

India Botanic Garden Library
BOTANICAL SURVEY OF INDIA

CLASS NO.....

BOOK NO. H. A.....

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ICONES FILICUM:

AD eas POTISSIMUM SPECIES ILLUSTRANDAS DESTINATÆ,

QUE HACTENUS,

VEL IN HERBARIIS DILITUERUNT

PRORSUS INCOGNITÆ,

VEL SALTEM

NONDUM PER ICONES BOTANICIS

INNOTUERUNT

W. J. Hooker

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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FASCICULUS 4.

LONDINI:

PROSTANT VENALES APUD TREUTTTEL ET WÜRTZ, TREUTTTEL FR. ET RÜHTER, 36, SOHO-SQUARE;

PARISIIS: APUD TREUTTTEL ET WÜRTZ, VIA DICTA DE BOURBON, No. 17.

ARGENTORATI: APUD EODEM, VIA DICTA DES SERRURIERS, No. 26.

1827.

TYPIS RICHARDI TAYLOR.



Acrostichum crinitum.



TAB. 1.

ACHOSTICHUM CHINITUM.

FILICES.—GYHATJE. *Br.* POLYPODIACEJE. *Kauf.* FIUOES vene. *Willd.*

GEN. CHAR. *si*ACHOSTICHUM> Linn. *Son* amorplu, sell *Capste*/tc per tntam paginau) inferiorcm frondis (interduni diversa;) vol a³ cjus partem sparsa;. *Industum* null am (nisi simamiJa;. v. setae in quilmsdain capsnlII interetinctte). *Br.*

AcKOSTitnuM *eriiiitum*, • ptileEteeo-villosum, frondibna ellipticii obtusis eiliatis, fertilibus minoribus, stipitibus villosb]nis.

Aero stid nun crinituui. *Linn. Sp. Pl. p. 1533. Swartz, Spi. Fil. p. 11. Willd. Sp. Pl. v.b. p. 108. Lingua cervina -villosu. amplis foLis aubrotndis. Plian. Fil, p, log, (, 135,*

HAB. In Martinicse **arbornn** truiicis. *Plunder.* Insuln Sancti Vincentii. *Rev. L. Guilding.* *EsBix* e fibrils ramoaLi, pubt-scenlibus.

Caatex nullus, nisi rdiquia! stipitum vetustorum.

Stipes €—S-poHlcoris, cm^itie penna; iillserina¹, b^niitutes, tledsjsiniu villosus, villia lull^is, purpuruo-nigrU, bfl dilnuiis, horiionlnlibus.

Fitmlez slsrihi non mro pcdalcSj cUipticte seu OVtlis, basi npieeqe DbtusisymiE, pnululum unduUts, tratsiuscula.¹,

In toovi rides, casts prominente percurste, **ofraqoe** villis nigris margin«jue cilia to. Hi **vil** insigniter irugilt suciltL glib lente bu^i Jilutuuc, rcticuluki.*. inai^iniljus iuvolut^¹. *Frondes ferities* plerumque duplo minorcj, supra miurguic villoMe, subtus fruciifene,

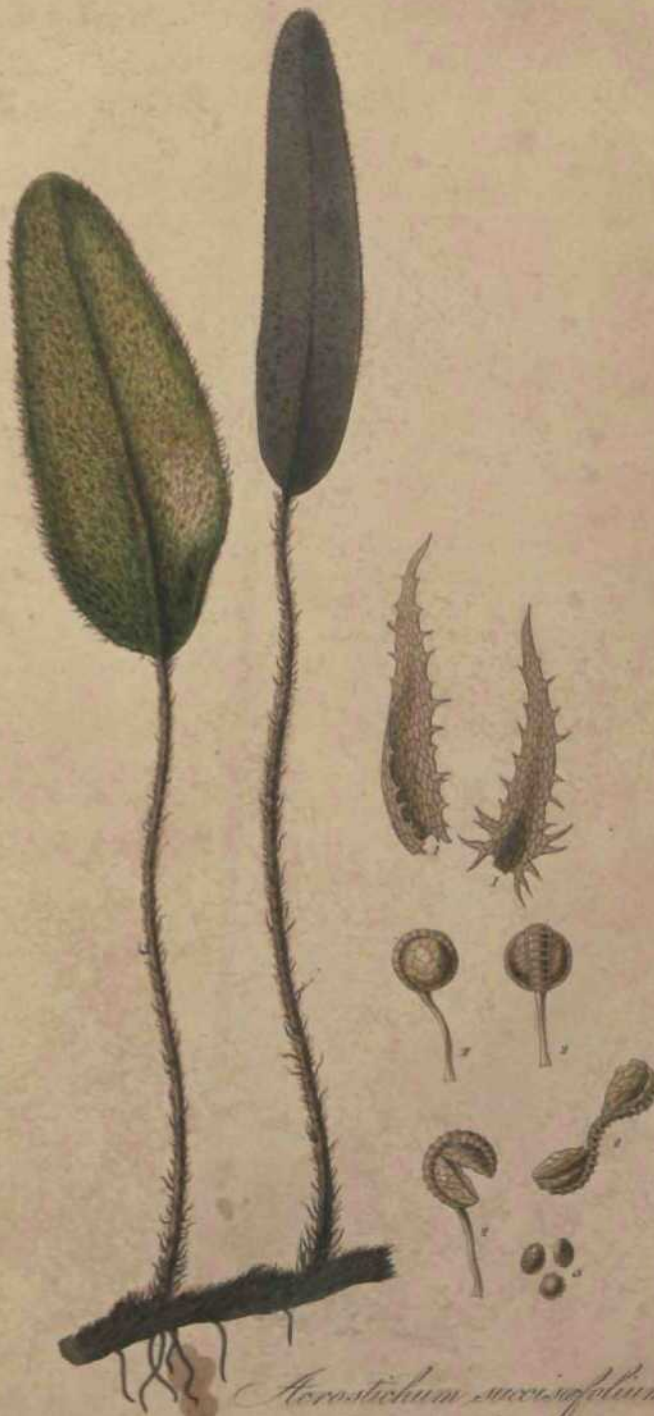
*Capstid*C totnm iuferiorciu partem, coyti cxt^pla; tc^cmoaj intense fusca¹, annulo vix coupieto cincto.; pudicetiatec, pedicel lo capsujii subii^ue longa.

