

albo; hymenio subporoso ligneo-albo, dissepimentis tenuibus denticulato-laceris, radiatim vel concentricè dispositis efformato; sporis . . . non visis.

Hab. ad palos vetustos putrescentes prope Apiahy Brasiliæ. — Pilei 10-30 mm. lat., 5-15 mm. long.; contextus 0,5 mm. cr.; lamellæ hymeniales 0,5-1 mm. altæ. Species pulchella pileo *Polysticto biformi* Klotz. simillima, hymenio autem fere *Polysticti lacerati* Berk., ab utroque tamen satis distincta; an huc *Dædalea Hobsonii* Berk.?

10. **Dædalea Burseræ** Pat. Journ. Bot. 1889, p. 341. — Late resupinata, tuberculata, margine interdum in pileos minutos, subtus brunneos reflexa; contextu brunneo, tenuissimo; poris angustissimis, confertis, elongatis, sinuatis, cinctis; dissepimentis obtusis, crassis; hymenio primum citrino-flavo, dein glabro et brunneo-nigro.

Hab. ad ligna putrida Burseræ gummiferæ, in Martinica (Duss).

MYRIADOPORUS Peck. — Syll. VI, p. 384.

1. **Myriadoporus Dussii** Pat. Bull. Soc. Myc. 1889, p. 85. — Sessilis, anguliformis, durus, supra zonatus, concentricè sulcatus, crusta dura, brunneo-fulva, sub lente villosa obtectus, subtus planus, concavus, fulvo-rubens; contextu fulvo, duro, fibroso, sericeo, subzonato, centro 2 cm. cr.; hymenio 0,5-1,5 cm. cr., compacto, brunneo, lineis saturatoribus zonato; margine sterili, 2 mm. circ. lat.; poris minutis, rotundatis vel angulatis, interdum confluentibus, parum profundis.

Hab. ad truncos, pr. St. Pierre Martinicæ (P. Duss). — Fungus 10-12 cm. diam., 3-4 cm. cr.

CERIOMYCES Corda. — Syll. VI, p. 385.

1. **Ceriomyces alveolatus** Boud. Bull. Soc. Myc. 1888, p. LIII, t. III (Ptychogaster). — Pileo oblongo conico, 2,5-3 cm. alt., 1 cm. lat., albo-rubente vel hinc inde fulvescente, tomentoso, poroso-reticulato, intus columella percurso et tubulis sporiferis prædito; stipite 3 cm. long., 4 mm. cr., tomento lanuginoso, ferrugineo sed apice albido vel rubido tecto, sursum bifido, ramulis singulis pileiferis; sporis in sporophororum ramulis acrogenis, rotundis vel subovoideis, 6-9 μ . diam., intus granulosis, levibus, vix fulvo-tinctis.

Hab. in paludosis silvaticis inter Sphagna et Carices pr. Blois Galliæ.

2. **Ceriomyces incomptus** Sacc. Bull. Soc. Myc. V, p. 115. — Sub-

globoso-inæqualis, 8-9 cm. lat., suberoso-ligneus, sessilis, extus pallidus, leviusculus, intus fuligineo-fuscus, locellis verticaliter elongatis, creberrimis refertus, dissepimentis pallidis; basidiis teretibus apice corniculatis; sporis ellipsoideis basi subapiculatis, 7-9 \approx 6, ochraceo-fuscis.

Hab. in ligno putri Kangaroo Island Australiæ (TEPPER).

3. **Ceratomyces mexicanus** de Seyn. Bull. Soc. Myc. VI, 1890, p. 102. 812

— Pileo cylindraco, ligno basi adnato, brunneo 3 cm. alt., prope apicem 1-1,5 cm. cr., rimose sulcato-rugoso, sursum subcapitato, flavo-ochraceo, superficie irregulariter dædaloideo-alveolata, septimentis lacero-cristatis; carne flava, peripherice strato tenui subcorneo, obscuriore cincta, ex hyphis biformibus formata; sporis intra alveolos et in strato subjecto enascentibus, plerumque in apice hypharum solitarie acrogenis, ovoideis, 5-6 \approx 4 (flavidis?).

Hab. ad truncos in Mexico. — Structura interior fere Hydnum, sed superficies alveolata potius polyporoidea.

4. **Ceratomyces rufo-albus** Bres. et Pat. Bull. Soc. Myc. 1889, p. 79 813

(*Ptychogaster*). — Pileis sessilibus dimidiatis vel attenuato-substipitatis, imbricatis vel scalariter dispositis posticeque conjunctis, e pulvinato explanatis, concentrice sulcatis longitudinaliter-scrobiculatis, rubiginoso-castaneis, margine tumido, albido, zona fulva ornato; contextu sicco compacto, dein e gasterosporis pulverulento, saturate cinnamomeo; tubulis fuscidulis; poris parvis, subrotundis elongatisve ex albo cinnamomeis; gasterosporis subglobosis, inæquilateralibus, levibus, aureo-flavis, 8-11 \approx 8; sporis ovoideis, levibus, aureo-flavis, 10 \approx 6.

Hab. ad truncos in ins. St. Thomé Africæ occ. — Pileus 3-5 cm. lat.

5. **Ceratomyces effusus** Pat. Journ. Bot. 1888, p. 216 c. ic. (*Ptychog.*). 814

— Pileo crasso, pulverulento, flavo-cremeo, irregulariter expanso; hyphis incoloribus, ramosis, septatis, acervos conidiorum coronatim sæpe dispositorum gerentibus; sporis ovoideis uniapiculatis vel subglobosis vel elongatis, 10-14 \approx 8-12.

Hab. in ligno denudato putri, Yun-nan Sinæ. — Pileus 1-2 mm. crass., 2-3 cm. long. *P. citrinus* vix differt.

FAVOLUS Fr. — Syll. VI, p. 390.

1. **Favolus Balansæ** Speg. Rev. Myc. 1889, p. 94. — Pleuropus; pileo membranaceo ex orbiculari reniformi, applanato, sordide alutaceo, levissimo, glaberrimo; poris rhomboideo-tetragonis, pro ra- 815

tionem minutis, integris, curtis, acie subintegra; stipite horizontali, crasso, sordide albo, striato, pulverulento.

Hab. ad truncos in silvis, Guarapì Brasiliæ (BALANSA). — Pileus 10-11 cm. diam. trans., 7-8 cm. ant. post.; pori 1 mm. lat.; stipes 3 cm. long., 5 mm. cr. *F. brasiliensi* et *tenuiculo* affinis.

2. **Favolus? Puiggarii** Speg. F. Puigg. n. 133. — Pileo tenui e membranaceo subcarnosulo orbiculari convexulo, postice abrupte profundeque depresso ibique cordato-fisso, superne papuloso fusco-rufescente glabro; hymenio pileo vix pallidiore; poris magnis rhomboideis, dissepimentis membranaceo-carnosulis, integris; stipite definite laterali, horizontali, tereti, tenui puberulo ex albo pallescente; sporis ellipsoideis levibus, hyalinis, 8-10 \times 4-5. 816

Hab. ad caudices putrescentes in silvis prope Apiahy Brasiliæ. — Pileus 5-10 mm. diam.; pori 0,5-1 mm. diam., 0,5-1 mm. profundi. An *Laschia papulata* Mont. typica?

3. **Favolus Jacobæus** Sacc. et Berl. Rev. Myc. 1889 — Pileo flabelato, basi disciformi sessili, tenui-membranaceo, utrinque plano, eximie radiatim sulcato, pallide lutescente, glabro, margine acuto, subundulato, alveolis radiantibus, oblongo-hexagonis, acie integra, ochraceo-alutaceis. 817

Hab. ad truncos S. Thomé Afr. occid. (AD. F. MOLLER). — Pileus 1½-2 cm. long. et lat., 1 mm. crass., alveolorum os 1 mm. long. ½ mm. lat. *Fav. philippinensi* et *F. europæo* subaffinis sed valde minor, et pileo radiatim exarato concham «Pecten» in mentem revocat.

4. **Favolus semipellucidus** Zoll. in Flora 1847, p. 304. — Semipellucidus, sordide albidus, lateraliter affixus, orbiculari-spathulatus, elasticus; pileo tenui, e membrana simplici formato, in pustulas obsoletas diviso. 818

Hab. ad Bambusas putrescentes in ins. Java. — Vix 12-14 mm. latus, pileus levis, cetera *P. pustulosi* Zoll. sed faveoli ambitum versus elongati inæquales vix 1-1,5 mm. crassi.

5. **Favolus? pygmæus** Speg. F. Puigg. n. 134. — Pileo peltato-resupinato v. reniformi-horizontali, tenuissime membranaceo subtremelloso ex albo pallescente v. subfulvescente. superne papuloso glabro; hymenio pileo concolore grosse polygono-alveolato; stipite nullo concolori; sporis globoso-ovoideis, hyalinis, levibus, 6-9 \times 4-6. 819

Hab. ad ramos dejectos emortuos in dumetis prope Apiahy Brasiliæ. — Pilei 1-5 mm. diam.; pori elongato-radiantes e triangulari pentagoni, 0,5-1 mm. long., 0,5 mm. prof. An *F. pusilli* Fr.

varietas? Species pusilla, ut *F. Puiggarii*, natura inter genera *Favolum* et *Laschiam* vere media.

GLÆOPORUS Mont. — Syll. VI, p. 402.

1. **Glæoporus Rhipidium** (Berk.) Speg. F. Puigg. n. 131, *Favolus Rhipidium* Berk. — Syll. VI, p. 397, *Glæoporus pusillus* Lév. — Sacc., l. c. p. 404. 820

Hab. ad rimas truncorum ramorumque languentium pr. Apiahy et locis s. ind. — Pileus ex orbiculari reniformis 10-15 mm. diam. alutaceo-coccineus v. roseo-pallescentis, glaber v. subpulverulento-furfuraceus, levis v. concentricè sulcatus; stipes plus minusve elongatus 3-8 mm. long. 1 mm. crass. teres, alutaceus rufescens v. flavescens; hymenium in vivo primo subtremelloideum dein carnosulo-ceraceum; poris elongatis, marginalibus præcipue fere radiato-lamellosis, roseis, carneis vel rubris, sæpe glaucescenti-pruinosis: species pulcherrima admodum variabilis (Spegazz. l. c.).

2. **Glæoporus guaraniticus** Speg. F. Puigg. n. 132, *Laschia* Speg. Syll. VI, p. 406. 821

Hab. ad ramos dejectos putrescentes in umbrosis prope Apiahy et locis s. ind. — Species *G. Rhipidio* peraffinis, a quo tamen pileo convexo sæpius sessili albo v. alutaceo-albo glabro non v. vix obsoletissime papuloso hymenioque pallidiore non radiatiam evoluta recedit.

LASCHIA Fr. — Syll. VI, p. 404.

1. **Laschia antarctica** Speg. F. Fueg. n. 60. — Pileo ex orbiculari dimidiato parvulo, 5-10 mm. diam., carnosulo 0,5 mm. crass. applanato-convexulo, margine integerrimo atque incurvulo, obtusiusculo, postice cordato vel subreniformi, sæpe strictissime marginato ac depressulo, glaberrimo, levissimo, in vivo albo, opaco, tenero, in sicco contractulo-subinvoluta, spadiceo, rigidulo; stipite breviusculo, 3-6 mm. long., 0,4-0,7 mm. crass. albo tereti, apice non v. vix compresso, basi abrupte truncato-innato non vel vix fuscescente, glabro, levi; hymenio plano, æquali, albo v. pallidissime alutaceo; poris mediocribus, 0,2-0,4 mm. diam., ore hexagono-rotundatis, breviusculis, dissepimentis crassiusculis acie integris; basidiis clavulatis, 25-27 \approx 8-10, utrinque rotundatis, 2-3 sterigmatibus breviusculis donatis, cellulis sterilibus clavulatis, 20-24 \approx 5-6, parvis inmixtis; cystidiis majusculis, clavatis, 30-35 \approx 12, antice late rotundatis dense minuteque asperulis, postice attenuato-pedicellatis, le-

vibus, hyalinis; sporis ovatis, utrinque rotundatis, $8 \approx 5$, inferne minute angulato-subapiculatis, hyalinis.

Hab. ad truncos ramosque emortuos Berberidis ilicifoliæ in Patolus bay, Staten island, Fuegiæ.

2. **Laschia lurida** Ces. Myc. Born. p. 9. — Sessilis, orbicularis, colore luride cinereo, gelatinosa, glabra; hymenio crasse plicato-poroso. 823

Hab. ad truncos Ceylon, Sarawak (BECCARI). — Cl. Berkeley *L. tremellosæ* nimis proximam existimat.

3. **Laschia lamellosa** Pat. Bull. Soc. Myc. 1888, p. 37, t. XI, f. 4. 824
— Pileo resupinato, dein reflexo, reniformi, ex albo flavido, venoso-rugoso, glabro, gelatinoso; alveorum laminis parum numerosis, ramosis, obtusis, excentrice radiantibus, venis connexis; hymenio roseolo.

Hab. ad truncos putridos Monocotyledonum, ad ripam sinistram Orenoco S. Bartolo Venezuelæ.

CAMPBELLIA Cooke et Mass. Grev. XVIII, p. 87 (1890) [Etym. a Domina F. CAMPBELL-MARTIN mycologiæ australiensis eximie scrutatrici]. — Pileus mollis tremellosus, siccus corneus, pileatus, stipitatus; hymenium inferum; substantia plus minus (præcipue in sicco) lacunosa, spongiosa. Pori ampli, angulosi, sat profundi, acie sæpius dentata vel serrata, dissepimentis flaccidis. Trama descendens. Sporæ ellipsoideæ, brunneæ. — Genus inter *Boletum*, *Merulium* et *Laschiam* fere medium; est quasi *Boletus* tremellinus.

1. **Campbellia infundibuliformis** C. et M. Grev. XVIII, pag. 87, *Merulius* C. et M. Grev. XVI, p. 73. — Syll. VI, p. 411.
2. **Campbellia africana** Cooke et Mass. Grev. XVIII, p. 87. — Ex- 825
pansa, convexa, dein centro depressa, 10 cm. diam., atra, demum atropurpurea et cornea (in sicco); stipite brevi, crasso, 5 cm. longo, 2,5-5 mm. crass., deorsum attenuato, solido vel lacunoso (in sicco); poris amplis, profundis, inæqualibus, acie dentatis, dissepimentis tenuibus, flaccidis; sporis ellipsoideis pallide brunneis, 7-8 \approx 4.

Hab. ad terram in horto botanico D'Urban Africae (WOOD).

MERULIUS Hall. — Syll. VI, p. 411.

1. **Merulius pezizoideus** Speg. F. Puigg. n. 136. — Pileo tenuiter 826
membranaceo pezizæformi, extus albo glabro; stipite gracili, longiusculo, rigidulo, concolore suffulto; hymenio e pallescente subful-

vo, venulis e centro radiantibus ramoso-anastomosantibus irregulariter reticulato; sporis..... non visis.

Hab. ad tigilla dejecta putrescentia in hortis, Apiahy Brasiliæ. — Pilei 5-18 mm. diam., 250 μ . cr.; stipes 5-15 mm. long., 0,3-0,8 mm. crass.; alveoli subhexagoni 1-3 mm. diam. Species elegantissima *Pezizæ* cujusdam habitu simillima, ad genus *Laschiam* nonnihil vergens.

2. **Merulius tessellatus** Bres. Bull. Soc. Myc. 1890, p. 47, t. X, f. 1. 827

— Pileo carnoso, reniformi, applanato, sessili, margine subrepando, e subtomentoso glabrescente, mox in areolas polygonales diffracto, luride luteo; poris subpentagonis, ad marginem tantum elongato-pliciformibus, carneo-ferrugineis; sporis fulvis, ellipticis, 7-9 \approx 6; carne lutescente.

Hab. ad truncos Wan Afr. centr. — Pileus 14-18 cm. lat., 7-3 cm., antice produc.; pori $\frac{3}{4}$ -1 mm. lat. *M. tremelloso* affinis.

MYCODENDRON Mass. Journ. of Bot. 1891, pag. 1, t. 300, f. 14-16 (Etym. *mycos* fungus et *dendron* arbor). — Stipes centralis erectus, basi disciformi-dilatatus. Pilei plures subcirculares vel subreniformes, stipite perfossi, remote superpositi, subhorizontales, tenui-membranacei, subgelatinosi; hymenium inferum, obsolete tuberculoso-plicatulum; basidia tetraspora; sporæ subovoideæ, continuæ, brunneæ. — Genus habitu sane abnormi sed sec. Masee typicum et *Merulio* affine.

1. **Mycodendron paradoxum** Masee l. c. — Stipite brunneo, cylindrico sursum attenuato, solido, glabro, 6-9 cm. long., 3-4 mm. cr.; pileis 4-6 undulatis, subgelatinosis, rugulosis, brunneis, 3-4 cm. lat.; hymenio brunneo, plicato-noduloso; basidiis clavatis tetrasporis, sterigmatibus, filiformibus brevibus; sporis elliptico-oblongis, brunneis, 7 \approx 4; cystidiis clavatis, apice brunneo-granulosis. 828

Hab. ad ligna, Madagascar. — Pilei evidenter formatione acropeta orti.

POROPTYCHE Beck in Verhandlungen der k. k. zool.-bot. Gesell. in Wien. 1888, p. 657 (Etym. *porus* et *ptyx* plica). — Fungus resupinato-expansus, margine definitus et sursum accrescens, tota superficie porifera, subtus mycelii ramis funicularibus, solo indefinite sed arcte affixus; pori in margine primum foveolati rotundi, mox magis excavati, lobis varie accrescentibus tortuosi et labyrinthiformes, sæpe clausi, serius hymenium poris numerosissimis irregu-

lariter perforatum et superficie oribus apertis præditum formantes; basidia clavata-sterigmatibus brevibus, quaternis; sporæ ellipsoideæ hyalinæ; cystidia nulla.

