subsensiformibus sorisque sparsis, legem insertionis haud multum infirmat.” To this *Cyathea* from the Molucca Isles, alluded to by Mr. Brown, our *C. sinuata* is, in all probability, closely allied, if it be not the same species. It is quite unlike any hitherto described one; and we regret not to have seen more perfect specimens than those here figured, which give no idea of the height of the caudex, or the thickness to which it may be supposed to arrive.



*Pteris dryosperma!*

## PTERIS CHRYSOCARPA.

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES veræ. *Willd., Spreng.*

GEN. CHAR. *PTERIS*, Linn. *Sori* lineares, marginales, continui, capsulis sinu involucri insertis.  
*Involucrum* marginale, continuum, scariosum, intus liberum. *Br.*

*PTERIS chrysocarpa*; fronde tri-quadrupinnata, foliolis linearibus acutis petiolatis, subtus aureo-flavis.

*Lomaria aurea.* *Wallich MSS.*

HAB. In Nepalia (*Hamilton*); ubi etiam in montibus prope Katmandu legit *Cl. Wallich.*

Nomen vernac. *Mousaga Mounoza* Nepalensibus.

*Caudex*, ut videtur, repens, radículas fibrosas emittens.

*Stipes* spithameus ad pedalem, erectus, teres, glaber, fuscus, subnitidus, hinc sulcatus.

*Frons*, circumscriptione, ovato-lanceolata, plerumque triplicato-pinnata, pinnis alternis, primariis subremotis, pinnulis subunciam longis, breve petiolatis, linearibus, acutis, superne convexis, medio canaliculatis, viridibus, subtus omnino pulcherrime aureo-flavis, inferioribus pinnarum non raro iterum pinnulatis. *Rachis* universalis partialisque glabræ, pallide flavo-fuscae. *Frondes* steriles nondum vidimus.

*Sori* marginales, in sinu involucri inserti, demum pedicellorum elongatione pinnarum totum dorsum tegentes.

*Involucrum* continuum, marginale, membranaceum, flavum, primum capsulas omnino tegens, interius dehiscens.

*Capsule* numerosissimæ, flavæ, longe stipitatae.

*Semina* minuta, spherica, subreticulata.

Fig. 1. Pinna fertilis. f. 2. Portio ejusdem ut capsularum insertio appareat. f. 3. Capsulæ. f. 4. Semina:—*magn. auct.*

Although in many particulars this agrees with the *Lomaria decomposita* of Don, yet I am inclined to think that, were it the same, so close an observer could not have failed to have remarked and described the singular and very beautiful colour of the whole underside of the frond; on which account Dr. Wallich, so long ago as 1816, when he gathered the plant in its native soil, named it *Lomaria aurea*. It is an extremely beautiful species, and no less remarkable in the striking contrast of colour which it exhibits, than in the much divided pinnae. The first aspect of the fructification might have indeed well led Dr. Wallich to consider it as belonging to the genus *Lomaria*; but if the capsules be carefully traced to their insertion, they will be found to be placed in the sinus itself of the involucre, where a longitudinal vein passes, which may be looked upon as the receptacle.

There is a *Pteris aurea* of Poiret from Chili; so that, however unwillingly, we are obliged to change the specific as well as the generic name which Dr. Wallich had given to this plant.



K. Sprengel, Del.

*Polypodium heteromorphum*

J. Zorn, Sc.





## POLYPODIUM HETEROMORPHUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *POLYPODIUM*, Swartz. Sori subrotundi (seriati, sparsi vel conferti). *Involucrum* nullum. Br.

*POLYPODIUM heteromorphum*, simplex vel ramosum, hirsutum, pinnatum; pinnis breviter petiolatis ovalibus subintegris vel oblongis pinnatifidis, soris in singula vena solitariis.

HAB. In rupibus humidis prope verticem montis Pichinchæ, Andium Peruvianarum. D. Prof.

Gul. Jameson.

*Planta* valde polymorpha, ubique hirsuta.

*Stipes* ut et *rachis*, filiformis, hirsutus.