Seraimn spliterica, subreticulate.

Fig. J. Copsala clausn. *f. i.* Eadeni **ddusaau**, F. 3, PediceUus. *f. **. Semimi:—*magn. taut.*

Aarostickum crinitum seems to be i plant of very rare occurrence; the only station, hitherto given, being the Island of Martinique, when indeed the fructification does not nppesu to liave been discovered. Our friend Mr. Guiklin^ has sent us truly magnificent specimens from the Island of St. Vincent, in various states; and from these our figures have bern made.





Acrostichum succinifolium.

ACROSTICHUM SUCCISIFOLIUM.

FILICES.—GYRATJE. *Br.* POXYPODIACEAE. *Kaulf.* FILICES verse. *Willd.*

GEN. CHAR. *ACROSTICHUM*, Linn. *Sort* amorphi, seu *Capsula* per totam paginam inferiorem frondis (interdum diversae) vel ad ejus partem sparsae. *Indusium* nullum (nisi squamulae, v. sets in quibusdam capsulis interstinctae). *Br.*

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

Acrostichum succiseefolium. # *Pet. Th. Esq. de la Flare de TrisL &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.l.p. 120.*

HAS. In sylvâ insule Tristan d'Acunha. *Aubert du Petit Thouars. Carmichael. Insulae Mauritiî. Aubert du Petit Thouars.*

Caudex 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 subpeltatis; magis angusta basi apiceque obtusissima.

Capsulae numerosissimae, totem inferiorem partem frondis tegentes, costa excepta, intense fuscæ, pedicellatæ; *anndo* fere complete

Semina subsphaerica, reticulata, marginata.

Fig. 1. Squamæ, f. 2. 2. 2. Capsulæ. f. 3. *Sennm—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. succisifolium* of that author; but he probably only adopted the name of Du Petit Thouars.



Acrostichum glandulosum.

W. Marshall del.

J. Smith sculp.

TA13. III.

ACROSTICHUM GLANDULOSUM.

FILICES.—GYRATE. *Br.* POLYPODIACEJS. *Kaulf.* FIUCES verse. *Willd.*

GEN. CHAR. *ACROSTICRUM*, Linn. *Sort* amorphi, seu *Capsula* per totam paginam inferiorem frondis (interdum diversae) vel ad ejus partem sparsae. *Indusium* nullum (nisi squamulae v. sete in quibusdam capsulis inter stinctae). *Br.*

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 Bonae Spei. *Carmichael.*

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

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

Fronde S—5-pollicares, oblongae, coriaceae, margine parum revolutaBi medio costate^ nervis obscuris parallelis, punctis glandulosis peUucidis adpersae, caetero glabrae, nitidae, costa subtus paululum paleacea, basi apiceque acutiusculas:-^?r;:0%£ fronde minore adgustiore, sed stipite longiore.

Capsule totam frondem tegentes, fusc&, numerosissimae; longe pediculate, annulo magno.

Semina sphaerica, marginata, margine tuberculato.

Fig. 1. Capsulae. f. 2. Capsula magis aucta. £ 3. *Semin** :—*magn. and.*

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 Radicans

TAB. IV.

ACROSTICHUM RADDIANUM.

FILICES.—GYRATJE. *Br.* POLYPODIACEA. *Kaulf.* FILICES verse. *Willd.*

GEN. CHAR. *ACROSTICHUM*, Linn. . *Sort* amorphi, seu *Capsulm* per totam paginam inferiorem frondis (interdum diversae) vel ad ejus partem sparsae. *Indusium* nullum (nisi squamulae v. setae in quibusdam capsulis interstinctae). *Br.*

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

Acrostichum sphaerulatum. *Raddi, Fil. Brasil p. 3.1.15.1. 2.*

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

Radix dense caespitosa, fibris valde ramosis subpinnatis.

Stipites plurimi ex eadem radice, 2—5 uncias longi, erecti, densissime pilosi, pilis patentibus rufescentibus.

Frondesteriles 3—4 uncias longae, lineari-lanceolatae, obtusae, basi sensim in petiolum attenuatae, utrinque margineque ferrugineo-pilose. Hi pili sub lente serrulati sunt, basidilatati, concavi, reticulati, membranacei:—*fertiles* sterilibus multo breviores, ellipticae, acutiusculae, dorso margineque solummodo pilosae.

Capsules totam frondem dorso tegentes, longe pedicellate, sphaericae, late annulate, annulo incompleto.

Semina parva, sphaerica.

Fig. 1. Filis vel squama. f. 2. Capsula. f. 3. Semina *i—magn, auct**

We have changed the name which Professor Raddi applied to this Fern, because of its similarity with that of *sphaerulatum*, 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.



Begonia *truncata*

TAB. V.

CETERACH PEDUNCULATA.

FILICES.—GYRAT/E. *Br.* POLYPODIACEJE. *Kaulf.* FILICES verae. *Willd.*

GEN. CHAR. *CETERACH.* *Sorŕ* lineares transversales. *Indusia* nulla. *Willd.*

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 JO. *Smith.* Misit clariss. *Wattich.*

Caudex repens, lignosus, tortuosus, pennae passerines crassitie, subtus radiculosa, radiculis e fibris ramosis descendentibus, quorum majoribus hirsutis.

Frondes steriles et fertiles ex eadem caudice, utraque stipitata.