1. **Poroptycha candida** Beck l. c. — Pileo candido v. centro ochro-leuco, margine et sæpe superficie subtiliter velutino, ceraceo-molli, in siccitate glabro, fragili, subpalmari; dissepimentis fragilibus; sporis $5 \approx 2,5$; odore fastidioso. 829

Hab. ad terram humidam, in cavædio Musei palatini rer. natur., Vindobonæ. — Pileus 3-5 mm. crass.; pori 1 mm. lat.

POROTHELIUM Fr. — Syll. VI, p. 421.

1. **Porothelium papillatum** Peck 40 Rep. p. 55. — Effusum, tenuissimum, flocculoso-pruinose, album, mox pallidum vel isabellinum, subceraceum, sæpe rimosum, margine subindeterminato; verrucis minutis, subdistantibus, initio hyalino-globosis, dein subprominentibus, papilliformibus, subiculo concoloribus, globulo ex hyalino succineo coronatis. 830

Hab. ad lignum decorticatum Populi tremuloidis, Elizabethtown, Amer. bor. — *P. Friesii* subaffinis.

SOLENTIA Hoffm. — Syll. VI, p. 424.

1. **Solenia minima** Cooke et Phil. Grev. X, p. 123. — Gregaria, minima, punctiformis, albido-pallida; cupulis subcylindricis, abbreviatis. 831

Hab. ad ligna, Inanda Natali Africæ (WOOD).

2. **Solenia stipitata** Fuck. — Syll. VI, p. 428. — ***S. connivens** Karst. 832 in Hedw. 1890, p. 270. — A typo præ ceteris differt tubulis incano-cinereis v. pallide fuscescentibus, siccis cervinis, ore (in statu humido) orbiculari, connivente et albovillosulo; sporis oblongato-ellipsoideis, $9-12 \approx 5$.

Hab. in ligno nudo trunci Fraxini excelsioris ad Mustiala.

3. **Solenia purpurea** Romell Fung. aliq. Suec. p. 26. — Tubulis sparsis vel subgregariis, sessilibus, firmis, siccitate corneis, ovato-cylindræis, apice truncatis, margine integerrimo, obtuso, parum constricto, levibus, glabris, obscure purpureis; sporis non visis. 833

Hab. in ligno quercino prope Ronneby Blekingiæ. — Tubuli 1 mm. alt., $\frac{1}{2}-\frac{3}{4}$ mm. crass.

4. **Solenia amœna** Oudem. Contr. Myc. Pays-bas XII, p. 19. — Stipata, mycelio brunneo tandem evanescente insidens, cylindræa, 834

brunnea, $\frac{1}{3}$ mm. alt., cum disco globuloso vel subpiriformi rigide pilosa; hymenio e cellulis clavatis, confertissimis formato; sporis non visis.

Hab. ad ligna putria Populi, Schéveningue Hollandiæ. — *T. anomalæ* affinis sed minus conferta et regulariter cylindræa.

5. **Solenia villosa** Fr. — Syll. VI, p. 425. — Var. **polyporoidea** Peck ⁸³⁵ 41 Rep. p. 86. — Initio granuliformis, dein cylindræa, sæpe gregaria, stratum candidum, continuum efformans, sub lente villosa.

Hab. ad ligna dejecta Abietis canadensis, Adirondack mountains Amer. bor.

Fam. 3. Hydneæ Fr.

HYDNUM L. — Syll. VI, p. 430.

I. Mesopoda.

1. **Hydnum fennicum** Karst. Rev. Mycologique 1887, pag. 10 (*Sarcodon* ⁸³⁶), *Sarcodon scabrosus* (Fr.) Quél. var. *fennicus* Karst. Hattsv. II, pag. 104. — Pileo carnosio, fragili, inæquali, primitus floccoso-squamuloso, demum diffracto, rufescente-testaceo, dein obscuriore, margine undulato lobatoque, 5-10 cm. lato; carne alba, stipite sat valido, inæquali, deorsum attenuato, flexuoso vel curvato, glabro, pileo concolore, basi acutata leviter albo-tomentello, extus intusque subcærulescente vel nigrescente cinereo, 2-8 cm. longo, 1-3 cm. crasso; aculeis decurrentibus, æqualibus, subulatis, ex albido fuscis, circ. 4 mm. longis; sporis ellipsoideo-sphæroideis vel subsphæroideis, asperis, fuscescentibus, 4-6 \approx 3-5.

Hab. locis sabulosis in silva mixta haud procul a Mustiala Fenniæ. — Sapore valde acerbo ab *H. scabroso* Fr. affini mox dignoscitur, qua nota ad *H. acre* (Quél.) accedit, a quo tamen colore distat.

2. **Hydnum squamosum** Schaeff. — Syll. VI, p. 431. — ***H. maximum** Karst. Hedw. 1889 (*Sarcodon*) ⁸³⁷. — Pileo carnosio, admodum molli, subspongioso, convexo-plano, solito inæquali, medio depresso, omnino glabro, rufescente-pallido, demum superficie rimose diffracto et fuscescente-rufo, usque ad 22 cm. lato, carne albida, miti, 2-3 cm. crasso; stipite deorsum attenuato, griseo-albido, basi albido, glabro, 7-8 cm. alto, usque ad 4 cm. crasso; aculeis ad stipitem decurrentibus, e griseo-albido fusco-griseis, 2-3 cm. longis; sporis sphæroideis vel subsphæroideis, verrucosis, dilutissime flavescentibus (sub lente), 5-6 \approx 4-5 vel 4-5 μ . diam.

Hab. in silva mixta in ditione Mustialensi Fennicæ.

3. **Hydnum aspratium** Berk. Grev. XVII, p. 16. — Pileo carnoso, ap- 838
planato, demum depresso, subinfundibuliformi, 12-15 cm. diam. v.
ultra, azono, squamoso, umbrino; stipite valido, crasso, 7 cm. long.,
2,5 cm. crasso, æquali vel deorsum attenuato, adnato, pallido, gla-
bro; aculeis acutis, decurrentibus, tenuibus, albo-fuscescentibus.

Hab. ad terram in Japonia. — Edulis.

4. **Hydnum albidum** Peck Bull. N. Y. Mus. n. 2, pag. 10. — Pileo 839
carnoso, tenui, convexo vel subplano, subpruinoso, albo; contextu
albo, aculeis albis; stipite brevi, solido, centrali vel excentrico, al-
bo; sporis subglobosis, 4-5 μ . diam.

Hab. ad terram in silvis, Sandlake Amer. bor. — Fungus, 2,5-5
cm. alt.; pileus 2,5-4 cm. lat.; stipes 6-10 mm. cr. *H. repando*
valde affine.

5. **Hydnum crocidens** Cooke Grev. XIX, p. 45. — Pileo carnoso, te- 840
nui, plano, subumbilicato, levi, regulari, 2,5-4 cm. diam., ochra-
ceo-flavo; stipite centrali, gracili, æquali, superficie regulari vel
sicco longitudinaliter striato, levi, pileo concolori, 3,5 cm. long.,
5-7,5 mm. cr.; aculeis longiusculis, spinulosis, stipitem attingen-
tibus, vix decurrentibus, marginem versus brevioribus, flexilibus,
aureo-flavis; sporis subglobosis, 4-5 μ . diam.

Hab. ad terram, Port Phillip Australiæ.

6. **Hydnum versipelliforme** Allesch. Verz. Süd-Bay. Pilz., II Na. 841
chtr. pag. 21. — Pileo carnoso, inæquali, superficie fibrilloso-floc-
coso, rubente vel brunneolo-rubiginoso; stipite brevi, crasso sub-
ramoso, aculeis usque ad basin decurrentibus tecto vel saltem, iis
fatiscentibus, punctato; aculeis griseo- vel umbrino-brunneis, apice
subalbis, deciduis; sporis exiguis, hyalinis.

Hab. ad terram in silvis acerosis et mixtis pr. Fischbach, Reut-
berg Bavaricæ. — Inter *H. versipelle* et *scabrosum* fere medium.

7. **Hydnum Ebneri** Wettst. Fungi novi Austr. pag. 1, t. I, f. 27. — 842
Totum firmum; stipite centrali vel subexcentrico, fibroso-carnoso;
pileo convexo, articulari, subrepando vel sublobato, initio tenuis-
sime velutino subpulverulento, denique glabro, tenuiter rugoso, in
speciminibus vetustis rimosis marginem versum nonnunquam ri-
moso-squamoso, e griseo vel rufo sordide violaceo, margine albi-
cante; stipite compacto, recto vel arcuato, denique excavato, æque
crasso vel basi incrassato, sæpe cum stipitibus speciminum pro-
pinquorum connato, albicante vel cœrulescente vel rarius rube-
scente; hymenii aculeis brevibus, crassis, obtusis, inæquilongis, pal-

lide e rufo violaceis, in stipitem decurrentibus ibidem in verruculas obtusas breves transeuntibus; sporis globoso-ellipsoideis, obtusissime tuberculatis, hyalinis, 7-9 \times 5-7.

Hab. in pinetis ad Siegmundslust prope Schwaz Tirolia. — Pileus 6-16 cm. diam.; stipes 3-5 cm. long., 2-3 cm. crass. *H. violascenti* et *H. fuligineo-violaceo* affine.

8. **Hydnum fasciatum** Peck 41 Rep. p. 78. — Gregarium, interdum 843
confluens; pileo tenui, coriaceo, subplano, umbilicato, nigrescentebrunneo, zonis 3-7 concentricis, angustis, elevatis, scabris, fusco-griseis ornato; aculeis brevibus, decurrentibus, ferrugineo-brunneis; stipite brevi, gracili, tenaci, fusco-griseo vel nigrescente; sporis subglobosis, asperis, 4 μ . diam.

Hab. ad terram nudam in silvis, Catskill mountains Amer. bor. — Pileus 12-24 mm. lat.; stipes 8-12 mm. long. *H. connato* et *H. zonato* affine.

9. **Hydnum velutipes** Beck Zur Pilzfl. Niederöst. V, p. 76, t. XV, 844
f. 10. — Pileo suberoso-rigido, carnosio, subinfundibuliformi, inæqualiter gibberoso vix zonato, dense tomentoso, fumoso-murino, marginem tenuem versus, sicut in siccitate, cinereo; pileis sæpe connatis 7-8 cm. latis; aculeis subulatis albidis serius dilute cinereis, integris rarius stipitem versus furcatis, 5-6 mm. longis; sporis globosis, aculeatis, dilutis, 2,5-3,5 μ . diam.; stipite solido firmo, extus dense tomentoso, fusco-murino subnigro, cum pileo ad 7 cm. alto; carne cana, serius subatra et in siccitate splendente, in stipite zonata.

Hab. in graminosis ad silvarum margines in valle Rothgraben prope Weidting Austria. — *Hydno nigro* Fries affine et imprimis stipite dense tomentoso distinctum.

10. **Hydnum padinæforme** (Mont.) Pat. Journ. Bot. 1888, pag. 146.
Huc ducenda, teste Pat. l. c., *Thelephora padinæformis* Mont. — Syll. VI, p. 534.

2. Marismata.

11. **Hydnum Henningsii** Bres. Bull. Soc. Myc. 1890, p. 48, t. IX, f. 2. 845
H. Schiedermayeri var. *kamerunensis* Bres. olim. — Pileo carnosio-lento, plus minus effuso, tuberculoso-stalactitico, immarginato, luteo-carneo, crasso, toto ex aculeis, primitus tuberculosus dein spathuliformibus vel subulatis tecto, intus cavernoso, cavernulis aculeis subulatis obsitis; carne luteola, fibrosa; sporis flavo-aureis, obovatis, 4,5-5 \times 2,5-3; basidiis clavatis, 20-25 \times 6-7.

Hab. ad ligna, Kamerun Afr. occid. — Pileus $\frac{1}{2}$ -2 $\frac{1}{2}$ crass. *Hydno luteo-carneo* affine.

12. **Hydnum tropicale** Pat. Bull. Soc. Myc. 1888, p. 38. — Imbricat- 846
tum, pendulum, postice adfixum, orbiculare, conico-stipitifforme, ru-
goso-scabrum, azonum, albo-flavidum, margine integro vel undulato
inciso; hymenio pallido, rufido, centro concavo, prope marginem
sterili; aculeis pendulis, numerosis, brevibus, acutis.

Hab. ad ramos emortuos, Atures Venezuelæ. — Fungus 8-15
mm. diam., e 15-20 pileis efformatus; aculei $\frac{1}{2}$ mm. circ. long.

3. Dimidiata.

13. **Hydnum Puiggarii** Speg. F. Puigg. n. 138. — Pileis coriaceis du- 847
ris, azonis, effuso-reflexis, vix pulverulento-pruinulosis, antice pal-
lescentibus, postice subrufescentibus, contextu ligneo-fuscescente;
aculeis ligneo-pallescentibus, confertis, brevibus, subæqualibus, acu-
tis, sæpius integris.

Hab. ad truncos languidos in silvis prope Apiahy Brasilæ. —
Pileus 30-40 mm. lat., 30 mm. alt.; contextus 2,5-3 mm. cr.;
zona marginali sterilis 1-5 mm. lat.; aculei 1-2 mm. long., 0,5
mm. crass. Species *H. pudorino* Fr. affinis, pileo fere glabrato
sublignoso-coriaceo satis tamen recedens.

14. **Hydnum auriculoides** Wettst. Vorarb. Steierm. I, p. 33. — Pileo 848
dimidiato-subsessili, tenui, ambitu ellipsoideo v. auriculiformi, basim
versus in stipitis modum rugoso-contracto, plano vel convexo, mol-
liter coriaceo, supra æqualiter breviter velutino, ochraceo vel pal-
lide fusco; poris magnis, tenuiter acuminatis, subæquilongis, fuscis,
marginem versus minoribus; sporis hyalinis, ovatis vel subglobo-
sis glabris, 3-5 μ . long.

Hab. ad truncos putres prope Frohnleiten Stiria. — *H. hirto*
maxime affine.

15. **Hydnum flavum** Berk. — Sacc. Syll. VI, pag. 456, Speg. Puigg. 849
n. 138. Cl. Spegazzini loc. cit. ita observat et distinguit:

Species pulcherrima a genere *Hydno* facillime separanda ac me-
lius forte *Hymenochæti* adscribenda, sat variabilis; formæ nobi-
liores hæc 3 sequentes prope Apiahy Brasilæ occurrunt. — *a*) Pi-
leis coriaceo-membranaceis, in sicco rigidulis, dimidiato-flabellatis,
5-20 mm. diam., subcucullato-convexulis, postice cuneatis, non mar-
ginatis levissimis; contextu sordide albo-pallescente, compacto, te-
nui 0,5 mm. crass.; hymenio e pallescente lutescente aculeis cy-
lindræo-conoideis, 150-200 \approx 50-60, laxiusculis, pallide subferru-
gineis apice sphacelatis atque pallidioribus vestito. — *b*) Pileis te-
nuibus coriaceis, rigidis in sicco, ex orbiculari reniformibus sub-

cucullato-convexulis, 40-50 mm. diam., postice emarginatis, stipite brevissimo vix evoluto peltato-dilatato, 5-10 mm. lat., adfixis, margine integris, cristula tenuissima, acuta, strictissima, vix perspicua auctis, fulvo-rufescentibus, unicoloribus, glaberrimis levissimis; contextu albo, compacto, subtenui, 1 mm. crass.; hymenio ex albo pallescente, aculeis obscure ferrugineis, cylindraneo-conoideis, 200-250 \times 40-45, subconfertiusculis, apice integris, acutissimis vestito. — c) Pileis tenuiter membranaceis, e rigidulo flaccidulis, dimidiato-suborbicularibus, cucullato-subgaleatis, 90-100 mm. latis, 60-80 mm. alt., postice profunde cordato-sinuatis marginatis, stipite parvulo brevissimo tuberculiformi subdorsali adfixis, ambitu integris vel vix subrepandulis, e lutescente sordide pallideque fulvescentibus, lituris radiantibus fuscescentibus ramulosis, sæpe anastomosantibus variegatis, margine zona strictissima ferruginea ornatis, levissimis, glaberrimis, contextu albo, marginali tenuissimo, 0,3-0,5 mm. cr., postice ad stipitem crassiusculo, 1-2 mm. cr., compacto; hymenio ex albo sulfureo vel pallide lutescente aculeis laxiusculis conoideo-elongatis, 150-200 \times 60-65, basi albo-luteis, apice acutissimis integris rufescentibusque vestito. An huc *H. brunneo-leucum* B. et C.?

16. **Hydnum citrinum** Zoll. in Flora 1847, p. 304. — Subimbricatum 850
dimidiatum; pileo molli coriaceo, supra byssaceo floccoso, citrino, subtus aculeis laxis, decrescentibus, obtuso-clavatis, mollibus, citrinis.

Hab. ad radices Bambusæ in ins. Java. — Pilei 3-6 imbricati, planiusculi, horizontales, plus minus semiorbiculares vel basin versus angustati, 2-3 cm. lati, 2-2,5 cm. longi, cum aculeis vix 4 mm. crassi, margine acuto integro. Aculei simplices erecti molles, apice incrassati, colore pilei obscuriores.

4. Resupinata.

17. **Hydnum cretaceum** Cooke Grev. XVIII, p. 34. — Resupinatum, 851
longe effusum, album; subiculo crassiusculo, tomentosum, niveum; aculeis robustis, subulatis, dependentibus, obtusis, ad basim conatis, 1-2 mm. long., plerumque compressis, farinaceo-cretaceis; sporis 4 \times 3.