*Frons*, circumscriptione, linearis, palmaris ad spithamæam, nunc simplex, flexuosa, nunc bis terve dichotoma, ramis pinnatis, pinnis remotiusculis semiunciam fere ad unciam longis, brevissime petiolatis, ovalibus, et tunc marginibus integris vel subintegris, vel oblongis pinnatifidis vel sinuato-pinnatifidis, lobis obtusissimis, ubique hirsutis, pilis longis versus basin ramosis, nunc stellatim divisis. *Color* fusco-viridis.

*Sori* in singula vena solitarii, rotundati.

*Capsule* annulo fere completo cinctæ, pedicellatæ.

*Semina* subtriangularia flavescenti-fusca.

Fig. 1. *Polypodium heteromorphum* statu simpliciter pinnata. f. 2. Idem, rachi dichotome divisa, pinnisque ovalibus integris. f. 2. Idem, pinnis sinuato-pinnatifidis et pinnatifidis:—*magn. nat.* f. 3. Pinna, cum soris. f. 4. Pili. f. 5. Capsulæ. f. 6. Semina:—*magn. auct.*

This is a very singular and interesting species of *Polypodium*, like none of the genus with which we are acquainted, or which we can find described in books. Indeed, so variable are the specimens from the same tuft, as gathered by Professor W. Jameson "upon the top of the mountain Pichincha, growing in large patches, straggling or hanging over the face of the dripping rocks," that if several of them were seen separately, they might well be supposed to constitute distinct species. The simple-fronded specimens have some affinity in their mode of growth with *Asplenium Trichomanes* and *viridis*, but those with the divided fronds have the ramifications as regularly dichotomous as in the *Gleichenia*: were this not the case, we might have supposed that the ramification depended upon innovations, or proliferous shoots.



*Lyopodium tetragenum*

LYCOPODIUM TETRAGONUM.

FILICES.—LYCOPODINEÆ. Swartz, Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *LYCOPODIUM*, Linn. *Capsule* uniloculares, axillares, sessiles; alia bivalves, farina repletæ; alia bi-trivalves, corpusculis 1—6, globosis. Br.

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*LYCOPODIUM tetragonum*; foliis quadrifariam arcte imbricatis ovatis subacutis concavis carinatis ciliatis, capsulis axillaribus, caule adscendente dichotomo ramoso.

HAB. Prope verticem montis Pichincha, Andium Peruvianarum. D. Prof. Gul. Jameson.

*Caulis* basi decumbens, demum erectus, ramosus, ramis dichotomis, ubique foliosus.

*Folia* arcte quadrifariam imbricata, erecta, ovata, sessilia, subbrevis acuminata, intus concava, dorso convexa, carinata, flavo-virescentia, rubedine tincta, margine ciliata: *fructifera* paululum magis acuminata.

*Capsula* axillares, versus apicem ramorum, reniformes, bivalves, flavæ.

*Semina* minuta, trigona, semper ternatim in unum corpus congesta, demum libera.

Fig. 1. Folium caulinum. f. 2. Folium fructiferum. f. 3. Semina:—*magn. auct.*

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No less than 140 species of *Lycopodium* are enumerated in Sprengel's edition of the *Species Plantarum*, with none of which will the plant here described accord. It inhabits almost the highest summits of Pichincha, and was communicated to us, along with many other rarities from the same mountain, by Professor W. Jameson.

*Acrostichum**subcrenatum?*

**ACROSTICHUM SUBCRENATUM.**

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kauf.* FILICES veræ. *Willd., Spreng.*

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsula* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamula, vel setæ in quibusdam capsulis interstinctæ). *Br.*

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*ACROSTICHUM subcrenatum*; frondibus pinnatis, pinnis brevi-petiolaris subcrenatis lanceolatis acuminatis, sterilibus (septenis) basi cuneato-attenuatis, fertilibus (novenis) multo minoribus, basi, inferioribusque apice, obtusiusculis, rachi subalata.

HAB. E Zeylona, ubi in rupibus, prope Saffragan, provenit, communicavit *D. Emerson, M.D.* *Caudex*, ut videtur, brevis, subrepens, squamoso-paleaceus.

*Stipes* erectus, in fronde sterili digitalis, fertili spithameus, gracilis, subnitidus, hic illic paleaceus, hinc sulcatus.