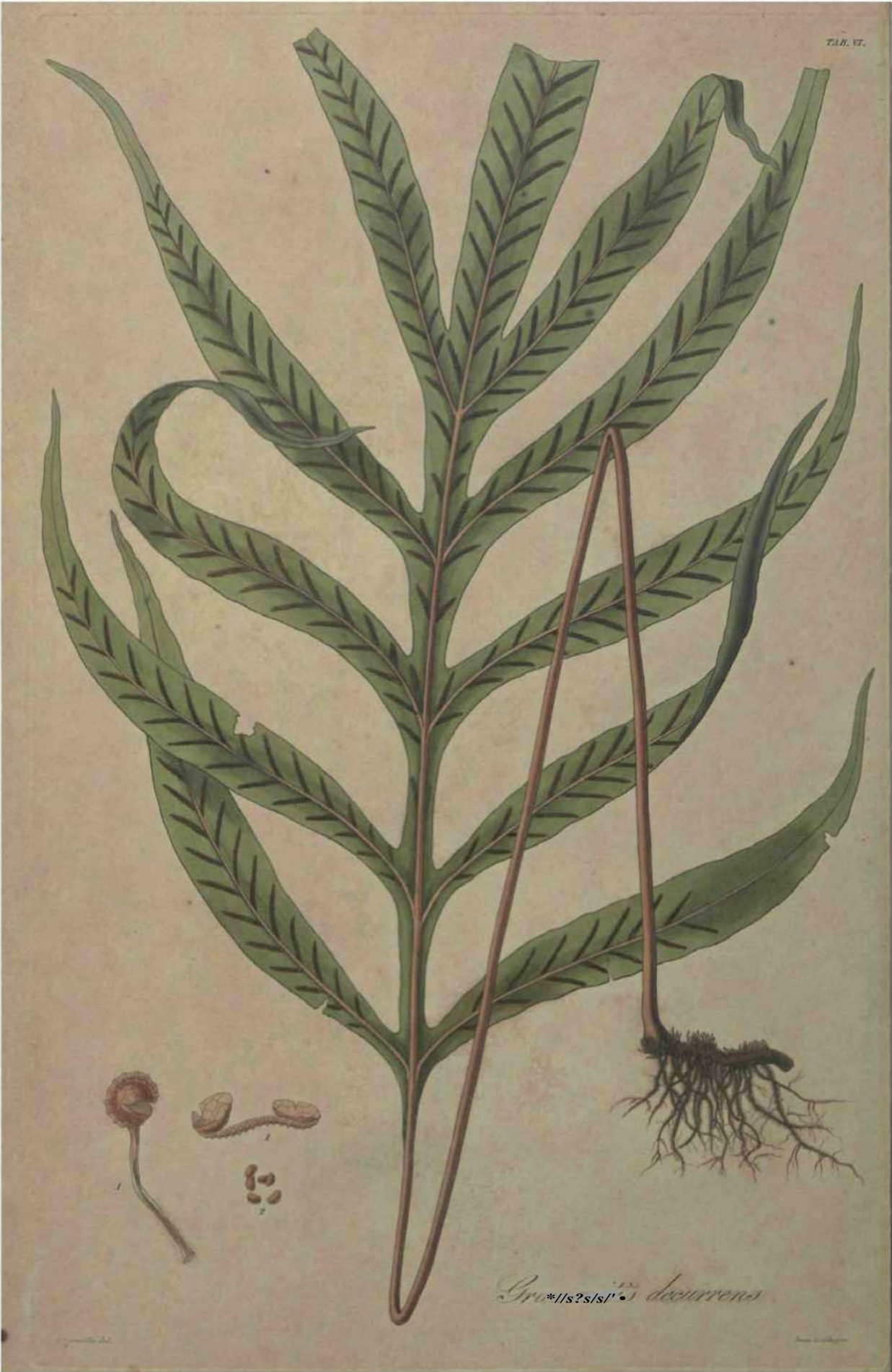
Sterilis.- *Stipes* erectus, glaber, gracilis, nitidus, pallide fuscus hinc sulcatus, 3—4-pollicaris. *Frons* 4—6-pollicaris, lato-lanceolata, membranacea, fusco-viridis, apice acuminata, basi attenuate, decurrente, margine sinuato-crenata, costa instructa venisque horizontali-patentibus, venulis anastomosantibus.

Fertilis: *Stipes* ut in sterili, sed triplo longior. *Frons* ut in sterili, sed magis angusta, crenata, substantiaque firmiore. *Indusium* nullum. *Sorŕ* lineares, intense fusci, in venis parallelis et cum iis alternantibus et totam latitudinem e costa ad marginem occupantes. *Capsule* sphericæ*, sublonge pedicellate, reticulate, annulo fere complete. *Semina* minuta, oblonga, vix angulata, fusca.

Fig. 1. Capsule. & 2. Semina:—*magn. auct.*

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 Oficinarum*. These scales are totally wanting in our plant; but the *sorŕ* 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 *Sorŕ* "venulâ unicâ insidentes." In *Ceterach pedunculata* they occupy each a number of veinlets or reticulations exactly intermediate between the straight lateral veins.



Pro... decurrens

TAB. VI.

GRAMMITIS DECURRENS.

FILICES.-T-GYRATJE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES verse. *Willd.*

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

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 *syedatis* et ultra, pennae corvinae crassitie, erectus, glaber, nitidus, fuscus, teres, Line sfulcatus.

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

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

Capsule sphericæ, longe pedicellate, reticulatæ, annulo incomplete.

Semina parva, oblongo-subreniformia.

Fig. 1. 1. Capsuls. f. 2. Scmina:—*magn. auct.*

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.



Ficus furcata

TAB. VII.

T. ENITIS FURCATA.

FILICES.—GYRATJE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES verae. *Wittd.*

(SEN. CHAR. *TJENITIS.* *Sorus* linearis, continuus, quandoque interruptus, longitudinalis, inter costam et marginem exteriorem frondis situs. *Indusium* nullum. *Wittd.*

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

Taenitis furcata. *WiUd. Sp. PL v. b.p. 136. Smith in Bees Oycl.*

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

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

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

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

Stipes fere nullus.

From spithamaea ad pedalem, erecta, infeme indivisa, linearis, basi attenuate, superne vel dichotomo-partita vel pinnatifida; laciniis ultimis et nonnunquam lateralibus furcatis; omnibus lineari-lanceolatis vel linearibus, 8—6 vel ad 8 undas longis, 6 lineis (in spechnine Plumieri unciam) lads, coriaceo-membranaceis, integerrimis, acutissimis, costatis et obscure venosis, facie superaa viridibus, subnitidis fere nudis, subtus pauidioribus punctato-squamulosis, squamulis minutis, ovatis, reticulatis, pellatis.