Hab. ad cortices in Brasilia (GLAZIOU). — 7-10 cm. extensum, quasi calce illinitum.

18. **Hydnum carbonarium** Peck 40 Rep. p. 55. — Resupinatum, 852
tenuissimum, initio floccoso-pruinatum et album, dein fumoso-brunneum, interdum margine persistenter album; aculeis brevibus dein

longioribus, subulatis vel cylindraceis, apice minute ciliatis, primo albidis, dein fumoso-brunneis.

Hab. ad ligna carbonaria, Elizabethtown Amer. bor.

19. **Hydnum setosum** Pers. M. E. II, pag. 213, *Dryodon* Pat. Tab. 853
anal. n. 679. — Resupinatum, orbiculare, 5–8 cm. diam.; subiculo tenui, tomentoso, flavo, a matrice facile secedente; aculeis numerosis, flexuosis, 1–3 cm. long., acutis, albidis dein rufidis; sporis hyalinis, ovoideis, levibus, 6 ≈ 3; odore anisino.

Hab. ad ligna putrida in Gallia.

20. **Hydnum subfuscum** Peck 40 Rep. p. 55. — Resupinatum, tenue, 854
molle, margine et subiculo subtus albis, tomentosis; subiculi superficie superiore pallide flavido-brunnea vel fusco-isabellina, particulis lucentibus adpersa; aculeis gracilibus, subulatis, acutissimis, albis dein apice albis vel omnino subiculo concolori.

Hab. ad lignum dejectum arborum deciduarum, Conklingville Amer. bor. — *H. Himantice* subaffine.

SISTOTREMA Pers. — Syll. VI, p. 480.

1. **Sistotrema membranaceum** Oud. in Hedw. 1879, p. 127 et 1880, 855
p. 4. — Integrum, candidum, interdum in crustam lacteam terræ contiguam confluens; pileo membranaceo, subirregulari, glabro, deorsum in stipitem p. m. gracilem contracto; lamellis niveis, planis vel canaliculatis, decurrentibus, siccando collabescentibus quasi diffluentibus. *Sistotrema confluent VI, 480*

Hab. ad terram sæpe quisquiliis variis adfixum, Baar inter et Hilversum Hollandiæ.

IRPEX Fr. — Syll. VI, p. 482.

1. **Irpex subflavus** Pat. Journ. Bot. 1889, p. 167. — Pileo suberoso, 856
dimidiato, plano, ochraceo, zonato-sulcato, tomentoso, margine obtuso et crasso; hymenio pallide tabacino; contextu citrino; hymenio margine sterili; dentibus numerosis, inordinate dispositis, cylindraceis vel applanatis et canaliculatis, prope marginem pilei poriformi-confluentibus.

Hab. ad ligna emortua, Tonkin Sinæ. — Fungus 3–6 cm. lat., 1–2 cm. long.; contextus 1 mm. cr.; dentes 2–3 mm. long.; margo sterilis 2 mm. circ. lat.

2. **Irpex anomalus** Wettst. Fungi Austr. p. 2, t. I, f. 1–9. — Pileo 857
turbinato in stipitem paulatim attenuato vel subdimidiato et excentrice stipitato, integro v. sublobato, sæpe compluribus connatis

pileos irregulares formantibus, fibroso-carnoso, molli, tenuissimo, albo v. albido-flavescente, supra tenuiter villosa; stipite basin versus attenuato, longo, concolori, infra flavescente, tenuiter fibroso-carnoso; hymenio in plicis lamellatis, marginem versus reticulatim dispositis et partim connexis, albis, carnosis, tenuibus; basidiis hyalinis, in parte sporigera incrassatis v. clavatis, sporas quinque octogeneribus, sterigmatibus tenuissimis in apice basidii orbiculariter dispositis; sporis ovoideis v. subglobosis, hyalinis, membrana tenuissima, glabris, 3-5 \times 2-3.

Hab. in locis humosis sub saxis prominentibus ad Trins Tiroliæ. — Pileus 1-2½ cm. diam.; stipes 1-2 cm. long. *I. radicato* vix affinis.

3. **Irpex fusco-violaceus** (Schrad.) Fr. — Syll. VI, p. 483. — Var. 858
stipitatus Wettst. Vorarb. Steier. I, p. 32. — Pileo plus minus in stipitem crassum contracto, pendulo, subcampanulato.

Hab. ad sepes pr. Feistritz Stiria.

4. **Irpex ambiguus** Peck 40 Rep. p. 55. — Resupinatus, adnatus, mi- 859
nute cæspitosus; subiculo tenuissimo, flocculoso-pruinoso, albo dein expallente; aculeis obliquis, basi subcoalitis, minutis, variabilissimis, subulatis et integris v. compressis, acutis, truncatis, ramosis, incisus vel subserratis, albis dein expallentibus.

Hab. ad lignum et corticem fagineum, Adirondack Mountains Amer. bor.

5. **Irpex rimosus** Peck 43 Rep. p. 22. — Resupinatus, primo orbi- 860
cularis, dein confluens, irregulariter cæspitosus, tenuis, albidus v. pallidus, dein rimoso-areolatus, margine plus minus libero v. subreflexo; hymenio primo subporoso vel dædaloideo; dissepimentis in aculeos subulatos, compressos v. incisos, dein fasciculares productis.

Hab. ad corticem Betulæ luteæ, Catskill Mountains Amer. bor.

6. **Irpex nodulosus** Peck 41 Rep. p. 79. — Resupinatus, cæspitosus, 861
10-25 cm. et ultra diam., subseparabilis; subiculo crasso, tenaci; hymenio versus marginem crassum definitum dentato-poroso, centro noduloso et aculeis inæqualibus, compressis, truncatis vel laciniatis, rarius tereti-acutis productis, albidis, centro flavido vel pallide ferrugineo.

Hab. ad corticem truncorum Populi, Gansevoort Amer. bor.

RADULUM Fr. — Syll. VI, p. 493.

1. **Radulum fruticum** Karst. Rev. Myc. 1884, p. 214. — Longitudinali- 862
ter effusum crustaceum, subglabrum, ligneo- vel albido-pallescentibus;

tuberculis elongatis subteretibus inæqualibus, vulgo conglomerato-confluentibus, curtis, apice ut plurimum subdenticulatis.

Hab. in ramis Corni sanguineæ corticatis putrescentibus ad Petit-Couronne, Seine inf. Galliæ (LETENDRE).

2. **Radulum Cyatheæ** W. G. Smith Journ. Bot. 1873, p. 66, t. 130, 863
f. 5-8. — Crustaceum, pallide ochraceum, tuberculis primitus rotundis obtusis, apice floccoso-villosis, demum subcylindræis, irregularibus, sparsis margineque subdenticulatis; sporis subirregularibus, 6-7 \simeq 4.

Hab. in stipitibus filicum cultarum, Veitch's Nursery Chelsea Britannia.

PHLEBIA Fr. — Syll. VI, p. 497.

1. **Phlebia acerina** Peck 42 Rep. pag. 27. — Resupinata, effusa, irre- 864
gularis, subtus fere glabra, margine integra; hymenio fusco-cremeo dein obscuriore, plicis irregularibus, obtusis, dentatis, subporosis.

Hab. in ligno et cortice Aceris saccharini, Mechanicville. — *Phl. vagæ* valde affinis. — Cl. Karsten in Hedw. 1889, p. 113 hæc scribit: Secundum descriptiones beat. Friesii a *Phlebia radiata* Fr. differunt *Phl. merismoides* Fr. præcipue receptaculo subtus villosa et *Phl. contorta* Fr. colore e rufo fusco, illam autem villosam numquam, hanc carneo-rubram vel aurantiacam sæpe vidimus, qua ex re omnes tres ad unam eandemque speciem pertinere contendere audemus. Sec. eundem, Hedw. 1890, p. 271, *Phl. vaga* habet sporas subglobosas, 5-6 \simeq 4-5, scabriusculas.

GRANDINIA Fr. — Syll. VI, p. 500.

1. **Grandinia glauca** Cooke Grev. XVII, p. 55. — Subceracea, late 865
effusa, adglutinata, glauca, ambitu determinato, hymenio æquali; granulis subconicis, æqualibus, minutis, confertis, concoloribus; sporis 8 \simeq 4.

Hab. in ligno decorticato, Brisbane Australia (BAILEY).

2. **Grandinia microspora** Karst. Finl. Basidsv. p. 365. — Receptaculis 866
effusis, laxè adhærentibus, submembranæis, mollibus, tenuissimis, ambitu initio subbyssino, albis, siccis calceis; verrucis confertissimis, sæpe confluentibus, valde inæqualibus, minutis, subgranulosis; basidiis exiguis, 4-sporis; sporis sphæroideo-angulatis, hyalinis, 4 \simeq 3, vel 2-4 μ . diam.; cystidiis nullis; hyphis gracillimis, 2-3 μ . crass.

Hab. ad lignum mucidum betulinum prope Mustiala Fennia.

ODONTIA Pers. — Syll. VI, p. 507.

1. **Odontia tenerrima** Wettst. in Bot. Centr. 1888, n. 38, p. 354. — 867

Hymenio e fibris tenerrimis contexto, superficiem substrati membrana tenuissima indefinite marginata, effusa, ochracea obtegente; mycelio sterili eadem forma coloreque, parum evoluto, ex hyphis ramosissimis tenuiter membranaceis, semper liberis vel anastomosantibus vel numquam pseudo-parenchyma formantibus composito, ramos breves plurimos sporiferos edente; basidiis tetrasporis, subclavatis, nonnumquam in aculeos compositis; sporis globosis, pallide ochraceis, longe setosis, membrana crassiuscula, eguttatis vel 1-guttatis 8-10 diam.

Hab. ad lignum quercinum putridum, Zimmermann. — Membrana 15-30 cm. long. et lat., 0,2-0,5 mm. crass.

2. **Odontia livida** Bres. in N. G. Bot. Ital. 1891, p. 158. — Latissi- 868

me effusa, indeterminata, crustaceo-membranacea, arcte adnata, albida, mox livido-fuscescens, siccitate rimosa, ambitu pruinoso, albo, verrucis granuliformibus, plus minusve elongatis, confertisque, concoloribus, apice hyalino-fimbriatis; sporis hyalinis, obovatis, 6-8 \times 4,5-5; basidiis clavatis 30-35 \times 6-7.

Hab. ad ligna mucida Lauri nobilis (?), Firenze alle Cascine (U. MARTELLI).

KNEIFFIA Fr. — Syll. VI, p. 510.

1. **Kneiffia irpicoides** Karst. Finl. Basidsv. p. 368. — Receptaculis 869

vage effusis vel orbicularibus, indeterminatis, tomentosus, crustaceo-adnatis, ambitu similari, albidis vel pallidis, siccitate ferruginascenti-flavidis; verrucis confertissimis, sæpe concretescentibus, vulgo complanatis, aculei- vel dentiformibus, acutatis, apice setulis (cystidiis) sparsis vel sæpius fasciculatis strigoso-exasperatis; sporis sphæroideis vel subsphæroideis, 4-5 \times 3-4 vel 3 μ . diam.; cystidiis cylindræis, filiformibus, hyalinis, inarticulatis, sæpe fasciculatim conjunctis, nudis, 6-7 μ . crass.

Hab. supra corticem, raro lignum, Betulæ, Sorbi et Alni Fennia austr.

2. **Kneiffia subtilis** Karst. Hedw. 1886, fasc. IV. — Latissime effusa, 870

indeterminata, flocculoso-furfuracea, crustoso-adnata, tenerrima, albido- vel ligneo-pallens aut cinerescens, ambitu similari, setulis

subconfertis, brevissimis, gracillimis, apice pilosulis; sporis sphæroideo-ellipsoideis.

Hab. ad lignum vetustum pineum prope Mustiala Fenniae.

3. **Kneiffia lactea** Karst. *Odontia lactea* Karst. Hattsv. II, p. 239, ⁸⁷¹
Sacc. Syll. VI, p. 508 — * **Kn. abietina** Karst. Hedw. 1886, fasc. VI.
— Latissime effusa, indeterminata, crustoso-adnata, flocculoso-furfuracea, tenerrima, persistenter albido-pallens, ambitu similari, setulis brevissimis, confertis, superne in pilos solutis; sporis ellipsoideo-sphæroideis, vulgo uniguttulatis 3-5 \approx 2-4.

Hab. in cortice vetusto Abietis excelsæ prope Mustiala Fenniae.
— A typo præcipue setulis confertioribus majoribusque recedit. Sec. auctorem huc spectat *K. setigera* Ellis N. A. Fungi n. 713, nec Fr.

4. **Kneiffia stenospora** Karst. Hedw. 1886, fasc. VI. — Latissime effu- ⁸⁷²
sa, indeterminata, crustoso-adnata, flocculoso-furfuracea, admodum
tenuis, ambitu similari, pallescens, siccitate sordide flavescens, setulis
confertissimis, curtis, inæqualibus, superne pilosulis; sporis cylin-
draceis, curvulis vel subrectis, 5-8 \approx 1.

Hab. ad ligna putrescentia pinea in Fennia australi passim. —
A *Kneiffia setigera* Fr. comparanda setulis brevioribus sporisque
statim dignoscenda.

5. **Kneiffia breviseta** Karst. Hedw. 1886, fasc. VI. — Latissime effusa, ⁸⁷³
indeterminata, crustoso-adnata, flocculoso-furfuracea, tenerrima, albi-
da vel lactea, ambitu similari, setulis brevissimis, confertis, superne
pilosulis, siccis argillaceis vel argillaceo-seu fuscescente-lutescenti-
bus; sporis ellipsoideis, utroque polo attenuatis, vulgo uniguttula-
tis, 5-9 \approx 3-5.

Hab. in ligno vetusto Pini silvestris circa Mustiala Fenniae
haud rara autumno seriore. — Ad *Kneiffiam ambiguam* Karst.
(*Odontiam ambiguam* Karst. — Syll. VI, p. 508) proxime accedit.

6. **Kneiffia fragilis** Karst. Hedw. 1889, pag. 26, *Radulum fragile* ⁸⁷⁴
Karst. Hedw. 1886. — Late effusa, crustoso-adnata, flocculoso-fur-
furacea, tenuissima, lactea, ambitu similari, tuberculis admodum
curtis, valde difformibus et inæqualibus, subinde pilosulis vel pa-
pillosis, fragilibus, siccis pallido-flavescentibus; sporis sphæroideo-
ovoideis, 2 μ . diam.

Hab. in ligno mucido Betulæ odoratæ in regione Mustialensi
Fenniae.

7. **Kneiffia vagans** Karst. Hedw. 1889, p. 26, *Radulum vagans* Karst. ⁸⁷⁵
Hedw. 1886. — Late effusa, crustoso-adnata, admodum tenuis, to-

mento contexta, ambitu primitus subtomentosa persistenter albida, tuberculis confertissimis, admodum curtis, difformibus, inæqualibus, teretibus, conoideis, compressis, obliquis, sæpe confluentibus, apice incisus vel subtiliter fimbriatis; sporis ellipsoideo-sphæroideis, 3-4 \approx 2-3.

Hab. in ligno putrido Pini silvestris prope Mustiala Fennia. — Primo obtutu facile pro *Irpice* sumitur.

8. **Kneiffia setigera** Fr. — Syll. VI, p. 510. — Sec. Karst. in Hedw. 1889, sporas habet oblongatas vel ellipsoideo-oblongatas, rectas vel subrectas, eguttulatas, 8-9 \approx 3-4; setulæ (cystidia) hujus discretæ vel fasciculatæ, cylindræ, hyalinæ, obtusæ, demum ut plurimum in hyphas filiformes, longas, ramosas, et articulatas ex-crescentes. Crescit in Betula, rarissime in Alno in Fennia.
9. **Kneiffia sera** (Pers.? Fr.) Karst. Hedw. 1889, ab auctoribus cum variis *Corticis* (v. c. *Corticium granulato* (Bon.) Karst.) confunditur; specimina nostra, quæ cum descriptione in Fr. Elench. I, p. 211 data ad unguem congruunt, verrucis exiguis apice ex cystidiis ex-cedentibus, filiformibus paucissimis ciliatis sporisque oblongatis, leviter curvulis vel subrectis, eguttulatis, obtusis, 6-8 \approx 2,5-3,5 sunt prædita. Crescit in Alno, rarissime in Betula in Fennia (Karst.).
10. **Kneiffia latitans** Karst. Hedw. 1889, *Corticium* Karst. in Rev. myc. 1888, p. 74, Sacc. Syll. Fung. VI, p. 617. Cystidia hujus cylindræ, recta, obtusa, hyalina, granulis oblecta, 100 \approx 10-12, subinde etiam inter verrucas obvia (Karst.).

MUCRONELLA Fr. — Syll. VI, p. 512.

1. **Mucronella subtilis** Karst. Symb. Myc. Fenn. XXIII, p. 1. — Su- 876
biculo nullo; aculeis confertis, tenuissimis, acuminatis, albis, siccitate vix v. levissime lutescentibus, vix 1 mm. altis; sporis 2-4 \approx 2.
Hab. supra lignum putridum pineum prope Mustiala Fennia.

Fam. 4. **Thelephoræ** PERS *).

CRATERELLUS Fr. — Syll. VI, p. 514.

1. **Craterellus floccosus** Boud. Quelq. esp. p. 308, t. 4, f. 3. — Pi- 877
leo parum carnosio, infundibulari, fuligineo dein griseo-flavido, squa-

*) Conferatur de hac familia difficillima perutilis *Monograph of the Thelephoræ* a cl. Masee edita in Journ. Linn. Soc. Lond. 1888-89 et nondum absoluta. Ibi plures species novæ describuntur, quas hic repetimus, ibi plures

mis floccosis, acutis, rectis v. undulatis obtecto, patulo et margine flexuoso; hymenio griseo-roseo v. subflavido, ad stipitem non bene limitato; stipite pileo vulgo et præcipue basi saturatiore, dein expallente, glabro, gracili, farcto, carne ut in pileo grisea; sporis ovoideis, subochraceis, intus granulosis, $10-12 \approx 6-7$.