*Frons sterilis* palmaris, pinnata, pinnis lanceolatis longe acuminatis, basi suboblique cuneato-attenuatis, ultima majori, margine subcrenata, utrinque glabra, venis pinnatis, venulis reticulatim connexis. *Rachis* subalata:—*fertilis* pinnis quadruplo minoribus, inferioribus basi apiceque minus attenuatis obscure crenatis.

*Capsule* totam inferiorem partem pinnarum tegentes, flavo-fusca, pedicellatæ.

*Semina* subovalia, paululum angulata, pellucida.

Fig. 1. Portio pinnæ sterilis. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

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Communicated by Dr. Emerson, who received it from Ceylon, with the native name "*Ale Kowila*" attached to it. We can find nothing corresponding with it to be described in any publication.



*Lindaea carisifolia!*

## LINDSÆA ENSIFOLIA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *LINDSÆA*, Dryand. *Sori* lineares, margine paralleli sæpiusque aproximati. *Involucrum* ex apicibus venarum (unâ plurium) ortum ducens, exterius liberum.

*LINDSÆA ensifolia*; glabra, frondibus pinnatis, pinnis (paucis) petiolatis alternis lineari-ensiformibus obtusis integerrimis basi attenuatis, soris marginalibus continuis.

*Lindsæa ensifolia*. Swartz. *Syn. Fil.* p. 118 & 137. Willd. *Sp. Pl.* v. 5. p. 420. Kaulf. *Enum. Fil.* p. 219. Spreng. *Syst. Veget.* v. 4. p. 79.

*Pteris stricta*. Lam. *Encycl. Bot.* v. 5. p. 713. Swartz. *Syn. Fil.* p. 96. Willd. *Sp. Pl.* v. 5. p. 370.

*Adiantum ensifolium*. Poir. in *Encycl. Bot. Suppl.* v. 1. p. 139.

HAB. Insula Mauritiï et in Madagascaria. Swartz; Néraud; Carmichael.

*Caudex* brevis, vix repens, squamoso-hirsutus, radículas filiformes flexuosas ramosas fuscas emittens.

*Stipes* spithamæus et ultra, erectus, strictus, fusco-viridis, nitidus, inferne badius, hinc canaliculatus.

*Frons*, in nostris exemplaribus, digitalis ad palmarem, circumscriptione oblonga, pinnata, pinnis paucis (5 ad 7), alternis, remotis, 3—4-unciam longis, lineari-ensiformibus, costatis, venisque obscuris reticulatis omnino glabris, integerrimis, obtusis, basi in stîpitem vel petiolum brevem attenuatis.

*Sori* intra-marginales.

*Involucrum* lineare, continuum, membranaceum, pallidum extus dehiscens.

*Capsulæ* sphericæ, pedicellatæ.

*Semina* obtuse triangularia, subpellucida intense flava.

Fig. 1. Portio fructificans pinnae. f. 2. Sorus et involucrum. f. 3. Semina:—*magn. auct.*

We are indebted to the Baron de Lessert for the opportunity of figuring this rare Fern, which was gathered by Mons. Néraud in the Mauritius, the same country in which it was first discovered, we believe, by Commerson.



*Lycopodium varium!*





## LYCOPODIUM VARIUM.

FILICES.—LYCOPODINEÆ. Swartz., Br., Kaulf. STACHYOPTERIDES. Willd.

GEN. CHAR. *LYCOPODIUM*, Linn. *Capsula* uniloculares, axillares, sessiles; alæ bivalves, farina repletæ: aliæ bi-trivalves, corpusculis 1—6, globosis. Br.

*LYCOPODIUM varium*; caule ramoso, foliis sparsis linearibus decurrentibus integerrimis imbricatis vel patentibus, spicis terminalibus dichotomis simplicibusve, squamis obtusis integerrimis. Br.

*Lycopodium varium*. Br. *Prodr. Fl. Nov. Holl.* p. 165. *Spreng. Syst. Veget.* v. 4. p. 12.

HAB. In insula Otaheite. Menzies. In insula Van Diemen. Brown; ubi in monte Wellington legit D. Fraser et communicavit.

*Radix* nobis ignota.

*Caulis* subpedalis, erectus vel decumbens repetitum dichotome ramosus, basi nudiusculus, dein foliosus.