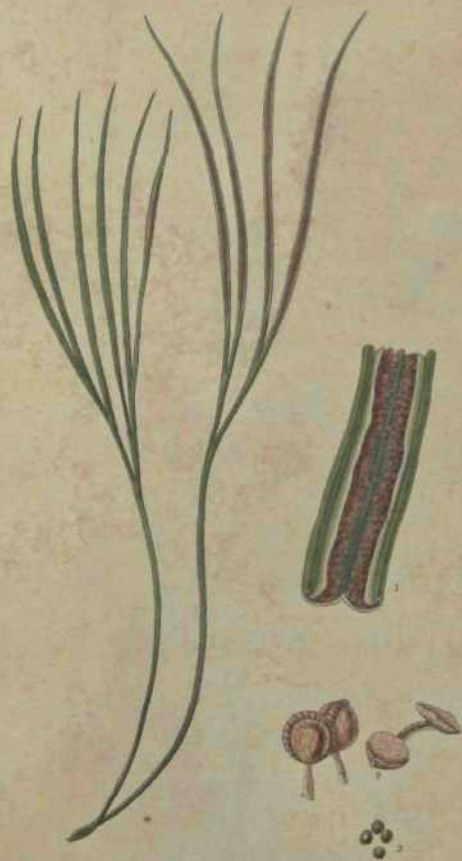
Son in duas lineas longitudinales prope marginem frondis, et totam fere longitudinem laciniarum plerumque occupantes. *Indusium* omnino nullum.

Capsule pedicellate, annulo complete.

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 *Tasnitis* 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

TAB. VIII.

PTERIS AUSTRALIA

FILICES.—GYRATE. *Br.* POLYPODIACEÆ. *Kaulf.* FILICES verae. *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 subaequante.

Asplenium australe. *Swart**. *Syn. Fd. p. 74 et 258. f. 3. l. 1.* *Willd. Sp. PL v. 5. p. 308.*

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

HAB. Insulis Mauritiæ et Borboniæ.

"*Stipites* plures e cespite squamis lineari-subulatis, membranaceis, ferrugineis, nitentibus congestis radículas simplices villosiusculas fuscas inferne emittente," erecti, flexuosi, 4—5-pollicares, filiformes, hinc sulcati.

Fronde 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.

Capsule 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

TAB. IX.

TRICHOMANES FLORIBUNDUM.

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

GEN. CHAR. *TRICHOMANES*, *Sm.* *Sort* marginales. *Capsule* sessiles, receptaculo communi cylindraceo insertae, 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. & q. v. I. p. 25.* *Kunth Syn. PL v. I. p. 89.*

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

Trichomanes rhizophylla. *Swartz. Syn. FU. p. 142.* " *Cavan. Præd. 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, Insulae Trinitatis. *De Schach.* Jamaica. *Masson.* Guiana. *Herb. De Lessert.*

" *Jai/r fuscafibrosa, fibris crassis.*" *Willd.*

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

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

Sort marginales, numerosissimi, serraturas terminantes.

Indusia cyathiformia, exserta, compressa, ore sub-bilabiato.

Receptaculum indusio duplo triplove longius.

Capsulae ad basin receptaculi, rotundato-compressae sessiles, annulo completo transversali cinctae.

Semina minuta subsphaerica.

Fig. 1. Apex pinnae fertilis. f. 2. Portio pinnae, 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 pinnae 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.—GYRATJE. *Br.* POLYPODIACEJE. *Kaulf.* FILICES vera. *Willd.*

GEN. CHAR. *TRICHOMANES*, Sm. A n marginales. *Capsule* sessiles, receptaculo communicylindræo 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. Fil.* p. 143. *Willd. So. PI.* v.b.p. 506.

HAB. Ad latera umbrosa cavernarum montium Jamaica. Sw. In monte Sancti Andrese Insulæ Sancti Vincentii. *Rev. L. Guixding.* In Demeraia, America Meridionalis. C. S. Parker.

Caudex repens, fibrosus, primum paleaceus, demum nudus.

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

Frons palmaris ad pedalem vel sesquipedalem, anguste oblongo-lanceolata, apice attenuata, sub-bipinnatifida. *Pinna* horizontales, approximate, oblongo-lanceolate, magis minusve acute, venosæ, reticulate, 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.

Capsules ut in *Tr. alato*.

Semina spherica.

Fig. 1. Pinnae 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.



Adiantum alatum L.

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TAB. XI.

TRICHOMANES ALATUM.

FILICES.—GYRATE. *Br.* POLYPODIACEJE. *Kaulf.* FILICES verse. *Willd.*

GEN. CHAR. *TRICHOMANES*, Sm. *Son* marginales. *Capsute* sessiles, receptáculo com-
muni cylindræo inserts, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura
froqdis. *Br.*

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

Trichomanes alatum. *Swartz. Fl. hid. Occ. v. 3. p. 1732. Syn. Fl. p. 143. Willd. Sp. PL*
v. 5. p. 506. (non Hook, in Fl. Lond.)

Filicula tota translucens. *Plum. FU. t. 50. l. D. (vix bona.)*

HAB. In montibus excelsis Jamaicae australis, alibique in India Occidentals *Swartz.* Hispa-
niola, et in Antillis minoribus. *Willd.* Insula Sanctae Vincentii. *Rev. L. Guilding.*

Caudex repens.

Radix e fibris plurimis longis nigricantibus vix tomentosis.

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

*Fronde*s translucentes ovato-lanceolatae, apice attenuatae, bipinnatifidae; pinnis vel segmentis primariis lanceolatis
attenuatis, laciniis lanceolatis, acutis, incisoserratis, omnibus neryosis, sub lente pulcherrime reticulatis, nervis
margine pilosis, pilis raris nunc furcatis. *RacJiis* alatus, plerumque pilosus.

Indusia urceolata, dentibus laciniarum immersa, ore aperto truncato.

Receptaculum indusio triplo quadruplo longius, ad basin capsulis tectum.

Sèmitia globosa.