Hab. ad terram nudam et argillosam ad vias umbrosas, Montmorency Gallia. — *C. sinuoso* subaffinis.

2. **Craterellus auratus** QuéL. XVI Suppl. p. 3, t. 21, f. 7. — Læte 878
flavo-auratus; pileo campanulato-convexo, dein depresso et flexuoso, 0,5-1 cm. diam., membranaceo, glabro, pruinoso; hymenio pruinoso, nervis tenuibus et raris percurso; stipite debili, sæpe applanato, 1 cm. long., pruinoso, subbulboso; sporis ellipsoideo-oblongis, 8-10 μ . long., subreniformibus, hyalinis.

Hab. ad michaschistos et sub Castanea, Vallée de Luchon Gallia (FOURCADE).

3. **Craterellus orinocensis** Pat. Bull. Soc. Myc. 1888, p. 19, t. IX, 879
f. 2. — Pileo submembranaceo, marginibus reflexis, dein expansis, undulatis, crenatis, demum inæqualibus, 4-5-lobatis, brunneo-fuligineo, rugoso-striato, atque ad stipitis basim tubi ad instar cavato; hymenio levi, dein rugoso, plicato, sordide griseo-violaceo; stipite gracili, brunneo, fasciculis pilorum obducto; sporis ovoideis, hyalinis, intus granulosis.

Hab. ad terram in silvis prope Raudal d'Atures Venezuelæ. — Fungus 6-8 cm. alt.; pileus 2-3 cm. lat.; stipes deorsum attenuatus, 4-5 mm. cr. *C. cornucopioidi* affinis.

4. **Craterellus insignis** Cooke Grev. XIX, p. 2. — Erectus, cæspitose 880
sus; pileo flabelliformi, alutaceo, ad 2,5 cm, lato, margine lobato-crenulato, striato; stipite gracili, 1,2-2,5 cm. long., concolori, sursum in pileum expanso, deorsum attenuato; hymenio ceraceo, rugoso, obscuriore; sporis ovalibus, $2-3 \approx 1\frac{1}{2}$, fusco-hyalinis.

quoque veteres, denuo examinatae, ad genera aptiora transferuntur, ibi multarum specierum notae micrologicæ declarantur; quas correctiones et notas dolet hic, spatii defectu, referre non posse, sed studioso enixe commendamus. Nominibus specificis nonnullis a cl. Masee ob homonymiam ex novo inditis præferri debent illa paullo anteriora in Sylloge adhibita, e. g. *Stereum crucibuliforme* Masee (1889) = *St. Curreyi* Sacc. (1888), *St. Spegazzianum* Masee (1889) = *St. Spegazzinianum* Sacc. (1888), *Cort.* et *Stereum Kalchbrenneri* Masee (1889), eadem sunt ac *Cort.* et *St. Kalchbrenneri* Sacc. (1888), *Coniophora furva* Karst. et *C. Karstenii* Masee eadem videntur; *Conioph. atrocinerea* Karst. apud Masee iterata est.

Hab. in truncis emortuis, New Zealand (COLENSO).

5. **Craterellus incarnatus** Quél. XVII Suppl. p. 4, t. XV, f. 13. — 881

Pileo cyathiformi, 2-3 cm. diam., sinuato-undulato, subincarnato, margine late flavo et piloso-fimbriato; contextu albo, trito mox roseo, amaro; hymenio venoso-rugoso, subreticulato cum stipite contiguo, pruinoso, incarnato; stipite farcto, torto, 3-5 cm. long., fragili, fibroso-striato, pruinoso vel sericeo, albo, dein citrino; sporis ovoideis vel pruniformibus, 10 μ . long., minute granulosis, hyalinis, pallide citrino-nitentibus.

Hab. cæspitosus vel gregarius ad terram argillaceam in fagetis Juræ Galliæ. — *C. cochleato* proximus.

6. **Craterellus multiplex** Cooke et Masee Grev. XVIII, p. 25. — Sti- 882

pite tenui, erecto, rugoso, 5 cm. long., 4 mm. cr.; pileis reniformibus vel obovatis, basi stipiti affixis, quinque senis superimpositis, 12-18 mm. lat., submembranaceis, postice depressis, glabris, ochraceis, margine subincurvis, tenuibus, hymenio carneo, longitrorsum rugoso; sporis 3,5 μ . diam., globosis, copiosis, hyalinis.

Hab. ad terram, Derwent River Tasmaniæ.

THELEPHORA Ehrh. — Syll. VI, p. 521.

1. **Thelephora circinella** Pat. Bull. Soc. Myc. 1888, p. 38. — Ere- 883

cta, stipitata, ochraceo-pallida; stipite rigido, coriaceo, cylindraceo, sursum in lamellam membranaceam, fibrosam, inciso-multifidam, subtus rugosam et hymeniophoram dilatato; hymenio brunneo, levi.

Hab. ad terram, ad ripas Orenoco Venezuelæ. — Fungus 1,5-2,5 cm. alt.; stipes 2 mm. cr.

2. **Thelephora Hisingeri** Karst. Symb. Myc. Fenn. XXIII, p. 2 (*Po-* 884

lyozus). — Coriaceo-mollis, erecta, dichotome ramosa, alutaceo-pallescens, 3-4 cm. alta, basi stipitiformi, simplici, gracili, subfiliformi, tereti, pubescente pruinosa, ramis complanatis vel teretibus, levibus, subfastigiatis, pruina dense obtectis, apice acutis vel rarius obtusis, subnudis; sporis subsphæroideis, hyalinis, 3 = 2.

Hab. ad radices Cyathæ medullaris in calidariis Fagervikien-sibus, ubi Orchideæ colebantur (EDV. HISINGER).

3. **Thelephora brasiliensis** Karst. Hedw. 1889 (*Thelephorella*). — 885

Pileis coriaceis, tenuibus, polymorphis, imbricatis et dimidiatis, confluentibus, basin versus scrobiculatis et subtiliter adpresse tomentosis, obsolete zonatis, spadiceo-ferrugineis, margine admodum tenui, glabro, integro v. sublacinatulo, nigrescente (saltem in statu

sicco); hymenio levi, ferrugineo vel spadiceo-ferrugineo, cystidiis (setulis) prominulis, obscurioribus setuloso; sporis anguloso-sphæroideis, verrucosis, flavescentibus (sub lente), 6-10 μ . diam.; cystidiis setaceis, acutis, levibus, nudis, aureo-brunneis (sub lente), 100-120 \approx 10-12.

Hab. ad terram in Minas Geraes, Sitio Brasiliæ. — Pilei sat parvi, numerosi, cæspites 2-4 cm. latos formant. Ad *Thelephoram vialem* Schw. proxime accedit. Sec. cl. Karsten loc. cit. genus *Thelephorella* est *Thelephora* hymenio cystidiis (setulis) cuspidatis, rigidulis, coloratis consperso.

4. **Thelephora lilliputiana** Speg. F. Puigg. n. 142. — Minuta, helvola, 886
dense cæspitosa; pileis tenuibus papyraceis, rigidulis, flabellatis, antice sæpius integris, postice cuneatis sæpius ramulosis, superne glabris fibrillosis, pallescenti-rufescentibus; contextu albo-ligneo; hymenio concaviusculo, helvolo, subpulverulento.

Hab. ad ramos dejectos putrescentes in silvis prope Apiahy Brasiliæ. — Cæspites 10 mm. lat., 5-6 mm. alt.; pilei 2-3 mm. lat.; stipites e nodulo communi fasciculato-assurgentes, 2-4 mm. long.; sporæ non visæ. Species trivialis pusilla habitu sæpe *Hymenochæti asperæ* Berk. similis, sed mox dignoscenda.

5. **Thelephora stereoides** Cooke et Mass. Grev. XVIII, p. 5. — Coriacea; 887
pileis effuso-reflexis, villosis, ferrugineis, margine acuto crispulo, hymenio obscuriore, rugoso, acie pallidiore, rufescente; sporis globosis, verrucosis, fuscis, 7-8 μ . diam.

Hab. ad cortices, Oakleigh Victoria (Dom. MARTIN). — Species vere notabilis, habitu *Sterei* vel *Hymenochætes*, fabrica vero et sporæ *Thelephoræ*; 7-10 cm. extensa, cum pileis reflexis circ. 12 mm. alt.

6. **Thelephora scoparia** Peck 42 Rep. p. 27, t. II, f. 20-21. — In- 888
crustans, hinc inde ramorum fasciculos emittens, subtus unita, subtus, acuminata vel fimbriato-incisa, primo pallida vel albida, mox ferrugineo-brunnea; hymenio æquali, pruinoso-pubescente; sporis angulosis, asperis, coloratis, 7-10 μ . long.

Hab. ad plantas minutas, muscos etc. Bethlehem et Selkirk Amer. bor. — *T. laciniatæ* affinis.

7. **Thelephora? rugulosa** Lév. in Zoll. Verg. I, p. 17 (*Phlebophora*). 889
— Pileo membranaceo-coriaceo, tremelloso, obtuse campanulato, e vertice depresso ad marginem incrassatum undulatum rugoso-sulcato, cinnamomeo; hymenii rugis vix prominulis, pallidiusculis; stipite stricto, coriaceo, nudo, fistuloso, pileo concolori,

Hab. ad terram in M. Prabakti Archipelagi indici. — Mihi omnino dubia.

CLADODERRIS Pers. — Syll. VI, p. 547.

1. **Cladoderris Schumanniana** Henn. in Schum. et Hollr. Flora Kais. 890 Wilhelm's Land. p. 6. — Imbricato-cæspitosa; pileis pluribus inter se confluentibus, laterali-stipitatis, suberosis. pulverulentis, margine tenuibus, undulatis, breviter erosis; hymenio flabellato-costato verrucoso-exasperato; stipitibus crassis in massam unicam coadunatis, alutaceis, glabris.

Hab. ad terram, Kaiser-Wilhelm's Land Groënlandiæ. — Pileus circ. 5 cm.; stipes 4-5 cm. alt.

2. **Cladoderris Glaziovii** P. Hennings in litt, — Pileo coriaceo-duro, 891 spathulato-flabelliformi, vix zonato, fulvo-tomentoso, ruguloso squamosoque, margine sublobato, tenui, nigrescente, 5 cm. lato; stipite laterali, brevi concolore, tomentoso; hymenio incarnato, costis dendroideo-ramosissimis, granuloso.

Hab. ad truncos in Brasilia prope Rio de Janeiro (GLAZIOU). — Contextu tenaci, duro et granulis valde irregularibus distincta.

STEREUM Pers. — Syll. VI, p. 551 *).

1. **Stereum rufo-nitens** Speg. F. Puigg. n. 143. — Mesopus; pileo te- 892 nuiter papyraceo-coriaceo, infundibuliformi, rufo, sericeo-nitente, ambitu glabro levi, zonis concentricis obscurioribus notato, centro longe grosseque crinito-setuloso; hymenio plano subpulverulento pallescenti-roseolo; stipite centrali brevi, crasso, rufo-pallescente, tuberculoso-adnato.

Hab. ad caudices putrescentes, rarissime, prope Apiahy Brasiliæ. — Pileus 15 mm. alt., 12 mm. lat.; setæ lamellosæ 1-3 mm. long., 150-250 μ . latæ; stipes 3-5 mm. long., 1,5-2 mm. crass. Species pulcherrima *St. cyathiformi* certe peraffinis, sed satis riteque diversa.

2. **Stereum insigne** Bres. in N. G. Bot. Ital. 1891, p. 158. — Cæ- 893 spitoso-connatum, sessile; pileis lignoso-suberosis, villososcribiculatis, zonato-sulcatis, ferrugineo-spadiceis, quotannis zona marginali 5-7 mm. lata, flavo-villosa adauctis, dimensione juxta ætatem variantibus; hymenio confluenti-stratoso, ligneo, luteo, cæsiocinereo pruinato, demum rimoso; sporis..... non visis.

*) Cfr. Masee Monograph Thelephor. London 1889.

Hab. ad truncos arbor. frondos. Florentiæ in R. viridario Boboli (MARTELLI). — *Stereo repando* et *areolato* affine, sed forma bene evoluta apoda, eximie pileata, est *Stereo lobato* similis. Variat resupinatum, hymenio albido.

3. **Stereum boreale** Karst. Myc. Fenn. XXIX, p. 104 (*Stereophyllum*). — Pileo coriaceo-membranaceo, molli, concavo, dimidiato, reniformi, raro integro et infundibuliformi, radiato-scrobiculato, sericello, albo, margine fimbriato, disco fuscescente, hymenio levi vel ruguloso, albo, 5-8 mm. lat.; stipite laterali vel subcentrali, verticali, æquali, striato, glabro, albo, 0,5-1 cm. alt.; sporis ellipsoideis, hyalinis, $1 \approx 0,5$; hyphis hyalinis vel dilutissime fuliginis, 0,5 μ . crass.

Hab. in collibus glareosis ad Polytricha prope Mustiala Fenniciæ. — Ad *Craterellum* vergit.

4. **Stereum pergameneum** B. et C. — Syll. VI, p. 551. — Var. **ramosum** Pat. Journ. Bot. 1890, p. 20. — Pileis infundibularibus, plus minus confluentibus; stipite fere e basi in ramulos erectos diviso; basidiis clavatis, 4-sterigmicis; sporis hyalinis, ovoideis, rotundatis, basi mucronatis, uniguttatis, $6 \approx 4$.

Hab. ad terram nudam et fragmenta ligni putridi, Hanoi Tonkin Sinæ.

5. **Stereum pallens** Karst. Hedw. 1889 (*Stereophyllum*). — Pileo coriaceo, reni- v. flabelliformi, applanato, postice in stipitem obsoletum attenuato, glabrescente, azono, subinde sulco unico obsoleto notato, basin versus vulgo rugoso-striatulo, margine integro, pallente; hymenio infero levi, pallente, nudo; strato intermedio a pileo inodermeo distincto; cystidiis nullis.

Hab. ad lignum in Minas Lafayette Brasiliæ. — Specimina majora 8 mm. lata, 4 mm. longa. Affine videtur *Stereo cyphelloidi* Berk. et C.

6. **Stereum pulchellum** S. et B. Rev. Myc. 1889. — Pileo coriaceo-membranaceo ex infundibuliformi flabellato, breve stipitato concentricè obsolete zonato, ochraceo-cervino, infra obscuriore, velutino, margine acuto, subintegro; hymenio levissimo, nitidulo, carneo; stipite teretiusculo, brunneo, puberulo, apice albido-marginato.

Hab. ad truncos in insula Principis Afr. occid. (F. NEWTON). — Hinc *Stereo Moselei*, illinc *St. Leichhardtiano* affine. Pileus 2-3 cm. lat. $1\frac{1}{2}$ cm. alt.; stipes 6 mm. lat., 2-3 mm. crass.

7. **Stereum Squamula** Speg. F. Puigg. n. 144. — Pleuropus, pusillum, lignicolor; pileis tenuibus coriaceo-rigidis, flabellatis vel spathu-

latis, integris vel lobato-fissis, glabris, concentrice sulcatis, subradiatim fibrilloso-rugulosis, postice cuneato-stipitatis; hymenio concolori levi.

Hab. ad terram nudam vel schidias putrescentes prope Apiahy Brasilæ. — Pilei 5-10 mm. alt., 4-5 mm. lat., subinde 5-15 alt., 10-15 mm. lat.; contextus albus 0,3-0,5 mm. crass.; sporæ non visæ. Species sæpius terrestris, raro frustulis ligneis terra obvolutis adhærens.

8. **Stereum hilare** Kalchbr. in Thuem. Pilz. d. Gazell. p. 3. — Ef- 899
fuso-reflexum, imbricatum, papyraceum; pileis azonis, levibus, glabris cum hymenio levi glabro læte isabellinis.

Hab. in insula Bougainville Oceanicæ. — Pileus 2,5 cm. long., 4 cm. lat.

9. **Stereum tenellum** Kalchbr. in Thuem. Pilz. d. Gazell. pag. 3. — 900
Umbonato-sessile, tenue, coriaceum; pileo ex orbiculari reniformi, plano-convexo, azono, velutino, cinereo-fusco, margine dilutiore, carneo; hymenio levi, glabro, carneo-pallido.

Hab. in ins. Amboina Oceanicæ. — *St. versicolori* et *St. lobato* affine.

10. **Stereum Coryli** Pers. Obs. Myc. I, p. 35, sec. Bres. in Rev. Myc. 901
1890, p. 108. — Suberosum, rigidum; pileo effuso-resupinato, dein margine libero reflexo centroque tantum constanter adflxo, cupulæformi, rugoso-striato, spadiceo; hymenio luteo, in sicco, albido, non cruentato, glabro, sub lente pruinoso, sed absque veris papillis, sæpe tuberculoso; sporis hyalinis, cylindræcis, interdum subcurvulis, 6-8 = 2,5-3.

Hab. ad truncos Coryli Avellanæ in Italia et Germania. — Pileus 3-4 cm. lat. *Ster. hirsuto* affine.

11. **Stereum spongiosum** Masee Monogr. Theleph. p. 172, *S. Miche-* 902
neri B. et Curt. p. p. — Pileo dimidiato, postice incrassato, umbrino vel cinnamomeo, spongioso-tomentoso, contextu umbrino; hymenio ochraceo, rimoso; sporis ellipsoideis, 6-7 = 4.