*Folia* numerosa, erecto-patentia, unguiculata, linearia, obtusiuscula, integerrima obscure costata, basi decurrentia, coriacea, glabra; suprema infra spicam ovato-lanceolata, costa dorso magis prominente. *Color*, siccitate, luteo-viridis.

*Spicæ* terminales, sessiles, lineares, acute tetragonæ, duas vel tres uncias longæ, nunc solitariae, plerumque geminae.

*Squamæ* arcte imbricatæ, quaternæ, cordatæ, obtusæ, breves, concavæ, dorso obtuse carinatæ (nunc lineari-oblongæ).

*Capsulæ* majusculæ, reniformes, glabræ, bivalves.

*Semina* pellucida, triangularia.

Fig. 1. Folium. f. 2. Folium e summitate caulis. f. 3. Squama spicæ, cum capsula. f. 4. Squama, a dorso visa. f. 5. Squama, intus visa. f. 6. Semina:—*magn. auct.*

The learned author of the *Prodromus Floræ Novæ Hollandiæ* has cited two varieties of this plant; the one, “*α umbrosum, caulis debilis, folia patentia, spicæ filiformes, simplices vel divisæ, flaccidæ, laxiusculæ; squamæ oblongo-lineares, capsulis multoties longiores;*” and the other, “*β alpinum, caulis erectus: folia arcte imbricata, opaca, ecostata; spicæ dichotomæ, tetragonæ, squamæ ovatæ, capsulas vix superantes.*” We find the plant, indeed, to be very variable in its fructification: some of our specimens, received since the plate was engraved, have the extremity of the spike running out into a shoot, with sterile scales or leaves, exactly resembling those of the stem and branches; in others, the part bearing the fructification scarcely forms a spike at all: but the fructification appears axillary; and then the species comes very near the *Lycopod. gmidoides*, Ic. Fil. t. 30.



*Lycopodium heterophyllum*

**LYCOPODIUM HETEROPHYLLUM.**

FILICES.—LYCOPODINEÆ. *Swartz., Br., Kaulf.* STACHYOPTERIDES. *Willd.*

GEN. CHAR. *LYCOPODIUM*, Linn. *Capsulæ* uniloculares, axillares, sessiles; aliæ bivalves, farina repletæ: aliæ bi-trivalves, corpusculis 1—6-globosis. *Br.*

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*LYCOPODIUM heterophyllum*; caule erecto dichotomo, foliis quadrifariis subulatis planis patulis incurvis, caulinis integerrimis nudis, in pedunculo denticulato-serratis piliferis, spicis pedunculatis subternis cylindraceis, squamis squarrosis ovatis acuminatis piliferis denticulato-serratis.

HAB. In insula Owyhee. *A. Menzies.*

*Caulis* erectus, pedalis et ultra, repetitum dichotome ramosus, ubique foliosus.

*Folia* quadrifariam inserta, patentia, incurva, subulata, plana, obscure costata, omnino integerrima, apice concolora.

*Spicæ* subternæ, longe pedunculatæ, cylindraceæ, erectæ, subrobustæ, insigniter squamosa.

*Pedunculus* terminalis, foliosus, foliis quadrifariis, caulinis similibus, sed magis distantibus, marginibus spinuloso-denticulatis in pilum longum diaphanum flexuosum attenuatis.

*Squama* ovata, acuminata, pilifera, margine spinuloso-denticulata.

*Capsulæ* reniformes, bivalves.

*Semina* pallido-flava, minutissima, subreticulata.

Fig. 1. Folium caulinum. f. 2. Portio pedunculi cum ejus foliis. f. 3. Squama cum capsula. f. 4. Semina:—*magn. auct.*

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Discovered by A. Menzies, Esq. at Owyhee, during his voyage with Captain Vancouver. It is remarkable for the two kinds of leaves which it bears; those of the stem being perfectly destitute of a diaphanous hair point; while those of the peduncle, which in fact is but a prolongation of a branch, are singularly toothed, somewhat spinous at the margins, and terminated with a waved hair-like point. It will rank near *L. aristatum* of Humboldt.



*Splenium pectinatum?*

## ASPLENIUM RESECTUM.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *ASPLENIUM*, Linn. Sori lineares, sparsi, dorsales. *Involucrum* e venâ lateraliter ortum ducens, margine superiore libero. Br.