Fig. 1. Frondis lacinae duae. f. 2. Indusium verticaliter sectum. f. 3. Portio receptaculi cum capsulis duabus.
f. 4. Capsula. f. 5. Semina:—*magru aucU*

ExceDent, 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 misfor-
tune of being little understood; the *Trichomanes lucens* having generally been sent to us hv i|u*
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 17. Lond.* (the *Hymeno-
phyllum alatum* of *Engl. Bot.*) On referring that species to its prpper genus, the old specific name
was retained, without recollecting that it was preoccupied. It should now be called, after Smith
in Rees's Cyclopaedia, *T. europaum*.

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

* The two specie9 are nevertheless very nearly allied. The European plant is much more divided, so as to be 3—4 pinnatifid,
the ultimate segments never serrat*



Adiantum crispum

WFA

TAB. XII.

TRICHOMANES CRISPUM.

FILICES.—GYRATE. *Br.* POLYPODIACEAE. *Kaulf.* FILICES verae. *Willd.*

GEN. CHAR. *TRICHOMANES*, Sin. *Sori* marginales. *Capsules* sessiles, receptaculo communi cylindraceo insertis, intra *Involucrum* monophyllum, suburceolatum, ore hiante, textura frondis. *Br.*

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

Trichomanes crispum. *Linn. Sp. PL* p. 1560. *Swartz. Fl. Ind. Occ. v. 3. p. 1731. Syn. Fil* p. 142. *Willd. Sp. PL. v. 5. p. 504. «Hedw. Fit. t. 4. f. fl." Smith in Bees 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. Bev. L. Building.*

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. *Pinna* sesquipollicares, horizontales, paralleles, approximate, pellucids, crispatilae, oblodgas, 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.

Capsules ut in reliquis hujus familiae.

Semina parva, subsphasrica.

Fig. 1. Apex pinna* cum soris. £ 2. Ejusdem portio magis aucta. £ 3. Indusium verticaliter sectum. £ 4. Capsulce. £ 5. Semina:—*magn. auct.*

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.—GYBATJE. *Br.* POLYPODIACEJB. *Kaulf.* FILICES verse. *Wittd.*

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

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

Trichomanes sinuosum. "RichardinHüt" *Willd. Sp. PL v. 5.p.502. Lam. Illustr. t.871. f. 1.*

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

HAB. In Guadeloupe. *Willd.* Insula Sancti Vincentii. *Rev. L. (holding.*

Caudex repens, filiformis, gracilis.

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

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

Sori ad apicem pinnarum, pauca

Indusium cyathiforme, immersum, ore aperto.

Receptaculum filiforme, indusio triplo longius.

Semina sphaerica.

Fig. 1. Portio pinnis, cum soris duobus. f. 2. Indusium verticaliter sectum. f. 3. 3. Capsule. f. 4. Semina:—*magn. auct.*

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 HERMANN!

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

GEN. CHAR. *GLEICHENIA*. *Capsula* annulo completo striato subsessiles, in soris rotundis dorsalibus, sæpius definite. *Indusium* nullum.—*Frondes* dichotomy velfurcata.

*GLEICHENIA Hermann**; 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. *Swariz. Syn. FU.* 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 Caknaria. *Humph. 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 Occidental^e Dominica, insula Sancti Vincentii. *Rev. L. Gilding.*

Caudex repens, tomentosus, fibrosus.

Stipes 3-pedalis, tevis, fuscus, nitidus, teres, repetitum dichotomus, ex axillis proliferus, foliaceo-bracteatus, minis ultimis frondosis.

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

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

Semina minute, oblonga, subreniformia.

Fig. 1. Portio frondis a parte inferiore visa. f. 2. Ejusdem portio cum soris. f. 3. 3. Capsule. 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.

TAB. XV.

GLEICHENIA IMMERSA.

FILICES.—GLEICHENEJE. *Br.* *Kaulf.* SCHISMATOPTERIDES. *Willd.*

GEN. CHAR. *GLEICHENIA*. *Capsula* annulo complete striato subsessiles in soris rotundatis dorsalibus saepius definite. *Indusium* nullum. *Frondes* dichotomy vel furcate.

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

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

HAB. In Brasilia Insula St. Catharinae. *Chamisso*. Insula Sancti Vincentii. *Rev. L. Guildins*, Ex insula Guadeloupe communicavit *Cl. Tonrrey*.

Stipes lepetitim dichotomus, primum pubescens, demum glaber, nitidus, fusus, ex axis proliferus, ramis ultimis (et antepenultimis, hinc) frondosis.

Frondes geminato-furcatae, lanceolatae, basi apiceque subattenuatae, 6-unciales ad sesquipedalem longae, supra glabrae, subtus ferrugineo-tomentosae, profunde fere ad basin pinnatifidae, segmentis linearibus horizontali-subfalcatis, marginibus omnino integerrimis. *Rachis* demum glabriuscula. *Costa* pubescens.

Sori tomento ferrugineo immersis, e capsulis quatuor radiatim dispositis, sphaericis, fere omnino sessilibus, oblique subverticaliter lato annulatis demum e vertice dehiscentibus.

Semina oblongo-reniformia, parva.

Fig. 1. Portio frondis ab inferiore parte visa. f. 2. Eiusdem portio, cum soris. f. 3. Portio segmenti, tomento abraso, cum soro capsulis duabus. f. 4. Capsulae. 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 Baddi?



Acaemis adiantifolia var. *beta*

TAB. XVI.

ANEMIA ADIANTIFOLIA *fi* ASPLENIFOLIA.

FILICES.—OSMUNDACEJ. *Br.* Kaulf. SCHISMATOPTERIDES. Willd.

GEN. CHAR. ANEMIA, Sw. Capsules ovatae, vertice radiatim striatae, in spicis compositis unilateralibus dispositae, basi adfixae, longitudinaliter dehiscentes. Indusium nullum. Kaulf.

Div. Spicae ~~pedunculatae~~ *geminatae ad basin frondis.*

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

a. 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 *filiculaefolia major*. Plum. *Fil. p.* 135. / 158.

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

3. *asplenifolia*, fronde bipinnatifida, laciniis obtusis. Tab. XVI.

Anemia *asplenifolia*. Sw. *Syn. FU. p.* 157-

Osmunda *asplenifolia*. Lam. *Diet. v. 5. />* 652.