Hab. in ramis tenellis in Pennsylvania et Carolina austr. — Pilei 3-7 cm. lat., sæpe imbricati, usque ad 1 cm. cr.

12. **Stereum Kurzianum** Cooke Grev. XVIII, p. 55. — Submembrana- 903
naceum, molle, tenue; pileo effuso-reflexoque, minutissime velutino, sæpe subruguloso, cervino, 7 cm. lat., 2,5 cm. alt.; hymenio glabro, pruinoso, carneo-fusco; sporis 7 = 5.

Hab. ad truncos in insula Java (KURZ). — Siccum chartam brunneam imitatur. *S. bicolori* proximum.

13. **Stereum amphirhytes** S. et B. Rev. Myc. 1889. — Pileis reflexis 904

latere connatis, coriaceo-rigidis; hymenio longitrorsum crebre inæqualiter sulcato minuteque foveolato, glabro, cinereo, versus marginem acutum pallidiore; dorso ochraceo-lutescente, longitrorsum plicato-sulcato minuteque colliculoso, glabrescente, sub lente vero pilis exiguis, tereti-clavulatis, hyalinis, continuis, tortuosis subvelutino.

Hab. ad truncos in insula S. Thomé Afric. occid. (AD. F. MOLLER). — Pileus 2-3 cm. lat. et long.; contextus pilei e stratis tribus constat, dorsualis velutinus, medius tortuoso-prosenchymaticus, lutescens, hymenialis parallelo-prosenchymaticus, albidus; basidiis (sterilibus visis) non exertis, tereti-acuminatis, subflexuosis endochromate atro-brunneo interrupto farctis. A *St. Friesii* differt pileis non concentricè sulcatis, hymenio numquam violaceo-purpurascente. Recte monente cl. Bresadola in litt., hymenium pro dorso loc. cit. perperam descriperam.

14. **Stereum Puiggarii** Speg. F. Puigg. n. 150. — Scutato-peizoi- 905

deum, sessile, coriaceum, durum, ambitu subinvolutum undulatum, dorso puncto adfixum atque dense spongioso-lanosum, sericeo-aterimum; contextu tenui, albo; hymenio sordide fusco-cinerescente, primo cinereo-pruinuloso.

Hab. ad caudices putrescentes in silvis pr. Apiahy Brasiliæ. — Pilei 15-20 mm. diam.; contextus 0,5-0,7 mm. crass. Species pulcherrima generi *Coniophoræ* DC. nonnihil accedens, distinctissima; hymenium subcrustaceum facillime a contextu separabile.

15. **Stereum atro-rubrum** Ell. et Ev. Proc. Phil. 1890, pag. 219. — 906

Flabellatum vel reniforme, 1-3 cm. lat. et long., coriaceum, tenue, in basim sessilem postice attenuatum, initio flavum et tomentosopubescens, parce tenuiter zonatum, demum sordide fusco-rubrum, glabrum, sed dense radiato-rugosum, zonis 3-5 distinctis, subelevatis, margine lobato-crispo (subinde prolifero), hymenio flavo, demum (senio) udo testaceo, sicco pallidiore.

Hab. in truncis vetustis, in Columbia britannica (MACOUN). — Siccando convolvitur, rigescit et fragile fit.

16. **Stereum pictum** Berk in herb. et Masee Mon Thel. p. 185. — 907

Pileo coriaceo-membranaceo, umbonato-sessili vel postice effuso, cinereo, villosa, zonis margineque glabrescentibus, badiis; hymenio pallide ochraceo, dein cinerescente; sporis ellipsoideis, $7 \approx 5$.

Hab. ad ligna in Brasilia. — Speciosum; pileus 7-10 cm. lat.,

in sicco rigidus. Affine *S. versicolori*, sed statura majore sporisque multo amplioribus mox dignoscitur.

17. **Stereum insignitum** Quél. XVII Suppl. p. 6. — Pileo conchato, 908
3-6 cm. lat., membranaceo-coriaceo, tomentoso, zonato, fulvo-cro-
ceo vel brunneo-rufo; hymenio undulato, pallide vitellino, sæpe
purpureo-maculato, margine cremeo vel læte flavo, tactu sulphu-
reo-tincto; sporis ellipsoideis, elongatis, 7-8 μ . long., hyalinis.

Hab. ad corticem arborum Provinciæ et littoralis occid. Galliæ.
— *S. hirsuto* affine.

18. **Stereum Eberstalleri** Wettst. in Bot. Centr. 1888, n. 38, p. 354, 909
Vorarb. Steierm. p. 117. — Resupinatum, substrato adpressum, mar-
gine distincto, initio ambitu orbiculari mox substratum undique
obtegens varias formas induens; hymenio glabro, ochraceo-viola-
ceo, pallido, initio pruinoso, in speciminibus vetustis rugoso, non-
numquam fuscescente; margine elevato, crasso, extus dense albo-
hirsuto, pilis brevibus, denique secedentibus; sporis ovoideis vel
subglobulosis, 5 \approx 4 vel 5 μ . diam.

Hab. ad corticem caulis Spirææ opulifoliæ pr. Graz Stiriæ. —
Thalamium 1,5-4 cm. diam., 1 mm. cr.

19. **Stereum rythidocyclum** Sacc. et F. Sacc. Myc. Sibir. p. 3, tab. I, 910
fig. 1. — Resupinatum, hinc inde breviter effuso-reflexum, pa-
pyraceum, initio suborbiculare, dein confluendo elongatum; hyme-
nio ex alutaceo rufescente omnino glabro, distincte concentrice
sulcato-zonato, margine pallidiore adpresse fimbriatulo, subtus (in
parte reflexa) pallido substrigoso; sporis..... non visis.

Hab. in cortice truncorum Sorbi aucupariæ in silvis subalpinis
pr. fl. Golubaja Sibiræ As. — Videtur affine *Stereo percomi* B.
et Br. Syll. VI, pag. 576, sed pileus vix reflexus nec vere spon-
gioso-hispidus minusque crassus. A *Peniophora papyrina* Mont.
differt defectu setularum hymenialium.

20. **Stereum Haydeni** Berk. in herb. et Masee Monogr. Thel. p. 199. 911
— Resupinatum, late effusum, determinatum, crassiusculum, ma-
trici totum adhærens, margine inæquali tenui; hymenio glabro,
rufo-ochraceo, rimoso; sporis ellipsoideis, 7 \approx 4-5.

Hab. ad ligna, Ohio Amer. bor. — Sec. Karst. in Rev. Myc.
1889, *Stereum odoratum* et *S. alneum* cystidiis cylindræis, te-
nuibus, prominulis sunt prædita. Sporæ illius ellipsoideæ, 4-6 \approx 3,
hujus ellipsoideæ, 4-6 \approx 3. *Corticium giganteum* Fr. et *C. con-
volutens* Karst. cystidia habent crassa, immersa, ergo ad *Penio-
phoram* pertinent.

HYMENOCHÆTE Lév. — Syll. VI, p. 588 *).

1. **Hymenochæte Balansæ** Speg. F. Puigg. sub n. 152, *H. damæcornis* 912
Speg. Guar. I, n. 72, nec Lév. — Pileis coriaceis, rigidis spathulatis, superne fulvo-rufis, pulverulento-velutinis, opacis, azonis, radiatim ruguloso-fibrillosis, margine longe denseque laciniato-fimbriatis, contextu helvolo; hymenio ochraceo, zona marginali substerili plus minusve evoluta fuscescente cincto, setulis rigidulis, elongato-conoideis, 50-100 \approx 10-15, obtuse acutatis latiuscule canaliculatis dense vestito; stipite elongato basi tereti simplici sursum appanato, ramoso, lignoso-duro, ochraceo-ferrugineo, pulverulento-velutino.

Hab. ad truncos dejectos putres in silvis Guarapi, Paraguay.

2. **Hymenochæte Schomburgkii** P. Hennings in litt. — Coriaceo-membranacea, fuscidula; stipite farcto irregulari subcompresso-ruguloso, basi tuberculoso, velutino, 10 cm. circiter longo, 8 mm. crasso, apice valde ramoso, ramis in pileos plurimos abeuntibus, pileolis flabellatis, fibroso-rugulosis, margine lobato vel laciniato, 6-12 mm. latis; hymenio levi vel ruguloso, setuloso, setulis fulvis, cuspidatis.

Hab. in Gujana anglica (R. SCHOMBURGK). — Exemplaria in herbar. berlin. adsunt. — *Hymenochæti formosæ* Lév. affinis et forsitan tantum hujus forma valde ramoso-laciniata.

3. **Hymenochæte pallida** Cooke et Masee Mon. Thel. p. 97. — Car- 914
tilagineo-coriacea; pileo reniformi v. subflabellato, appanato, spongioso-velutino, concentrice sulcato-zonato, margine sublobato, acuto; hymenio lineato-rugoso, velutino, umbrino, subbrutilante; setis prominulis, subclavatis, 40-50 \approx 5; sporis ellipsoideis, 6 \approx 3-4.

Hab. ad ligna in Mexico. — Pilei tenues, 3-5 cm. lat., vetusti albidi.

4. **Hymenochæte abnormis** Peck 42 Rep. p. 28, t. I, fig. 13-16. — 915
Pileo effuso-reflexo, coriaceo vel fere suberoso, circ. 12 mm. lat., vulgo imbricato et undulato vel complicato, tomentoso, obscure zonato, interdum tuberculato vel inæquali, nigricante; hymenio cinereo, pruinoso, setis obtusis, pallide ferrugineis obsito; sporis oblongis, hyalinis, 10-12 \approx 5-6,5.

Hab. ad lignum dejectum Abietis in uliginosis, Adirondack Mountains Amer. bor.

*) Cfr. Masee Mon. Theleph. p. 95 et seq., ubi generis totius revisio et epicrasis.

5. **Hymenochæte perpusilla** Pat. Champ. N. Caled. p. 5. — Orbicu- 916
laris expanso-reflexa, subtus coriaceo-rufa et hispida; margine
acuto, levi et integro; hymenio ochraceo-ferrugineo, levi, setuloso,
margine sterili; cystidiis brunneis, brevibus.
Hab. ad lignum emortuum, Noumea Novæ Caledoniæ. — Fun-
gus 4-8 mm. diam.
6. **Hymenochæte rugispora** Ell. et Ev. Proc. Phil. 1890, p. 219. — 917
Subpeltata, ubique umbrina, margine diviso in numerosos minutos
pileos, 0,5 cm. lat., partim reflexos, tomentosos, 2-3 mm. cr., fir-
mos, inæquali-colliculosos; pileis sæpe 2 vel pluribus confluenti-
bus, crustam 5 cm. lat. formantibus; hymenio verticaliter fibroso-
contexto; setulis subcylindricis, 100-150 \approx 7-8, supra tenuiter in-
crassatis, rugulosis et obtusis; sporis oblongis, oblique apiculatis,
6-8 \approx 3, subhyalinis, subferrugineo-brunneis, rugulosis.
Hab. in ligno combusto Abietis Douglasii in Columbia britan-
nica.
7. **Hymenochæte nigrescens** Cooke Mon. Thel. p. 104, t. V, f. 5. — 918
Pileis peltatis, applanatis, solitariis vel gregariis vel confluentibus,
rigidis, ambitu liberis, subreflexis; hymenio setuloso e fusco nigre-
scente; setulis conicis nigricantibus, 80-140 \approx 10-12; sporis elli-
psoideis, 10 \approx 5.
Hab. ad ligna sicca, Carlisle Britannicæ. — Initio subcircularis,
demum sæpe radiatim rimosa.
8. **Hymenochæte arida** Karst. Finl. Basidsv. p. 428 (*Hymenochætella*) 919
la). — Effusa, indeterminata, laxe floccoso-graminosa, tenuis, ad-
nata, fulvo-pallida; hymenio levi, contiguo, sicco, fragili, cinna-
momeo-pallido; basidiis cylindraceo-clavatis, 2-4 μ . cr.; sporis
elongatis, rectis vel curvatis, hyalinis, 4-7 \approx 0,5-1,5; cystidiis se-
tæformibus, acutis, ferrugineis, membrana crassa, 75-100 \approx 6-9;
hyphis ramosis, articulatis, enodulosis, hyalinis, flavescentibus (sub
lente), 3-4 μ . cr.
Hab. in cortice arborum frondosarum ad Mustiala Fennicæ.
9. **Hymenochæte laxa** Karst. Finl. Basidsv. p. 429 (*Hymenochætella*). 920
— Effusa, indeterminata, tenuis, laxe tomentosa, adnata, ferrugi-
neo-cinnamomea, ambitu similari; hymenio arido, levi, contiguo;
cystidiis setæformibus, 60-70 \approx 6-8, acutis, ferrugineis (sub lente
brunneis, aureo-micantibus), membrana crassa; hyphis ramosis,
articulatis, flavis vel fulvescentibus, 3-5 μ . cr.
Hab. ad ramos exsiccatos Coryli Avellanæ prope Aboam op-
pidum Fennicæ.

10. **Hymenochæte croceo-ferruginea** Masee Mon. Thel. p. 110, t. V, 921
f. 9. — Effusa, late incrustans, tenuissima, ferrugineo-crocea dein
ferruginea; hymenio minutissime setuloso, rimoso; setis cylindra-
ceis, basi inflatis, 70-100 \approx 30-35; sporis subglobosis, olivaceis,
7 \approx 6.

Hab. in ramis emortuis Rosæ caninæ, Apathorpe Britanniae. —
Habitus fere *H. corrugatae* sed setæ et sporæ diversæ.

11. **Hymenochæte tenuis** Peck 40 Rep. p. 57. — Resupinata, tenuis- 922
sima, superficie æqualis, cæspitulos plus minus confluentes, atro-
ferrugineos efformans, margine determinato concolor, inseparabilis,
rimosa; setis acutis, 30-65 μ . long.

Hab. ad lignum decorticatum Thujæ occidentalis, Cascadeville
Amer. bor. — *Hym. spreata* Peck., observante Cooke in Grev. XVII,
p. 18, non differt ab *H. unicolore* B. et C.

12. **Hymenochæte tasmanica** Masee Mon. Thel. p. 105, t. V, f. 2. 923
— Latissime effusa, crustaceo-adnata, crassiuscula; margine te-
nuiore, pallidiore, demum leviter libero; hymenio rugoso-tubercu-
loso, velutino, ferruginoso, margine pallidiore; setulis longissimis,
subcylindræis vel basi inflatis, 100-200 \approx 8-10; sporis subcylindra-
ceis utrinque obtusissimis, 7 \approx 3.

Hab. ad ligna in Nova Zelandia. — Ab *H. rubiginosa*, cui ha-
bitu accedit, statim dignoscitur setis longissimis sporisque elongatis.

13. **Hymenochæte pulcherrima** Masee Mon. Thel. p. 104, t. V, f. 4. 924
— Late effusa, adnata, margine determinato, subreflexo, subtus
croceo-fuscescens, strigosa; hymenio colliculoso-aspero, velutino,
cervino; setis conico-acuminatis, 70-90 \approx 18-22; sporis ellipsoideis,
4 \approx 3.

Hab. ad cortices Venezuelæ. — Setis conico-acuminatis di-
stincta.

14. **Hymenochæte noxia** Berk. in Masee Mon. Thel. p. 108. — La- 925
tissime effusa, tenaciter ac subcrustaceo-adnata, margine subinde-
terminato; hymenio umbrino-brunneo, leviter velutino; setulis cy-
lindræo-conicis, 40-70 \approx 5-7; sporis ellipsoideis, 7 \approx 4.

Hab. ad truncos Artocarpi, quibus valde noxia, Samoa (T.
POWELL).

15. **Hymenochæte barbata** Masee Mon. Thel. p. 109. — Latissima 926
effusa, adnata, crassa, margine obtusiusculo; hymenio læte ferru-
gineo, ambitu pallescente; setis conico-acuminatis, 80-140 \approx 12-17;
sporibus ellipsoideis, 4 \approx 2-2.5.

Hab. ad ligna in ins. Ceylon. — Affinis *H. pulcherrimæ*.

Lloydella
virescens (Pork)
Pres. 600.

16. **Hymenochæte Kalchbrenneri** Masee Monogr. Thel. p. 116, *Cort-* 927

ticium murinum Kalchbr. nec B. et C. — Brunnea, crassiuscule membranacea, late effusa, laxe matrici adnata, margine subdeterminata, repanda; hymenio velutino; setulis cylindræis vel subclavatis, interdum asperulis, 80-90 \approx 6-8; sporis ellipsoideis, 7 \approx 4-5.

Hab. ad truncos emortuos Eucalypti, Victoria Australiæ.

17. **Hymenochæte ambigua** Karst. Hedw. 1889, p. 26, *Xerocarpus* 928

Karst. Hym. Fenn. p. 38. — Effusa, subrotunda, marginata, adnata, grumoso-cartilaginea, rigescens, glabra; hymenio bullato-papilloso, ferrugineo-lutescente; setulis filiformibus, sursum attenuatis, rectis, lutescentibus, 70 \approx 4-6; sporis perexiguis, subrotundis, 0,5-1 μ . diam.

Hab. ad corticem Abietis, Aboa Fenniciæ, rarissime.

CORTICIUM Fr. — Syll. VI, p. 603.

I. *Eu-Corticium*.

1. **Corticium pezizoideum** Ell. et Ev. Journ. Myc. 1888, pag. 74. — 929

Lacteum, tenue, orbiculare, $\frac{1}{2}$ -1 mm. cr., subinde confluens, margine elevato pilis crispulis fimbriato; basidiis clavatis, 12-15 \approx 7, apicibus rotundatis et subglobosis; sporis globosis, 3 μ . diam.