*Asplenium resectum*; frondibus pinnatis, pinnis membranaceis oblongo-lanceolatis dentato-serratis, basi superiore truncatis, inferiore abscisso-cuneatis integerrimis, stipite rachique gracilibus glabris nudis.

*Asplenium resectum*. Smith *Icon. t. 72*. Swartz. *Syn. Fl. p. 80*. Willd. *Sp. Pl. v. 5. p. 322*. Spreng. *Syst. Veget. v. 4. p. 84*.

*Asplenium inæquilaterale*. Willd. *Sp. Pl. v. 5. p. 322*.

HAB. In insula Borboniæ. Commerson. Inter saxos ad marginem rivulorum, in sylvis montosis insulæ Mauritiî. Bojer.

*Caudex* repens, squamosus, radicales plures, fibrosas, fuscas, ramosas emittens.

*Stipes* digitalis, erectus, gracilis, atro-purpureus, nitidus, hinc sulcatus, basi subsquamosus.

*Frons* palmaris fere ad pedalem, circumscriptione lato-lanceolata, basi truncata, apice argute acuminata, pinnata, pinnis approximatis, plerumque alternis, subhorizontalibus, patentibus, tenuibus, membranaceis, oblongo-lanceolatis, obtuse acuminatis, unciam ad duas uncias longis, inæqualiter dentato-serratis, costatis, furcato-venosis, inæquilateralibus, basi superiore truncatis, inferiore abscisso-cuneatis, integerrimis.

*Sori* in venis lateralibus siti, oblongo-lineares.

*Involucrum* membranaceum, fuscum, costam versus dehiscens.

*Capsulæ*, annulo lato fere completo, cinctæ, pedicellatæ.

*Semina* intense flavo-fusca, subrotunda, tuberculata.

Fig. 1. Pinna fructificans. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

This, we believe, is certainly the *Aspl. resectum* of Smith in the *Icones* above quoted; but it must be confessed that it belongs to a group of the simply pinnated *Asplenias*, which are liable to much variation, and consequently to be determined with difficulty; on which account we are the more anxious to represent the present plant from perfect specimens, sent us by the excellent Bojer, through the kindness of Charles Telfair, Esq., from the Mauritius. It is indeed very nearly allied to the West Indian *Aspl. abscissum*, the pinnæ being almost exactly the same in shape, but that has the rachis winged.



*Trichomanes quercifolium?*

**TRICHOMANES QUERCIFOLIUM.**

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *TRICHOMANES*, Sm., Sw. Sori marginales. Capsula sessiles, receptaculo communi cylindraceo insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. Br.

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*TRICHOMANES quercifolium*; frondibus obovato-cuneatis in stipitem brevem attenuatis, profunde pinnatifidis, laciniis lineari-oblongis obtusis sinuatis apice soriferis, involucris exsertis.

HAB. In arboribus, in sylvis apud Esmeraldas, ab urbe Quito iter diei distantem. Amer. Merid. alt. 8000 ped. D. Prof. Gul. Jameson.

*Caudex* filiformis, repens, hic illic radicans, squamoso-tomentosus, fuscus.

*Frondes* 3—4 uncias longæ, unciam ad duas uncias latæ, obovato-cuneatæ, basi in stipitem brevem subtomentosum attenuatæ, membranaceæ, pulcherrime reticulatæ, profunde pinnatifidæ, laciniis lineari-oblongis, obtusis, sinuatis, penninerviis, superioribus apice soriferis. *Pili* pauci, furcati vel stellati ad marginem laciniarum.

*Sori* terminales, solitarii vel bini ternive in singula lacinia superiore.

*Involucra* omnino exserta, libera, subcylindracea, inferne attenuata, superne bilabiata, labiis erectis subrotundis.

*Receptaculum* longissimum, exsertum, ad basin solummodo, intra involucrum, capsuliferum.

*Capsulae* orbiculares, compressæ, peltatæ, transversim complete annulatæ.

*Semina* parva, oblonga vel triangularia, flavo-fusca.

Fig. 1. Portio laciniaæ cum soris. f. 2. Portio frondis:—*magn. auct.* f. 3. Pars inferior receptaculi cum capsulis. f. 4. Semina:—*magn. auct.*

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Allied to *T. reptans* of Swartz and Willdenow; but distinguished by its much greater size, and the deeper and narrower segments of the frond.