HAB. In India Occidental. Insulis Bahamensibus. D. Swainson. 3. In Dominica. Lamarck. Jamaica.

VAR. 8.

Radix caespitosa, fibrosa, fibris ramosis.

Stipes 4—6-undalis, erectus, glaber, hinc sulcatus, basi nigricans, superne pubescens.

Fronde 8—5 uncias longae, ovato-triangularis, bipinnatifidae, pinnis lanceolatis, pinnulis ovato-cuneatis, coriaceis, tenuissime venosis, nitidis, inferioribus nunc bilobis, apice obtusis denticulatis, superne glabris, subtus rachique breviter pilosis.

Spicae compositae, bipinnatifidae* pedunculatae, geminae, ad basin frondis insertae, laciniis angustis, pilosis, hinc capsulis tectae. *Peduncti* magis minusve pubescentes.

Capsulae oblique, ovatae, sessiles, hinc gibbae, reticulate, pallide fuscae, paulo infra apicem radiato-annulate, extus longitudinaliter dehiscentes.

Semina parva, sphaerica, sub summa lente reticulata.

Fig. 1. Portio spicae a dorso visa. 2. Eiusdem pars superior. 3. Capsula. 4. Eadem dehiscentis. 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*.



Schizanthus dichotoma

TAB. XVII.

SCHIZ^ASA DICHOTOMA.

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

GEN. CHAR. *SCHIZMA*, Sm. *Capsules* otales, sessiles, apice radiatim striato, basi insertis, in appendice divisa terminali frondis dorsales. *Indusium* e marginibus inflexis appendicis continuum, intus liberum. *Br.*

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

Schizaea dichotoma. *Swartz. Syn. PU. 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 Pro dr. PL. Nov. Holl. p. 162.

^a *Ripidium dichotomum. Bernhadi 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 Mauriti, Madagascar, Borbonia. *Carmichael. Nova Hollandia, intra tropicos. Brown.*

Radix e fibris paucis, nigris, flexuosis, simplicibus, crassiusculis.

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

Frondes, circumscriptione subflabelliformes, repetitum dichotomae laciniis linearibus, compressis, coriaceis medio costatis, glabris, plerumque iambus, mine, praecipue in speciminibus e Nova Hollandia, marginibus costaque dorso asperis, apicibus obtusis.

Appendices fructificantes recurvae, profunde pinnatifidae, a tria ad decem paria; in tribus ad quinque paribus dispositae, opposite lineares semiteretes, intus costae margineque pilosae, ultime breviores.

Capsulae duplici serie, costa utrinque, dispositae, sessiles, ovaes, pulcherrime reticulate, ad verticem radiata, longitudinaliter, ad latus inferius (i. e. versus basin segmentorum) dehiscentes.

Semina oblonga.

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

Mr. Brown, in his admirable *Prodromus Flora Nova Hollandia*, mentions that this plant is liable to great variation both in regard to the number of pinnae, 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.



Danea alata

TAB. XVIII.

DANIEA ALATA.

FILICES.—MARATTIÆ. *Bory.* POROPTERIDES. *Willd.*

GEN. CHAR. *DANJEA*, Sm. *Sori* lineares, dorsales, transversi, paralleli. *Capsula* in series geminatas arete connate, superne poro dehiscentes. *Indusium* superficialium soros cingens. (*Aspleirii* Sp. *Linn.*) _____

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

Danaea alata. Sm. *Tracts*, p. 261. Sw. *Syn. FU.* p. 167. *WiUd. Sp. PL* v. 5. p. 68. Sm. in *Bees Cycl—Kaulf. Enum. FU.* t. 3. (pinna fertiliset sorus.)

Lingua cervina nodosa minor. Plum. *FU. Am.* p. 91. l. 109.

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

Caudex longus, repens, carnosus, nigro-fuscus, supra reliquiis stipitum vetustorum tectus, hic illic fibrosus.

Fronde bi-tripediales, simpliciter pinnate, erecte;

Steriles, circumscriptione oblonga, basi attenuate, 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. *Pinned* subremote, breviter petiolate, opposite, 4?—6-pollicares, inferiores multo minores, ovales, reliquæ oblongo-ellipticee, apice attenuate, dentato-serrate, basi inæquali subcordata, supra intense virides, glabriusculæ, subtus pallidiores, margine incrassato; costæ subtus ferrugineo-squamosa, nervis numerosis parallelis distinctis fere horizontalibus, simplicibus, vel, rarissime, furcatis;

Fertiles, quoad formam, fere omnino ut in *sterilibus*, sed pinnae multoties angustiores, lineari-lanceolate, acuminatae, margine undulatae potius quam serrate. *Indusium* membranaceum, soros undique cingens.

Caules 12—16, ovales, nervo, ut nobis videtur, in series geminatas et arete connatas unite, massam (vel sorum) unam linearem formantes, parallele, et totam fere inferiorem partem pinnarum occupantes, superne poro dehiscentes.