Hab. in sarmentis dejectis Vitis, Newfield et in Arundinaria emortua, St. Martinsville, La. Amer. bor.

2. **Corticium albidum** Mass. Grev. XVII, p. 55 (*Aleurodiscus*). — 930

Primum pezizæforme, margine erecto, tomentoso, inflexo, dein explanato-expanso sæpeque confluenti; hymenio albo, subpulverulento, in sicco hinc inde rimoso; sporis ellipsoideis, 10-12 \approx 9.

Hab. ad ramos, Brisbane Australiæ (BAILEY). — Candidum, initio sparsum, 4-6 mm. diam.; sæpe demum confluens et tunc 12-18 mm. lat.

3. **Corticium mutatum** Peck 43 Rep. p. 23. — Effusum, late et ir- 931

regulariter cæspitosum; hymenio udo tumido, centro tuberculoso, marginem versus plus minus plicato, sicco multo tenuiore, superficie subæquali, rimoso, flavido-cremeo vel carneo-tincto, margine byssoideo vel subfimbriato, albo; sporis oblongis, hyalinis, rectis vel subincurvis, 15-17,5 \approx 4-5.

Hab. ad corticem emortuum Populi tremuloidis, Sevey Amer. bor. — *C. levi* affine.

4. **Corticium subaurantiacum** Peck 43 Rep. p. 23. — Effusum, molle, 932

tenue; subiculo tomentoso simul et margine læte aurantiis; hy-

menio æquali, griseo-flavo vel aurantio-tincto, habitu pruinoso, sicco interdum leniter rimoso; sporis subellipsoideis, $7,5 \approx 5$.

Hab. ad corticem emortuum Abietis nigræ, Rainbow Amer. bor.

5. **Corticium Greschikii** Bres. in Rev. Myc. 1890, p. 109. — Effusum, 933
adglutinatum, flocculoso-membranaceo-ceraceum, niveum, demum luride lutescens, ambitu primitus pruinoso-tomentosulo non simili; hymenio substrato, inæquabili, ruguloso, velutino, demum rimoso; sporis hyalinis, obovatis $3,5-4,5 \approx 2 \mu.$; basidiis clavatis, $20-30 \approx 5-6 \mu.$; cystidiis fusoides, apice acuminatis, hyalinis, $45-60 \approx 4-6$.

Hab. in Polyporo conchato f. Evonymi pr. Lentschau Hungariæ (GRESCHIK). — *Cort. velutino* et *Cort. sero* affine.

6. **Corticium Carlylei** Masee Mon. Thel. p. 148. — Elongato-effusum, 934
adglutinatum, ceraceo-molle, glabrum, ambitu albo, mox evanido; hymenio levi, nudo, sordide aurantio, sicco contiguo; sporis tereti-ellipsoideis, utrinque obtusis, curvulis, $18-20 \approx 5-6$.

Hab. in cortice quercino, Carlisle Britannicæ (CARLYLE).

7. **Corticium Liquidambaris** Berk. in Masee Mon. Thel. p. 148. — 935
Irregulariter effusum, adglutinatum, carnosum-molle, ambitu tenui, pallido; hymenio ochraceo-fulvo, demum rimoso, interstitiis sericeis; sporis subglobosis, $7-8 \mu.$ diam. vel $8 \approx 7$.

Hab. ad corticem Liquidambaris, Alabama Amer. bor.

8. **Corticium flaveolum** Masee Mon. Thel. p. 150. — Effusum, mem- 936
branaceum, matrici laxè adhærens, margine determinatum; hymenio glabro, pallide flavente; sporis cylindræo-ellipsoideis, utrinque obtusis, $7 \approx 5$.

Hab. ad truncos Filicum arborescentium, Kew London Britannicæ. — $5-8$ cm. latum.

9. **Corticium basale** Peck 43 Rep. p. 23. — Effusum, stricte adna- 937
tum, tenax, initio albidum, hymenio dein brunneo, aspectu ceraceo, margine lato fusco-albo; sporis non visis.

Hab. ad basim Fraxini americanæ et Tiliæ americanæ, Whitehall Amer. bor.

10. **Corticium tenerum** Berk. Flor. Now. Zeal. vol. II, p. 184, Hook. 938
Handb. New. Zeal. Flor. p. 613. — Effusum, primum etiam resupinatum, partim vinoso-brunneum, demum areolatum, areolarum marginibus sæpius definitis; margine angustissimo, nec distincte byssoideo.

Hab. ad corticem Knightiæ, Nova Zelandia (insula septentr.) (COLENSO).

11. **Corticium calotrichum** Karst. Rev. Myc. 1888. — Effusum, im- 939
marginatum, adnatum, subtus adpresse fibrillosum ambituque sub-
byssinum, demum membranaceum, subsecedens et glabrescens; my-
celio ex hyphis ramosis, articulatis, obtusis, albis, 6-12 μ . crassis
contexto; hymenio tenui ceraceo, levi, contiguo, rarius siccitate
rimoso, albido, mox in flavum vel luteum vergente; cystidiis nul-
lis; sporis sphæroideis, 6-9 μ . diam.

Hab. supra corticem vetustum Alni incanæ in regione Mustia-
lensi Fenniæ. — *Corticio radioso* Fr. affine.

12. **Corticium confluens** Fr. — Syll. VI, pag. 626. — Var. **triviale** 940
Karst. Rev. Myc. 1888. — Orbiculare vel elongatum, adglutinatum
immarginatum, ambitu primitus subfimbriatum album, dein gla-
brescens; hymenio ceraceo, rigescente, levi, contiguo, rarissime
(sicco) rimoso, livido-cæsi, sicco albido-alutaceo seu flavescente,
nudo; cystidiis nullis; sporis sphæroideis vel subsphæroideis, dilu-
tissime lutescentibus, 6-9 μ . diam. vel 7-9 \simeq 6-8.

Hab. supra corticem, rarius lignum Sambuci racemosæ, Aceris
et Populi frequens usque ad mare glaciale. Num hæc varietas tan-
tum sit, ut omnis analogia suadet, in medio relinquimus. Speci-
mina Friesio missa ab ipso nomine *Corticii radiosi* determinata
sunt (Karst.). — Var. **subcalceum** Karst. Rev. Myc. 1888: rotundatum
v. effusum, confluens, adglutinatum immarginatum ambitu simile v.
primitus tenuissime byssinum, concolor; hymenio ceraceo, rigescen-
te, levi, contiguo vel sæpius rimosopartito, nudo, albido; cystidiis
nullis; sporis sphæroideis, dilutissime flavescentibus vel subhya-
linis, 6-9 μ . diam., parcis. Supra corticem et lignum Betulæ circa
Mustiala, fere per annum. A var. *padino* Karst., cui proxime ac-
cedit, hymenio vulgo rimoso, albidiore ambituque similari vel mox
glabrescente concolori discrepat.

13. **Corticium leve** Pers. — Syll. VI, pag. 611. — ***C. pelliculare** 941
Karst. Finl. Basidsv. p. 411. — Tenuissimum, hymenio membrana-
ceo, tenerrimo, albido, siccitate lutescente.

Hab. in ligno putrescente Betulæ et Alni nec non ad saxa pr.
Mustiala Fenniæ.

14. **Corticium subincarnatum** Peck 42 Rep. p. 28. — Effusum, tenue, 942
pallide flavum, mox subincarnatum, æquale, pruinoso-pulverulen-
tum; margine vix determinato, sulphureo; sporis ellipsoideis, 4 \simeq 2.

Hab. ad lignum decorticatum Abietis, North Elba Amer. bor.

15. **Corticium Letendrei** Karst. Hedw. 1889, p. 112, *Xerocarpus* Karst. 943
Rev. Myc. 1884, pag. 214. — Late effusum, indeterminatum, cru-

staceo-adnatum, furfuraceo-submembranaceum, molle, aridum tenuissimum, leve, contiguum, albidum pallescens, leviter in flavidum v. isabellinum vergens, ambitu pruinatum; sporis oblongatis vel ellipsoideis, 8-12 \approx 3-4.

Hab. ad ramos corticatos Ulicis europæi emortuos in Petit-Couronne, Seine inf. Galliæ (LETENDRE).

16. **Corticium Corni** Karst. Rev. Myc. 1884, p. 214 (*Xerocarpus*). — 944

Effusum vel ambiens, indeterminatum furfuraceo-submembranaceum crustaceo-adnatum, tenuissimum aridum, parce rimosum, glabrum, album, ambitu similari; sporis ellipsoideis vel sphæroideo-ellipsoideis, 4-6 \approx 3.

Hab. ad ramos putridos Corni sanguineæ in Petit-Couronne Seine inf. Galliæ (LETENDRE). — A *C. Letendrei* ex ipso auctore differt tantum sporis paullo minoribus.

17. **Corticium subterraneum** Rabenh. in Masee Mon. Thel. p. 145. 945

— Longe lateque effusum, indeterminatum, subcrassum, ceraceum, lateritio-expallens, superficie bullato-tuberculosum, subtus et ambitu nudum; sporis ellipsoideis 7 \approx 4.

Hab. ad trabes in subterraneis Saxonie.

18. **Corticium cinnabarinum** Masee Mon. Thel. p. 140. — Late ef- 946

fusum, adglutinatum, immarginatum; hymenio contiguo, levi, ceraceo, cinnabarino; sporis subglobosis, 5-6 μ . diam.

Hab. ad ligna, Clarence River Australiæ. — Plura centimetra extensum, sat tenue.

19. **Corticium roseolum** Masee Mon. Thel. pag. 140, t. VI, f. 2. — 947

Latissime effusum, indeterminatum, tenuissimum; hymenio contiguo, glabro, e pulchre roseo pallescente; sporis subglobosis, basi apiculatis, 8-9 \approx 7.

Hab. in ligno vetusto fabrefacto in Britannia. — Habitus *Pen. incarnatæ* et color *Pen. roseæ* sed notæ micrologicæ omnino aliæ.

20. **Corticium Cacao** Karst. Hedw. 1890, pag. 271 (*Xerocarpus*). — 948

Elongato-effusum, arcte adnatum, grumosum, cacaicolor, glabrum, nudum, ambitu similari; sporis oblongatis, ut plurimum curvulis, levibus eguttulatis, 4-6 \approx 1,5-2,5; cystidiis nullis.

Hab. ad asseres truncosque sectos Pini in agro Mustialensi.

21. **Corticium oosporum** Karst. Hedw. 1890, pag. 270. — Effusum, 949

arcte adnatum, glabrum, albidum, hymenio ceraceo, papilloso, sicco levi, contiguo, nudo, ambitu subsimilari; sporis exacte ovoideis, raro late ellipsoideis, eguttulatis, 11-15 \approx 8-9; basidiis cylindraceo-clavatis, 9-10 μ . crass.; cystidiis nullis.

Hab. ad lignum putrescens truncorum Coryli in regione Mustialensi. — Hyphæ flexuosæ, teneræ, remote articulatae, ad septa unilateraliter nodulosæ, 3-6 μ . crassæ.

22. **Corticium pertenuæ** Karst. Hedw. 1890, p. 270. — Elongato-effusum, adglutinatum, ceraceum, admodum tenue, glabrum, nudum, livido- vel sordide calceum, siccitate subinde obsolete lutescens, ambitu similari; sporis ellipsoideis, utrinque obtusissimis, ut plurimum leniter curvulis basique oblique apiculatis, hyalinis, primitus intus granulosis, dein 1-2-guttulatis, 9-11 \simeq 5-7; basidiis cylindræo clavatis, 4-sterigmicis, 30-38 \simeq 7 cm.; cystidiis nullis.

Hab. ad asseres Pini cis Mustiala. — Hyphæ teneræ, ramosæ, articulatae, intricatae, breves. A *Corticio calceo* affini hymenio persistenter contiguo, sporis ellipsoideis majoribus aliisque notis recedit.

23. **Corticium latitans** Karst. Myc. 1888. — Effusum, admodum tenue, adnatum, subcorticale, epidermide divulsa nudum, album, ambitu indeterminato, subbyssino; hymenio tenuissimo, submembranceo, contiguo, papillis sat confertis minutis, conoideis instructo, dilutissime lutescente; sporis oblongatis vel ellipsoideo-oblongatis, rectis vel curvulis, utrinque obtusissimis, primitus guttulis 2 majusculis præditis, dein eguttulatis vel tenuiter uniseptatis, hyalinis, 9-15 \simeq 4-5.

Hab. in ramis putrescentibus Sorbi aucupariæ in agro Mustialensi Fennicæ. — Hyphæ steriles, ramosæ, articulatae, tenerrimæ, hyalinæ, 3-5 μ . crassæ. Basidia 6 μ . crassa.

24. **Corticium roseolum** Karst. Symb. Myc. Fenn. XXIII, p. 2. — Effusum, ceraceum, rigescens, adglutinatum, tenue, indeterminatum, nudum, contiguum, pallescens, rosellum, ambitu similari; sporis sphæroideo-ellipsoideis, plerumque guttula unica minuta præditis, 5-8 \simeq 4-7.

Hab. supra corticem vetustum Betulæ circa Mustiala Fennicæ.

25. **Corticium hypnophilum** Karst. Rev. Myc. 1890, n. 47. — Ceraceo-carnosum, effusum, indeterminatum, contiguum; mycelio arachnoideo-bombycino, albido; hymenio levi, carneo-pallido, siccitate saturate carneo; strato subhymeniali pseudoparenchymatico; basidiis excedentibus, capitato- vel clavato-cylindræeis vulgo inæqualibus, 45-60 \simeq 10-12, sterigmata 4-6 \simeq 0,5 gerentibus; sporis ellipsoideis vel ovoideis, subinde inæquilateralibus, mucro obvolutis, 10-12 \simeq 6-7; cystidiis nullis.

Hab. supra Hypnum cupressiforme vivum, quod obducit, ad

Mustiala Fennicæ (O. KARSTEN). — Hyphæ divaricato-ramosæ, articulatae, enodosæ, leves, 5-7 mm. crassæ,

26. **Corticium Quintasianum** Bres. et Roum. Rev. Myc. 1890, p. 36, 954
t. 92, f. 4. — Latissime effusum, arcte adnatum, grumoso-induratum, e lacteo subalutaceum, ambitu similari; hymenio levi, glabro.

Hab. ad ligna mucida in Ins. St. Thomæ (QUINTAS). — Stratum 1-1,2 mm. cr. *C. lacteo* proximum, sed giganteum, durius.

27. **Corticium Bupleuri** Roum. F. Gall. exs. n. 1804, *C. Friesii* Grogn. 955
Cell. Saone-et-Loire in Rev. Myc. t. IV, p. 19. — Effusum, aglutinatum, tenuissimum, indeterminatum; hymenio cinereo, sicco rimoso; sporis ellipsoideis, $6 \approx 3$.

Hab. ad Bupleurum fruticosum in Gallia. — Maculam cineream imitatur.

28. **Corticium Molluginis** Allesch. Suedbay. Pilze pag. 50. — Album, 956
margine fibrillosum, transverse rimosum, 2-3 cm. long.; sporis elongatis, utrinque obtusis, circ. $6-7 \approx 3-4$, hyalinis.

Hab. ad caules aridos Galii Molluginis pr. München Bavaricæ.

De Corticiis sequentia observat ill. Karsten in Hedw. 1889, p. 26 et in Rev. Myc. 1889. Secundum specimina authentica (Friesiana) sporæ sunt: *Corticii lactei* Fr. oblongatæ vel subovoideæ, $3-4 \approx 1-2$ mm. (nec $5-6 \approx 3-4$; *Cort. lacteum* Schroet. Pilz. Schles. p. 424 aliam speciem spectat); *Cort. radiosii* Fr. sphæroideo-ellipsoideæ, $7-12 \approx 6-8$ (nec $10-12 \approx 4-5$); *Cort. calcei* (Pers) Fr. $4 \approx 1$; *Cort. ochracei* Fr. sphæroideo-ellipsoideæ, $4-6 \approx 3$ (nec $6-7 \approx 4-5$); *Cort.* (Grandiniæ) *serialis* Fr. sphæroideo-ellipsoideæ, $4-5 \approx 3-4$ (nec 10μ . diam.); *Cort. nudi* Fr. oblongatæ, curvulæ $12-18 \approx 3-4$.; *Cort. comedentis* (Nees) Fr. cylindræ, leviter curvulæ, $17-20 \approx 6-9$ (nec minutissimæ); *Cort. salicini* Fr. cylindræ, curvatæ, $16-18 \approx 4-6$; *Corticium leve* Pers.? Fr. a *Cort. radioso* Fr. vix una nota gravioris momenti discedit. Sporæ hujus subsphæroideæ, $6-9 \mu$. diam.; *Cort. evolvens* Fr. pileo effuso-reflexo vulgo legitur, hinc pro *Stereo* vero, ut jam antea indicavimus, censendum postque *Stereum fuscum* (Schrad.), cui affinitate proxime accedit, locandum. Sporæ ejus oblongatæ vel elongatæ, rectæ, eguttulatæ, hyalinæ, $4-7 \approx 1-2$. — Sec. Cooke Grev. XVII, p. 18, *Corticium dryinum* B. et C. in Ell. N. A. F. n. 2020 est *Cort. xanthellum* Berk.

II. *Pachysterigma* Bref.: sterigmatibus crassis.

29. **Corticium incarnatum** Bref. Unters. VIII, pag. 7, t. I, fig. 1-2 957

(1889). — Rubescens, indeterminatum, crassiusculum, hyphis vage ramosis, septatis; basidiis clavatis 4-sporis; sterigmatibus crasse ovoideis, dein sursum acutatis; sporis piriformi-obovatis, inæquilateralis, $11 \approx 8$.