*Pteris auriculata?*





## PTERIS AURICULATA.

FILICES.—GYRATE. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *PTERIS*, Linn. Sori lineares, marginales, continui; capsulis sinu involucri insertis. *Involucrum* marginale, continuum, scariosum, intus liberum.

*PTERIS auriculata*; frondibus pinnatis, pinnis brevissime petiolatis triangulari-ovatis subtrilobis, vel basi sursum auriculatis inferioribus subrotundis, stipite rachique levissimis nitidis.

*Pteris auriculata*. Thunb. *Fl. Cap. ed. Schultes. v. 2. p. 733.* Willd. *Sp. Pl. v. 5. p. 365.*  
Swartz. *Syn. Fl. p. 103.* Spreng. *Syst. Veget. v. 4. p. 71.* Sieber *Syn. Fl. no. 8.*  
Schlentend. *Adumb. Pl. t. 22.*

*Adiantum auriculatum*. Thunb. *Prodr. Fl. Cap. p. 173.*

HAB. Ad Promontorium Bonæ Spici. Thunberg; Villette; Thom; Mund; Carmichael.

*Radix* cæspitosa, e fibris numerosis ramosis subpilosis.

*Stipes* brevis, vix duas uncias longus, erectus, flexuosus, atro-purpureus, longissimus, nitidus.

*Frons* palmaris usque ad spithamæam, circumscriptione lanceolata, pinnata. *Pinnæ* alternæ, plerumque subremotæ, forma mire variantes; *inferiores* subrotundæ, integerrimæ, obtusissimæ, reliquæ magis minusve ovatæ vel triangulares, basi utrinque vel sursum solummodo auriculatæ, nunc obtusæ, nunc acutæ; *superiores* magis angustæ; omnes brevissime petiolatæ, subcoriaceæ, glabræ, supra intense virides, inferne pallidæ, costatæ, vix, nisi oculo bene armato, venosæ. *Rachis* glaberrima, atro-purpurea.

*Sori* marginales, continui.

*Involucrum* e margine membranaceo formatum, pallide fuscum, apice inæqualiter crenulatum, subundulatum.

*Capsulæ* numerosæ, pedicellatæ, annulo lato donatæ.

*Semina* parva, globosa.

Fig. 1. Portio pinnæ cum soro. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

At the time that our drawing was made, no figure existed of this species of *Pteris*; but since the engraving was executed, we find it represented in the last number of Schlentendal's excellent *Adumbrationes Plantarum*; of which, however, the descriptions have not yet reached us. The four numbers that we have seen are admirably illustrative of the Ferns of the Cape of Good Hope.



*Trichomanes apodum?*

## TRICHOMANES APODUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *TRICHOMANES*, Sm., Sw. *Sori* marginales. *Capsula* sessiles, receptaculo communi cylindracco insertæ, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. Br.

*TRICHOMANES apodum*; frondibus minutis (plerumque) sessilibus cordato-rotundatis profunde lobatis minutissime reticulatis patenti-nervosis, lobis obtusis sinuatis, involucris exsertis submarginatis bilabiatis, caudice longe repente tomentoso.

HAB. In insula, Barbadoes dicta. C. S. Parker.

*Caudex* repens, longus, ramosus, tomentoso-radiculosus.

*Stipes* vix ullus, plerumque sessilis.

*Frondes* plurimæ, parvæ, semiunciam longæ, imbricatum decumbentes, cordatæ, rotundatæ, obtusæ, profunde lobatæ, sinibus obtusis, lobisque obtusis, sinuatis, submembranaceis, pellucide virentes, minutissime lente reticulatæ, nervosæ, nervis divaricatis in medio singuli lobi (nunquam radiatim vel parallelo-venosæ), ad marginem hic illic pilosæ, pilis stellatim ramosis.

*Involucrum* (an semper?) solitarium, in singula fronde, liberum, oblongum, basi attenuatum, utrinque marginatum, apice bilabiatum, labiis margine rubris.

*Receptaculum* longissime exsertum, filiforme, basi ubi capsulæ, paululum incrassatum.

*Capsulæ* peltatæ, annulo completo, ut in omnibus speciebus hujusce generis.

*Semina* subglobosa, limbo pellucido, circumscripta.