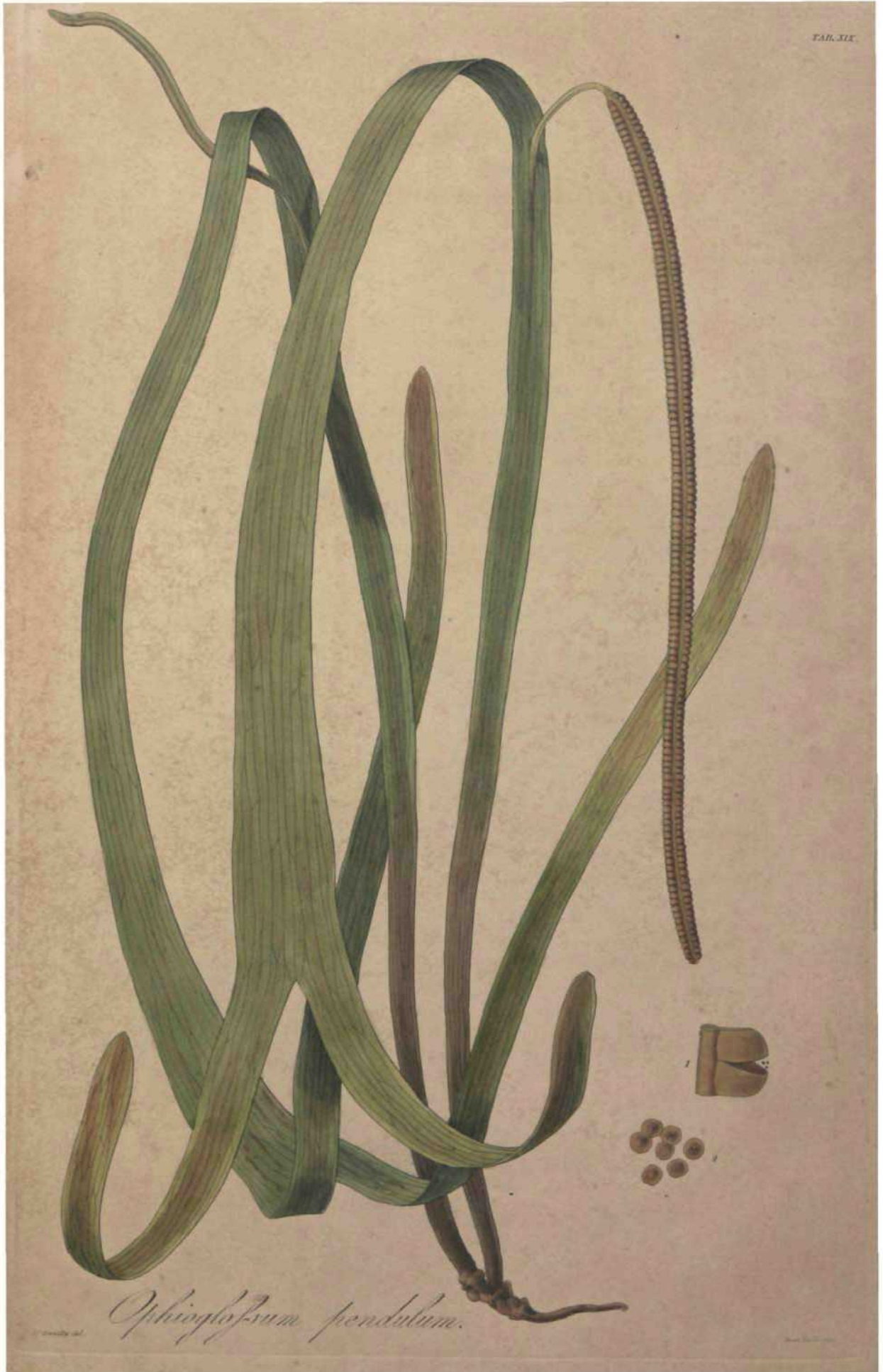
Semina minuta, sphaerica vel subreniformia.

Fig. 1. Portio pinnae 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. Seminar—*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 *Danaea* is a very distinctly marked one, having the under side of the pinnae 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.



Ophioglossum pendulum.

TAB. XIX.

OPHIOGLOSSUM PENDULUM.

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

GEN. CHAR. *OPHIOGLOSSUM*. Linn. *Capsula* nuda, in spicam articulataia disticham connate, 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. FU.* p. 170. Willd. *Sp. PL* v. b.p. 60. Smith in Rees' *Cycl.* Sieber *Herb. FU.* n. 16.

Scolopendria. Rumph. *Amb.* v. 6. p. 84. / 37*/3.

HAB. In arboribus Amboynae, ubi rarum. Rump *kites*. Mauritii. Carmichael Sieber. Et in montibus excelsis insulae Owhyhee. David Nelson.

Parasitium. Frondes 2—3 ex eadem parva tuberculata radice, pendentes, bi-tripedales, usque ad quinque pedes long®; basi angustae, deinde lineares, tenues, siccitate coriaceo-membranaces, 6 lineas ad pollicem latae, simpliciter vel bis dichotomae, virides, reticulatfle, areolis elongatis; segmentis apice obtusis, margine undique integerrimo.

Spica pedunculata, nunc basin versus, prope medium, vel infra apicem, frondis sita, digitum ad pedem longa, pendula, linearis, compressa, marginibus utrinque capsulifera. Hae capsules arete connatae, sphericse, transversim dehiscentes.

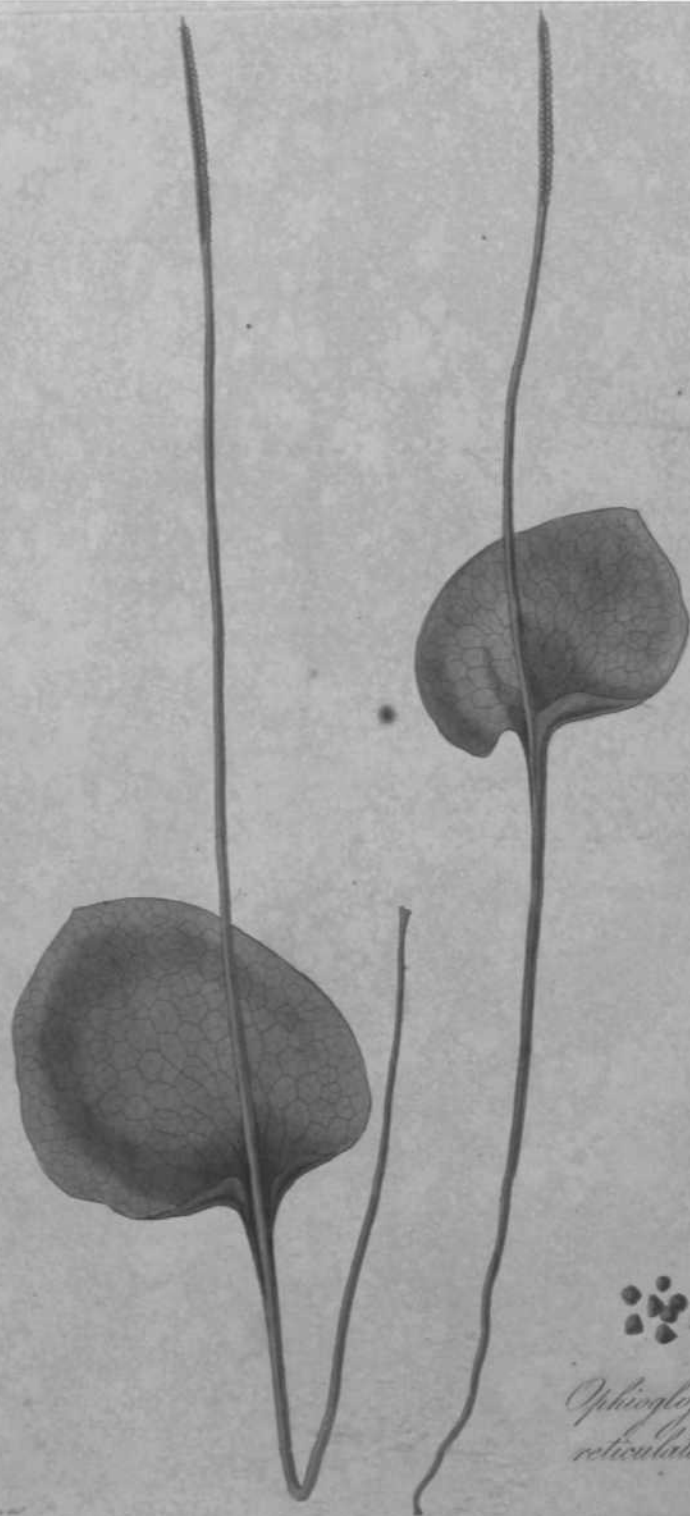
Pedunculus duas uncias longus, teres.