Hab. in corticibus pineis in Guestphalia. — Ex auctore ipso forte non differt a *C. pinicolo* Tul. (*Prototremella Tulasnei* Pat.). Cum gen. *Pachysterigma* Bref. verisimiliter congruit antè genus **Prototremella** Pat. Journ. Bot. 1888, p. 269 cum ic. — Fungus planus, subgelatinosus; basidia continua, sterigmata 4 majuscula gerentia; sporæ et conidia globulosa. — **Prototremella Tulasnei** Pat. Journ. de Bot. 1888, ? *Corticium piniculum* Tul. — Sacc. Syll. vol. VI, p. 625. — Ad corticem Salicis et Populi in Gallia. — Sporæ initio globosæ, 6-7 μ . diam., coacervatæ rosæ, dein leniter ovoideæ, 8-9 μ . long.

30. **Corticium violaceum** Bref. Unters. VIII, p. 6, f. 8-10. — Effu- 958
sum, violaceum; subiculo tenuissimo; hyphis vage ramosis, tortuosis, anastomosantibus, ramulis in basidia crassa ovato-globosa 4-spora, rarius 5-6-spora desinentibus; sterigmatibus ovatis, dein apice attenuatis; sporis ovato-oblongis, rectiusculis, apiculatis, $15 \approx 8$.

Hab. in ligno putri udo, præcipue Alni, in Guestphalia. — Affine *C. lilacinc* (Schröt.). — Sacc. Syll. VI, p. 625.

31. **Corticium rutilans** Bref. Unters. VIII, p. 6, t. I, f. 5-7, vix Fr. 959
— Effusum, indeterminatum, rubrum rutilans, crassiusculum; hyphis vage tortuose ramosis, subinde noduloso-septatis, hinc inde basidia crassa ovata 4-spora gerentibus; sterigmatibus ovatis sursum tenuatis; sporis ovatis, curvis, apiculatis, $16 \approx 8$, hyalinis.

Hab. in corticibus Betulæ in Guestphalia.

32. **Corticium fugax** Bref. Unters. VIII, p. 6, t. I, f. 3-4. — Effu- 960
sum, tenuissimum, griseo-nitens, oculo inermi vix conspicuum; hyphis filiformibus vage ramosis, septatis, ramis e latere apiceque basidia 4-spora obovata gerentibus; sterigmatibus crassis ovatis, demum apice acutatis; sporis ovoideis, basi apiculatis, $12 \approx 10$.

Hab. in corticibus pineis in Guestphalia.

ASTEROSTROMA Masee Mon. Thel. p. 154, t. XLVI, f. 8-9 [1888]
(Etym. *aster* et *stroma*). *Corticium* et *Hymenochæte* Auct. — Resupinato-effusum; subiculo fibrilloso, arido, hyphis stellatis brunneis immixtis. Sporæ globosæ vel oblongæ, continuæ, hyalinæ.

1. **Asterostroma corticolum** Masee loc. cit. — Late effusum, subi- 961

culo crasso, cinnamomeo; hymenio cervino demum isabellino; sporis ellipsoideis, $8 \approx 3-4$.

Hab. in corticibus pineis in Carolina Amer. bor. — Hypharum stellatarum radii 30-60 μ . long., subinde breve ramulosi. Ad hoc genus quoque spectant: *A. hapalum* (B. et Br.) Mass. (Syll. VI, p. 631), *A. cervicolor* (B. et C.) Mass. (Syll. VI, p. 621), *A. muscicolum* (B. et C.) Masee (Syll. VI, p. 602), *A. albido-carnaeum* (Rav.) Mass. (Syll. VI, p. 619).

HETEROBASIDIUM Masee Monogr. Thel. pag. 127, t. XLVI, f. 11, [1888] (Etym. *heteros* alienus et *basidium*). — Resupinato-effusum, subiculo compacto arido. Basidia bi-monospora. Sporæ septatæ, fuscidulæ. — Ex auctore, inter *Hyphomycetes* et *Hymenomycetes* medium genus.

1. **Heterobasidium chlorascens** Masee loc. cit. — Late effusum, de- 962
terminatum; hymenio pallide virente; sporis elliptico-fusoideis, tri-
septatis, fuscidulis, $25 \approx 5-6$.

Hab. in cortice Carpini, Gainesville Florida Amer. bor. (RAVEN-
NEL). — *Corticium chlorascens* B. et Br. typicum, ex Masee,
est *Nectria* quædam, immatura, byssoidea.

PENIOPHORA Cooke — Syll. VI, p. 640.

1. **Peniophora pezizoides** Masee Mon. Theleph. p. 141, t. 47, f. 17-19. 963
— Subcoriacea, cupuliformis, dein explanata, centro affixa, extus
pallido-villosa; hymenio ochraceo, velutino, continuo; cystidiis fu-
soideis, apice rotundatis, basi acuminatis, 50-60 \approx 20; sporis glo-
bosis 4-5 μ . diam.

Hab. in ramis *Æsculi* Hippocastani, Kew Britannia. — Habi-
tus Pezizæ; affinis *P. quercina*, 6-12 mm. lata.

2. **Peniophora atro-cinerea** Masee Mon. Thel. pag. 141, *Corticium* 964
atro-cinereum Kalchbr. herb. — Effusa, margine libera, subtus
et ambitu fibrillosa; hymenio cinereo, leviter velutino; cystidiis
elongato-fusoideis, 80-120 \approx 10-15; sporis ellipsoideis, 10 \approx 4-5.

Hab. ad cortices in Capite Bonæ-Spei.

3. **Peniophora Ellisii** Masee Mon. Thel. p. 144, *P. papyrina* Ellis 965
N. J. F. n. 3460, nec Mont. — Effusa, tenuis, rigida, margine bre-
viter reflexa, strigosa; hymenio ferrugineo-lividove, velutino, sic-
citate rimoso; cystidiis fusoideis, 30-35 \approx 20; sporis oblongo-el-
lipsoideis, 10 \approx 5.

Hab. ad ramos emortuos, Newfield N. J. Amer. bor. (ELLIS).

4. **Peniophora intermedia** Masee Mon. Thel. p. 143, *Stereum papy-* 966
rinum Rav. Fung. Amer. n. 118, nec Mont. — Late effusa, mol-
lis, margine breviter reflexo, villosa; hymenio velutino, obscure
ferrugineo, contiguo; cystidiis cylindraceo-fusoideis, 60 \approx 15; spo-
ris ellipsoideis 12 \approx 5.
Hab. in ramis quercinis, Florida Amer. bor. — Præter cysti-
dia, occurrunt setæ cuspidatæ coloratæ, transitum ad *Hymenochæ-*
tem indicantes.
5. **Peniophora Karstenii** Masee Mon. Thel. p. 153, *Cort. alneum* 967
Karst. in F. E. exs. n. 3231, nec Fr. — Latissime effusa, adglu-
tinata, tenuissima, pallescenti-gilva; hymenio leviter velutino; cy-
stidiis clavatis, interdum apice leniter coarctatis, asperulis, 80-100
 \approx 10-12; sporis ellipsoideis, 5-7 \approx 4.
Hab. ad ligna et cortices Alni, Betulæ, Populi in Fennia. —
Habitus *Pen. incarnatæ*.
6. **Peniophora phyllophila** Masee Mon. Thel. p. 150, *Cort. epiphyll-* 968
lum Rav. F. Amer. n. 457, nec Pers. — Late effusa, membrana-
cea, ambitu laxe fibrillosa; hymenio pallido, contiguo; cystidiis
fusoideis vel cylindraceo-clavatis, 60-80 \approx 20-30; sporis ellipsoi-
deis, 12 \approx 6.
Hab. in foliis emortuis in Amer. boreali. — Habitus *Cort.* seu
Hypochni epiphylli sed notæ *Peniophoræ*.
7. **Peniophora puberula** Karst. Finl. Basids. p. 427 (*Peniophorella* 969
pubera). — Late effusa, indeterminata, ceracea, adnata, immargi-
nata, alba vel argillacea; hymenio levi, e cystidiis excedentibus
velutino, siccitate rimoso et fuscescente; sporis cylindraceis, obtu-
sis, rectis, vulgo (« spurie? ») 1-septatis, 6-8 \approx 2 μ .; cystidiis setæ-
formibus, hyalinis, longis.
Hab. ad ligna in Fennia. — Tam a *Pen. pubera* sec. Pat.
(sp. 4 \approx 2), quam ab homonyma Masee (sp. 10-12 \approx 4) videtur di-
versa.
8. **Peniophora scotica** Masee Mon. Theleph. p. 152. — Late effusa, 970
margine fibrilloso-radiata; hymenio cinnamomeo-velutino; cystidiis
subcylindricis, 80-120 \approx 15-20; sporis ellipsoideis, 8-10 \approx 6-7.
Hab. in cortice interiore late effusa in Scotia (Herb. BERKELEY).
— Affinis *P. velutinæ* sed colore, cystidiis etc. diversa.
9. **Peniophora gigaspora** Masee Mon. Thel. p. 152. — Latissime ef- 971
fusa, ambitu fimbriata, albicans; hymenio pallido, velutino, sicco
indurato, contiguo; cystidiis fusoideis, 80-120 \approx 30-40; sporis ob-
longo-ellipsoideis, 18-20 \approx 10.

Hab. ad ligna decorticata, Bahamas N. Providence. — Habitus fere *P. velutinæ*.

10. **Peniophora rhodella** (Peck) Sacc. *Corticium* Peck 42 Rep. p. 28. 972

— Tenuis, membranacea, adnata; subiculo atque margine albis v. albidis; hymenio subpruinoso, roseo-incarnato, cystidiis, 40-50 \approx 10-11,5; sporis ellipsoideis, navicularibus, 4-5 μ . long.

Hab. ad ligna dejecta, Syndonville, Orleans County (C. E. FAIRMAN) et corticem populinum, Philadelphia Am. bor. (T. G. GENTRY). — *P. carneæ* et *C. roseæ* affinis.

11. **Peniophora Martelliana** Bresad. N. G. B. I. 1890, p. 258 (*Cort-* 973

licium). — Late effusa, membranaceo-ceracea, arcte adnata, demum frustulatim secedens, e lacteo fuscescens, ambitu pruinoso subsimilari; hymenio levi, glabro, demum velutino, siccitate rimoso; sporis hyalinis oblongo-obovatis vel ellipticis, 9-11 \approx 6-7; basidiis clavatis, 25-35 \approx 6-8; cystidiis (?) conoideis, hyalinis, asperulis, 50-60 \approx 12-14.

Hab. ad ligna mucida Lauri nobilis?, Florentiæ. Inter *Cort. calceum* et *Penioph. puberam* media.

12. **Peniophora diffissa** Sacc. Myc. Sibir. p. 3, tab. I, f. 2. — Effusa, 974

superficialis, mox in areolas inæqualiter quadratas v. varie angulosas diffissa, coriacea, crassiuscula, ex alutaceo rufescens; areolis ambitu perpendiculari nudo concolori inter se discretis; hymenio plano-convexo, sub lente tenuissime velutino; setulis seu cystidiis tereti-oblongis v. tereti-conoideis, 20-30 \approx 5-6, spinulis cylindraceis, 3-5 \approx 1, creberrimis, hyalinis, demum secedentibus obsessis; sporis..... non visis.

Hab. in ramis corticatis Rhododendri dahurici in silvis subalpinis prope fl. Golubaja Sibiricæ. — Species hymenio in areolas discretos eximie fisso setulisque longuiscule spinulosis mox distincta; 3-4 cm. extensa; areolæ 1,5-2 mm. lat, $\frac{1}{3}$ mm. crass.

13. **Peniophora æmulans** Karst. Finl. Basidsv. pag. 425. — Effusa, 975

orbicularis vel elongata, indeterminata adnata, sat tenuis subceracea, sicca indurata, levis, contigua, sicca sæpe rimosa, pruinosa, ambitu similari, pallide alutacea, sæpe roseolo-alutacea, demum plus minus ferruginascens; sporis oblongatis vel ellipsoideis, retis, sæpe inæquilateralibus, hyalinis, 5-9 \approx 3-3,5; cystidiis fusoides v. conicis flavido-hyalinis; hyphis parum notabilibus.

Hab. in ligno arborum frondosarum ad Mustiala Fenniæ. — *P. incarnatæ* affinis.

14. **Peniophora unicolor** Peck 43 Rep. p. 23. — Effusa, tenuis, mem- 976

branacea, mollis, subseparabilis, superficie æqualis, subpulverulenta, pallide ochracea, margine et subiculo hymenio concoloribus v. pallidiore, interdum in fibras producta; cystidiis sparsis, subcylindraceis, obtusis, asperis, $4 \approx 7,5$; sporis non visis.

Hab. ad lignum dejectum, Syracuse Amer. bor.

15. **Peniophora prætermissa** Karst. Finl. Basidsv. p. 423. — Effusa, 977
adglutinata, tenuis, livida, subinde pallide rufescente-incana, siccitate albicans vel flavicans, ambitu primitus floccoso, demum nudo, similari; basidiis cylindræo-clavatis, $80 \approx 6-8 \mu.$; sporis ellipsoideis, rectis vel leniter curvulis, 1-2-guttatis vel eguttulatis, hyalinis, $10-12 \approx 5-6 \mu.$; cystidiis fusoides, irregularibus, immersis, flavescentibus, $70-80 \approx 9-10$; hyphis nullis.

Hab. ad lignum vetustum Alni incanæ pr. Mustiala Fennia.

16. **Peniophora hydroides** Cooke et Masee Mon. Theleph. p. 154, 978
t. 47, f. 15-16. — Late effusa, tenuis, subinnata, indeterminata; hymenio cinereo; cystidiis cylindrico-fusoides, fasciculato-aggregatis, $70-120 \approx 12-14$; sporis subglobosis, $4-5 \mu.$ diam.

Hab. in corticibus, Carlisle Britannia. — Ob cystidia fasciculato-aggregata cl. Masee subgenus condidit nomine *Scopuloides*, ad quod retulit quoque *P. ambiguam* Masee l. c. seu *Hydnum ambiguum* B. et Br. Syll. VI, p. 466.

17. **Peniophora sordescens** (Karst.) Sacc., *Diplonema sordescens* 979
Karst. Finl. Basidsv. p. 43. — Receptaculis vage effusis, indeterminatis, arachnoideo-membranceis, adhærentibus, albidis; hymenio tenuissimo, laxo, sordide sulphureo-pallenti; basidiis cylindræo-clavatis, $5-6 \mu.$ cr.; sporis ovoideis, guttula chlorina præditis, $3-5 \approx 2-3$; cystidiis cylindræis, obtusis, hinc inde constrictis vel articulatis, asperulis, leviter excedentibus, hyalinis; hyphis ramosis articulatis, levibus vel sublevibus, unilateraliter nodulosis, flavescentibus, hyalinis, $3 \mu.$ cr. (immixtis, crassioribus usque ad $10 \mu.$ cr.) et subsulphureis.

Hab. ad corticem vetustum Alni incanæ pr. Mustiala Fennia.

18. **Peniophora guttulifera** (Karst.) Sacc., *Glæocystidium guttuliferum* 980
Karst. Finl. Basidsv. p. 430. — Late effusa, indeterminata, adnata, contigua, raro rimoso, ambitu primitus tenuiter flocculoso-pruinosa; hymenio arido, sordide albido, demum isabellino v. subhelvolo; sporis oblongatis, obtusis, rectis, raro subcurvulis, hyalinis, $10-12 \approx 3-4$; cystidiis exsertis, subconfertis, cylindræo-conoideis, obtusis, apice sæpissime guttula oleosa sphæroidea, fulva, aureo-nitente notatis, $20-35 \mu.$ long.

Hab. in ligno vetusto Populi tremulæ ad Mustiala Fenniæ.

Peniophora Juniperi Karst. sec. ipsum auct. in Hedw. 1889, p. 113, status est, ut videtur, biennis *Peniophoræ levigatæ* (Fr.). Sporæ *Peniophoræ cinereæ* (Pers.) Cooke, sunt 3-3 \approx 1-1,5 (nec 12 \approx 3-4) et *Peniophoræ incarnatæ* (Pers.) Karst., 8-12 \approx 3-5 (nec sphæroideæ, 4 μ . diam.).

CONIOPHORA DC. — Syll. VI, p. 647.

1. **Coniophora incrustans** Masee Mon. Thel. p. 132. — Effusa, te- 981
nuis, indeterminata; hymenio subtomentoso, pallido; sporis pallidissime ochraceis, 15-17 \approx 8-10.

Hab. ad folia et ramos, quæ obducit, Apethorpe Britannia. — Habitus fere *Thelephoræ byssoideæ* sed sporis imprimis diversa.

2. **Coniophora sistotremoides** (Schw.) Masee Mon. Thel. p. 133, *The-* 982
lephora Schw. Syn. Carol. n. 1053. — Late effusa, primum byssina, olivaceo-brunnea, demum compacta, pulverulenta atque rimulosa; sporis ellipsoideis, olivaceis, 12 \approx 8.

Hab. ad cortices et ligna in America boreali.

3. **Coniophora fulvo-olivacea** Masee Mon. Thel. p. 134, *C. olivacea* 983
Karst. nec Auct. — Effusa, indeterminata, tenuis; hymenio subpulverulento, fulvo-olivaceo; sporis dilute fusco-olivaceis, ellipsoideis, utrinque acutis, sæpe leviter curvulis, 10-12 \approx 5-6.

Hab. in truncis pineis putrescentibus in Fennia. — A genuina *Con. olivacea* differt, quia tenuior, sporisque minoribus.

4. **Coniophora indica** Masee Mon. Thel. p. 134. — Effusa, crassa, 984
fibrillosa, determinata; hymenio brunneo, pulverulento; sporis subglobosis, deorsum apiculatis, fulvis, circiter 12 \approx 10.