Fig. 1. Frons fertilis. f. 2. Pars inferior receptaculi, cum capsulis. f. 3. Semina:—*magn. auct.*

Closely as this species may appear at first sight to be allied to *Trich. reptans* (Ic. Fil. t. 32.) and *T. muscoides*, yet a more careful examination will prove it to be abundantly distinct. It is much smaller, has the fronds almost entirely sessile, more rounded and approaching to cordate, deeply and constantly lobed at the margin. The texture of the frond, too, is very different; here it approaches nearer to that of many frondose *Jungermannia*, the reticulation is small, and the nerves much less frequent, the main branches from the midrib or central nerve always following the direction of one of the lobes.

We are not aware that it has been found by any botanist but our friend C. S. Parker, Esq., in the island of Barbadoes.



*Sarcostichum tripartitum.*

## ACROSTICHUM TRIPARTITUM.

FILICES.—GYRATÆ. Br. POLYPODIACEÆ. Kaulf. FILICES veræ. Willd., Spreng.

GEN. CHAR. *ACROSTICHUM*, Linn. *Sori* amorphi, seu *Capsulæ* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). Br.

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*ACROSTICHUM tripartitum*; frondibus longe petiolatis, sterilibus reniformibus tripartitis, laciniis cuneatis trilobis, fertili trilobo valde squamoso.

HAB. In sylvis provinciæ Esmeraldas, Am. Merid. arborum truncis, legit *D. Prof. Gul. Jameson*, ad alt. 5000 ped.

*Caudex* repens, hic illic radiculosus, undique ferrugineo-squamosus.

*Stipites* erecti, frondium sterilium vix unciam, fertilium duas ad tres uncias longi, flavo-fusci, squamosi, squamis fuscis lanceolato-acuminatis membranaceis sparsis.

*Frondes* simplices, steriles, reniformes, subcoriaceæ, squamosæ, squamis demum deciduis, tripartitæ, laciniis cuneatis basi attenuatis, trilobis, lobis obtusis plerumque integris: *fertiles* circumscriptione cordatæ, primum valde fusco-squamosæ, dein nudiusculæ, trilobæ, lobis rotundatis, integris vel subsinuatis.

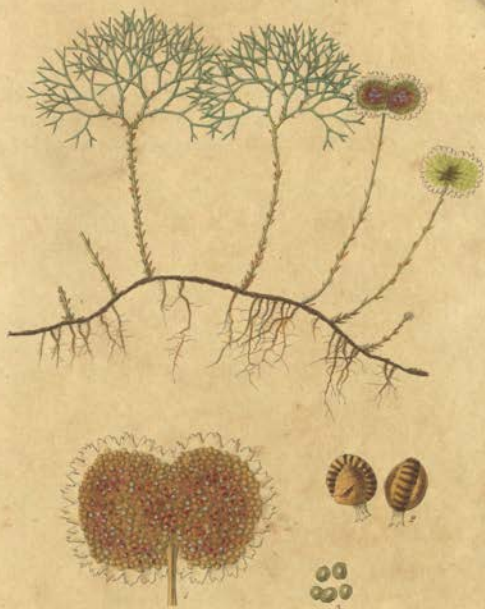
*Capsulæ* totam inferiorem partem frondis tegentes, squamis interspersæ, sphericæ, intense fuscæ, annulo lato fere completo cinctæ.

*Semina* ovalia, vel subrotunda, lævis.

Fig. 1. Capsulæ. f. 2. Semina:—*magn. auct.*

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The nearest affinity with this plant is unquestionably the *A. flabellatum* of Humboldt, a native of rocky places in Venezuela; but that is much larger, has the sterile fronds in the first instance bipartite, the segments multifid; whilst the fertile ones are orbicular and peltate, (according to the figure, but reniform in the description,) quite glabrous, or free from scales, and surrounded by a diaphanous and crenated margin. That species appears, as it were, intermediate between our plant and *A. peltatum* of Swartz.



*Sacrestidium feniculaceum!*

ACROSTICHUM FŒNICULACEUM.

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FILICES VERÆ. Willd., Spreng.

GEN. CHAR. *ACROSTICHUM*, Linn. Sori amorphi, seu *Capsula* per totam paginam inferiorem frondis (interdum diversæ) vel ad ejus partem sparsæ. *Involucrum* nullum (nisi squamulæ, vel setæ in quibusdam capsulis interstinctæ). Br.