Semina parva sphaerica 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.

TAB. XX.

OPHIOGLOSSUM RETICULATUM.

FILICES.—OPHIOGLOSSEJS. *Br.* *Kaulf.* STACHYOPTERIDES. *Willd.*

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

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

Ophioglossum reticulatum. *Unn. Sp. Pip.* 1518. *Swartz. Syn. Fil. p.* 170. *Willd. Sp. PL v. 5. p.* 60. *Smith in Bees Cycl.—Lam. Illustr. t.* 864. / 2. *Sieber Herb. Fd. n.* 19.

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

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

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

Radix (fide Flumieri) descendens, elongata, cariosa, 2—3-pollicaris, fibris plurimis albidis simplicibus instructa.

Stipes 4—6-pollicaris, erectus, teres, viridis.

Frons solitaria, ad apicem stipitis, latocordata, 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.

Capsules parvas, arctissime connate, ^minibus angulato-sphaericis repletae.

Fig. 1. Semina:—*magn. and.*

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.

PROSPECTUS.

THE Tribe of FERNS, universally celebrated as amongst the most beautiful and useful productions, and which a celebrated French author has lately elevated to the rank of a distinct *Class* among Plants, does not appear hitherto to have been illustrated in the degree that it deserves. Besides the beauty of external appearance of the Ferns, which must strike even the most casual observer, the power and wisdom of the Creator is nowhere more evident than in the curious and varied forms of their fructification. They seem to hold a middle rank between the *Cotyledonous* and *Acotyledonous* plants, with somewhat the habit of the former, though possessing the simpler organization for the production of their seeds which characterizes the latter. The largest of them emulate the *Potamogeton* in their structure and mode of growth, the smallest are hardly discernible at first view from some of the *Hepatica*, especially from the genera *Marchantia* and *Jungernannia*.

The Ferns are not without their obvious use in the arts and in domestic economy. In the East Indies and New Zealand several species are employed as food by the natives. In our own country, and in the North of Europe, peat is procured from them after combustion; and this substance is so combined in the *Pteris aquilina*, or common Brake, with resinous extractive matter, as to allow of its being used as a substitute for soap. Tannin, again, is another product of Ferns, and Gallic acid of the *Scolopendrium officinale* and *Polypodium vulgare*. Many of the most abundant species are employed medicinally; and one already mentioned, the *Pteris aquilina*, affords in its stalk an excellent covering for the roofs of houses, and as such is very commonly used in the countries where it grows.

For a long time the Exotic kinds of Fern were almost wholly excluded from our stoves and green-houses, in consequence of an erroneous opinion that their culture was attended with so much difficulty as to be nearly impracticable. The reverse is now found to be the case; and the Messrs. Shepherd of the Liverpool Botanic Garden were the first to prove that these plants might easily be raised from seed, even after that seed had for many years been attached to specimens in the herbarium. It was thus that Willdenow enriched the Berlin Garden with numerous species that existed in the Hortus Siccus of the German Botanist; and, to confine ourselves to instances in our own country, we need only mention the Liverpool Garden, the Royal Garden at Kew, that of Messrs. Loddiges at Hackney, those of Edinburgh and Glasgow, and of the late Mr. Hassell at Ipswich (now that of W. Rodwell, Esq.), as proving how readily the Ferns may be now cultivated, and what a valuable addition they make to our collections. In the herbarium, too, no plant retains their form and colour so well.

Few indeed are the works which have, by means of faithful representation, aided the study of this tribe of Plants. Professor Raddi of Florence has lately published a work with numerous plates, entirely confined to the Ferns of Brazil; and Schkuhr's "Filices" contain sufficiently accurate representations of many, and especially the more common kinds.

To compensate in some measure for what is wanting in these and other similar publications of less note, Dr. Hooker and Dr. Greville have undertaken the editing of a work on the new or rare and little known species of the family.

The herbaria of the authors are enriched by the contributions of their correspondents in various parts of the world, and they have received the promise of still further assistance from their friends both at home and abroad.

The work will be included in 12 fasciculi, each consisting of 20 plates, accompanied with as many leaves of description, to appear quarterly. The Descriptions will be written entirely in Latin, and a few remarks added in English; the Plates will be executed with the greatest attention to accuracy, and in the best style of the art, especially in the dissections of the fructification, from drawings made by the authors. The engravings which adorn Humboldt's and Bonpland's *Nouv. Genere* and De Lessert's *Icones* may be considered as the models for those which will illustrate the present work.

The price of the work will be Twenty-five Shillings each part. A few Copies will be coloured in a superior style, price Two Guineas each.

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