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*ACROSTICHUM fœniculaceum*; frondibus sterilibus reniformi-multifidis, laciniis repetitum dichotomis lineari-filiformibus fertilibus bilobis supra nudis, margine diaphano duplicato-crenato.

HAB. Supra truncos putridos arborum, in sylvis apud Esmeraldas, Amer. Sept. altit. 3000 ped.

D. Prof. Gul. Jameson.

*Caudex* longe repens, gracilis, squamosus, subtus radices plures, tenues, filiformes ramosas emittens.

*Stipites* 3—4 uncias longi, frondium sterilium et fertiliū subæque longi, erecti, graciles, squamosi.

*Fronde* sterile, circumscriptione reniformes, duas ad tres uncias latæ, repetitum dichotome ramosæ, laciniis divaricatis, tenuissime linearibus, planis, obscure costatis, glabris, apicibus furcatis, acutis: *fertiles* vix unciam latæ, bilobæ, lobis rotundatis, facie superiore nudo, margine diaphano duplicato-crenato, subtus vix squamulosi.

*Capsulæ* numerosæ, brevi-pedicellatæ, globosæ.

*Semina* subglobosa.

Fig. 1. Frons fertilis, subtus visa. f. 2. Capsulæ. f. 3. Semina:—*magn. auct.*

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Received, along with our *A. tripartitum*, from W. Jameson, Esq., whose love of science has justly entitled him to the honour which has lately been conferred upon him, of the appointment to the Professorship of Natural History and Chemistry in the University of Quito. We trust that this situation will give him still greater opportunities for exploring the botanical riches of the magnificent country in which his residence is now fixed. The success which has already recompensed his exertions in pursuit of plants, is a sufficient proof of how much yet remains undiscovered.



*Menisium trifidum*





**MENISCIUM TRIPHYLLUM.**

FILICES.—GYRATEÆ. Br. POLYPODIACEÆ. Kaulf. FÏLICES veræ. Willd., Spreng.

GEN. CHAR. *MENISCIUM*, Schreb. *Capsulæ* venulis transversalibus sublunulatis parallelis insidentes. *Involucrum* nullum.

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*MENISCIUM triphyllum*; fronde ternata, foliolis oblongo-lanceolatis repando-subdentatis.

*Menisium triphyllum*. Swartz. *Syn. Fil.* p. 19. & 206. Spreng. *Anleit.* 3. p. 84. t. 3. f. 20.  
(frons sterilis). Willd. *Sp. Pl.* v. 5. p. 133. Spreng. *Syst. Veget.* v. 4. p. 40.

HAB. In India Orientali, China. Swartz. In Zeylona, in rupibus prope flumen Caltura.

— Emerson, M.D.

*Caudex* crassitie pennæ corvinæ, repens, radicosus, squamosus, demum denudatus.

*Stipes* palmaris ad spithamæam, erectus, glaber, teres, hinc sulcatus, basi solummodo squamosus.

*Frondes* subspithamææ, e foliolis ternis, duobus lateralibus minoribus, digitalibus, alternis, basi inferiore nuda vel auriculata, brevè petiolatis, intermedio terminali, petiolato, palmari ad spithamæam, basi subbistata; omnibus oblongo-lanceolatis, acuminatis, basi obtuse vel oblique truncatis, supra glabris, subtus costa nervisque reticulatis, pubescenti-scabris. *Frondes steriles* plerumque latiores.

*Sori* intra nervos primarios, venis transversalibus insidentes, lineari-oblongi, curvati.

*Capsulæ* subbrevis-pedicellate, annulo lato incompleto cinctæ.

*Semina* oblongo-subreniformia, flavo-fusca, sub summo lente reticulata.

Fig. 1. Portio frondis fructificantis. f. 2. Nervus in quo capsulæ insertæ. f. 3. Capsulæ. f. 4. Semina:—  
*magn. auct.*

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This is probably by no means an uncommon plant in the East Indies, although the only specimens that have come under our observation are from Sylhet, gathered by Dr. Wallich in 1815; and from Dr. Emerson, collected in Ceylon. From the latter our drawings have been made.



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