Hab. ad ligna, Bombay Indiae orientalis. — Hymenium subinde purpureo tinctum.

5. **Coniophora subcinnamomea** Karst. Finl. Basidsv. p. 436. — Vage 985
effusa, subinde suborbicularis, grumoso-membranacea, adnata, contigua pallide vel ferrugineo-cinnamomea, ambitu fibroso-radiata et albida; sporis ovoideis vel ellipsoideis, flavescentibus (sub lente), 9-12 \approx 6-8; hyphis ramosis, hyalinis, granulis calcareis præditis, 4-7 μ . cr.

Hab. ad corticem Abietis excelsæ et lignum carbonisatum pinneum in Fennia merid. — *Con. aridæ* affinis.

6. **Coniophora Berkeleyi** Masee Mon. Thel. p. 135. — Effusa, cras- 986
sa, determinata; hymenio brunneo demum purpurascente, rimoso

interstitiis sericeis; sporis ellipsoideis, basi apiculatis, ochraceis, 12 \approx 8.

Hab. in lignis decorticatis in Britannia (BERKELEY). — Margo minute byssoideus. Habitus fere *Cort. lactescentis*.

7. **Coniophora lichenoides** Masee Mon. Thel. p. 136. — Effusa, am- 987
bitu sinuato-lobato, hymenio ochraceo, papillato pulverulento, de-
mum rimoso; sporis dilute ochraceis, ellipsoideis, 10 \approx 7.

Hab. ad cortices in insula Zante Græciæ (PROF. BALFOUR). — Ob marginem inæqualiter lobatum lichenes corticolas quodammodo refert.

8. **Coniophora Cookei** Masee Mon. Thel. p. 136, *Cort. laxum* Cooke 988
herb. Kew. nec Fr. — Effusa, fibrilloso-membranacea, ambitu bys-
soidea, pallida; hymenio olivaceo-ferrugineo, pulverulento; sporis
ellipsoideis, ochraceis, 10 \approx 6.

Hab. in lignis putrescentibus in Britannia et Amer. bor. — Habitus *Cort. laxi* Fr., quod vera *Thelephora*.

9. **Coniophora fulva** Masee Mon. Thel. p. 136, *Cort. scutellare* Auct. 989
nonnull. nec Berk. — Late effusa, carnosa, ambitu tenuis, byssoi-
dea; hymenio fulvo-brunneo, areolato-rimoso; sporis ellipsoideis,
ochraceis, 10 \approx 7.

Hab. ad truncum Magnoliæ Newfield, N. J. Amer. bor.

10. **Coniophora ochracea** Masee Mon. Thel. p. 137, t. XLVII, f. 13. 990
— Latissime effusa, submembranacea, indeterminata; hymenio pul-
verulento, ochraceo; sporis flavidis, subglobosis, 8 \approx 6-7.

Hab. in cortice interiore Ulmi, Kew London Britannicæ. — Pro ætate *Conioph. sulphuream* vel *Cort. arachnoideum* imi-
tatur.

11. **Coniophora stratalis** Masee Mon. Thel. p. 138, *Hypa stratalis* 991
Thüm. herb. — Late effusa, fibrilloso-pannosa, secernibilis; hy-
menio pulverulento, sordide ochraceo vel brunneo; sporis subglo-
bosis, olivaceo-fuscis, circiter 6 \approx 4.

Hab. ad truncos loco ignoto. — Pannum elasticum format.

12. **Coniophora Broomeiana** Masee Mon. Thel. p. 140, *Thelephora* 992
Berk. in Herb. — Maculiformis, mox confluendo effusa, ambitu
fibrilloso-radiata; hymenio subtiliter pulverulento, pallide cinere-
scente; sporis tereti-ellipsoideis, dilute olivaceis, 10 \approx 3.

Hab. in corticibus in ins. Ceylon.

HYPOCHNUS Fr. — Syll. VI, p. 657.

1. **Hypochnus flavus** (Bref.) Sacc., *Tomentella* Bref. Unters. VIII, 993

p. 11, t. I, f. 11-14. — Effusus, incrustans, flavo-brunneus, tandem omnino brunneus; hyphis sporigeris inferioribus, parce erecto-ramosis, septatis, basidia teretiuscula tetraspora apice gerentibus; sporis globosis eximie spinulosis, 13 μ . diam.; sterigmatibus filiformibus suffultis; hyphis conidiophoris fasciculatis, septatis, apice crasse patenti-ramosis, ramis ubique conidia copiosissima globosa spinulosa, 8 μ . diam., gerentibus.

Hab. ad lignum exsiccatum Fagi in Guestphalia. — Status conidicus forte sistit *Botrytem argillaceam* Cooke.

2. **Hypochnus sulphurinus** (Karst.) Sacc., *Tomentella* Karst. Finl. Basidsv. p. 420. — Effusus, fibrilloso-byssinus, adnatus, saturate subaurantio-sulphureus, ambitu initio byssino; hymenio membranaceo, tenui, fragilissimo, levi, siccitate hinc inde rimoso, alutaceo; sporis ellipsoideis vel sphæroideis, hyalinis, 3-4 \times 2; hyphis ramosis, articulatis, subinde anastomosantibus, unilateraliter nodosis, vulgo subtiliter asperulis, hyalinis vel luteolo-hyalinis (sub lente), 5-6 μ . cr.

Hab. supra corticem Pini silvestris in parœcia Fenniæ.

3. **Hypochnus obducens** (Karst.) Sacc., *Tomentella* Karst. Finl. Basidsv. p. 421. — Diffusus, incrustans, byssinus, laxè adhærens, sulphureo-pallens, ambitu subinde incano, fibrillis paucis pallide subaurantio-sulphureis immixtis; hymenio tenui, levi, siccitate subrimoso cinerescente v. pallide fuscescente; sporis sphæroideis, ellipsoideis, hyalinis, guttula unica margine chlorino-hyalina; hyphis remote articulatis, subramosis, unilateraliter nodulosis, levibus, firmis.

Hab. ad ligna et ramulos carbonisatos pr. Mustiala Fenniæ.

4. **Hypochnus asperulus** Karst. Finl. Basidsv. pag. 441. — Effusus, floccoso-membranaceus, tenuis, adhærens vel subadnatus, contiguus, levis, incanus, ambitu byssino; sporis sphæroideis aculeolatis, brunnescentibus, 6-9 μ . diam.; hyphis subramosis, subarticulatis, subasperis, subinde inæquilateralibus, nodosis, subhyalinis, membrana tenui, 3-6 μ . cr.

Hab. in ligno betulino ad pagum Ryska Lapponiæ.

5. **Hypochnus Brefeldi** Sacc., *Tomentella granulata* Bref. Unters. VIII, p. 11, t. I, f. 15-16. — Effusus, compactiusculus, albus, farinosus; hyphis sporigeris erecto-ramosis, septatis, basidia teretoclavulata, tetraspora apice gerentibus; sporis globosis, levibus, hyalinis, 10 μ . diam., sterigmate filiformi suffultis; hyphis conidiophoris apice patenti-ramosis, ramis clavatis, ubique conidia globosa, 8 μ . diam., stipitellata crebre gerentibus.

Hab. ad terram, rarius ad caudices in Guestphalia. — Sec. ill. Brefeld genus *Tomentella* differt ab *Hypochno* conidiorum præsentia: quod, post observatas in vivo plures *Hypochni*, species facile servandum erit.

6. **Hypochnus subterraneus** Harz Bot. Centr. 1889, I, p. 341. — Co- 998
riaceo-pannosus, substrato laxe adnexus, hinc inde facile secedens; hymenio pulvereo-pannoso, griseo; sporis utrinque rotundatis, ovoideis, brunneo-griseis, 6-7 \approx 3,5-3,7.

Hab. ad Hausham et Penzberg Bavarix super.

7. **Hypochnus cinerescens** Karst. Symb. Myc. Fena. XXIII, p. 2. — 999
Effusus, primo byssinus, albidus, dein disco e sporis cinerescens, ambitu similari absque hymenio distincto; sporis sphæroideis, echinulatis, cinerescens, 6-7 μ . diam.; hyphis ramosis, hyalinis (sub lente), 3-4 μ . cr.

Hab. supra corticem vetustum Salicis prope Mustiala Fennix.

8. **Hypochnus fuscatus** Karst. Finl. Basidsv. p. 443 (*Hypochnopsis*). 1000
— Effusus, sæpe orbicularis, tomentosus, mollis, adhærens, fuscus; hymenio lato, interdum rimoso, subcærulescente-atro; sporis sphæroideis, cærulescentibus, episporio obscuro, levibus 3-4 μ . diam.; hyphis ramosis, articulatis, levibus, flavido-fuliginis (sub lente), 5-7 μ . crass.

Hab. in cortice pineo in parœcia Messuby Fennix.

9. **Hypochnus nigrescens** Karst. Hedw. 1889. — Effusus, carnosus, 1001
mollis, tenuis, tuberculatus, ambitu similari nigrescens, e sporis ferrugineo-cinereo-pulverulentus; sporis sphæroideis vel subsphæroideis, echinulatis, dilute fuliginis (sub lente), 7-10 \approx 6-8 μ . diam.; hyphis hyalinis, articulatis.

Hab. supra terram humoso arenosam ad Mustiala Fennix (ONNI KARSTEN). — Observante cl. Pat. Bull. Soc. Myc. 1889, p. 31, *Stereum acerinum* (Pers.) Fr. statu fertili est verus *Hypochnus* (*H. acerinus* [Pers.] Pat.), basidiis ovoideis vel oblongis, 1-2-4 sterigmata ferentibus; sporis ovoideis, 12-13 \approx 7-10, hyalinis, levibus.

EXOBASIDIUM Woron. — Syll. VI, p. 664.

1. **Exobasidium Symploci** Ell. et Mart. Amer. Nat. 1884, p. 1147. — 1002
Citrino-flavum, subglobosum, sublobatum, 3-3,5 cm. diam.; sporis hyalinis, cylindratis, rectiusculis, 15-21 \approx 2.

Hab. ad gemmas floriferas distortas Symploci tinctorix, Cove Springs Amer. bor.

2. **Exobasidium Warmingii** Rost. Fungi Groën. p. 530. — Excrescentiis phyllogonis, inæqualibus; basidiis cylindræis, 13-15 \approx 2,5; sporis graciliter fusoides, 6-10 \approx 1. 1003

Hab. in foliis vivis Saxifragæ Aizooi in Groenlandia, Tirolis et Pedemonte. — *Exobasidium Ledi* Karst., observante ipso auct. in Hedw. 1889, p. 27, ab *Ex. Vaccinii* (Fuck.) admodum diversum est; etiam *Ex. Myrtilli* Thuem. et *Ex. Andromedæ* Karst. et habitu et modo crescendi ab eodem ita differunt, ut facillime pro propriis speciebus censenda sint.

HELICOBASIDIUM Pat. — Syll. VI, p. 666.

1. **Helicobasidium fimetarium** (Schum.) Boud. Journ. Bot. 1887, p. 331 cum icon., *Tremella* Schum. — Tuberculiforme, rotundatum vel mammosum, 1-4 mm. diam., 1-2 mm. crass., sordide roseum, firmum, non gelatinosum, e filamentis septatis, ramosis, 2-3 μ . v. in ramulos prope peripheriam 4-5 μ . diam. cr. efformatum; sterigmatibus prope apicem filamentorum; sporis ellipsoideis, basi breviter et obtuse productis, hyalinis, 9-11 \approx 4-8, intus minutissime granulosis. 1004

Hab. in fimo equino in silva Montmorency Galliæ.

CYPHELLA Fr. — Syll. VI, p. 667.

1. **Cyphella fumosa** Cooke Grev. XIX, p. 14. — Submembranacea, cyathiformis, stipitata; cupulis gregariis sparsisve, fumosis, primo expansis, demum siccis conniventibus, nigricantibus, glabris, 1-1½ mm. lat. et long.; sporis globosis. 1005

Hab. ad folia putrida Gladioli, S. Carolina Am. bor. (RAVENEL).

2. **Cyphella polycephala** Sacc. Hedw. 1889, t. II, f. 5. — Gregaria; pileis subquaternis, arcte fasciculatis basi, communi stipitiformi, teretiuscula, albido-fusca, glabra, sursum incrassata suffultis, urceolatis, diu clausis, albo-villosis; pilis filiformibus, sursum minute asperulis, 5 μ . crassis; hymenio . . . immaturo. 1006

Hab. ad caules emortuos Senecionis hypoleuci, Norwood Australiæ merid. — Fungillus 1 mm. crass. et alt. Pileolis 4-6 rarius 2-3, arcte conjunctis basi que communi fultis prædistincta species.

3. **Cyphella Mauritiæ** Pat. Bull. Soc. Myc. 1888, p. 40, t. XII, f. 5. — Omnino alba, tenuissima, diaphana, obconica, glabra, margine integro, sinuoso; hymenio levi; stipite curtissimo, obtuso, curvato, basi villosa; basidiis clavatis, 23-30 μ . long., 4-sterigmicis. 1007

Hab. ad petiolos putridos Mauritiæ flexuosæ, Puerto-Zamuro.

4. **Cyphella roseo-cinerea** Pat. Bull. Soc. Myc. 1888, p. 40, t. XII, 1008
f. 6. — Minutissima, subglobosa vel turbinata, dein expansa, circ.
1 mm. diam, tenuis, villosa, extus farinosa, margine integro vel
fisso; hymenio levi, griseo-roseo; stipite curtissimo; sporis hyali-
nis, minutis, ex ovoideo subsphæricis.
Hab. gregaria ad corticem putrem, Atures Venezuelæ. — *C.*
albo-violascenti proxima.
5. **Cyphella terrigena** Karst. Symb. Myc. Fenn. XXV, pag. 21. — 1009
Receptaculo membranaceo, campanulato, subinde in stipitem bre-
vissimum porrecto, levi, fere albo, albo-puberulo, 0,2-0,3 mm.
alto; hymenio levi, lutescente albo; basidiis clavulato-cylindræcis,
20-25 \approx 4-5; sporis ellipsoideo-sphæroideis, 6-7 \approx 5-6; cystidiis
nullis.
Hab. supra terram nudam in horto Mustialensi Fenniæ.
6. **Cyphella Schneideri** B. et Br. Brisb. III, p. 220, t. XXIX, f. 9. — 1010
Tubæformis, membranacea, extus levigata, pallide lutea, 4-6 mm.
alt.; sporis globosis, 5-7,5 μ . diam.
Hab. gregaria ad ligna, Australia (H. SCHNEIDER).
7. **Cyphella pezizoides** Zopf in Morgan Mycol. Miami Vall. p. 202. 1011
— Membranacea, subsessilis, globosa, dein cupularis, vix stipitata,
extus pilis erectis, longis vestita; hymenio æquali, brunneo; spo-
ris obovoideis, 12-13 μ . long.
Hab. ad caules herbarum vetustos, Miami Valley Amer. bor.
non frequens. — Fungus 1 mm. diam.
8. **Cyphella trachychæte** E. et E. Journ. Myc. 1888, p. 73 (ex er. 1012
rore 61). — Gregaria, alba, cupularis, e basi angusta sessilis, 300-
400 μ . alt. et lat., extus pilis valde asperatis, apice levibus, ap-
pressis, subhyalinis, 12-15 μ . long., prope receptaculi basim pal-
lidioribus, vestita; hymenio subalbo, ardosiaco-tincto; sporis mi-
nutissimis.
Hab. ad folia quercina dejecta, Louisiana Amer. bor.
9. **Cyphella Puiggarii** Speg. F. Puigg. n. 157. — Orbicularis cupula- 1013
ta, sessilis, tenuiter ceraceo-membranacea, candida extus intusque
glabra.
Hab. ad culmos dejectos putrescentes Graminacearum prope
Apiahy Brasiliæ. — Pilei solitarii vel hinc inde laxè gregarii,
cupulato-orbiculares v. auriculæformes parvuli 2-8 mm. diam. sessi-
les, tenuiter membranaceo-subceracei, margine integri v. repanduli,
candidi (in sicco subpalléscentes), extus glaberrimi levissimi, puncto
impresso matrici adnati; hymenium ceraceum tenuissimum leve

glaberrimum ex albo subpallescens; sporæ non visæ. Species *C. culmicolæ* Fr. affinis sed tenuior ac magis alba.

10. **Cyphella eumorpha** Karst. Hedw. 1890, p. 271. — Sparsa, sub- 1014
membranacea, urceolata vel obcampanulato-cylindræa, margine
connivente, sessilis, pallida, albo-villosula, disco pallido, levi, 1-2
mm. lata; sporis ellipsoideo-oblongatis, rectis, eguttulatis, 7-8 =
3-4 mm.; basidiis cylindræo-clavatis.

Hab. in ligno nudo Populi tremulæ prope Mustiala Fennicæ. —

Pili flexuosi, continui, simplices, asperuli, apice obtusi, 3-5 μ . crassi.

11. **Cyphella Urbani** P. Hennings in litt. — Membranacea, oblique 1015
campanulata, margine refracta, sinuata et minute eroso-denticula-
ta, ad medium stipite gracili protracto affixa, albida, sericea, hy-
menio albo venoso, 2-6 mm. diam., stipite albo-sericea, 1-1,5 mm.,
long.; sporis obovatis, hyalinis.

Hab. solitaria vel gregaria in vaginis Cannæ coccinæ in horto
berolinensi, vere 1889 (P. HENNINGS).

12. **Cyphella discoidea** Cooke Grev. XII, p. 85. — Gregaria, epi- 1016
phylla; cupulis discoideis, 1-2 mm. diam., tenuiter membranaceis,
applanatis, glabris; disco carneo, margine albido; basidiis brevi-
bus; sporis globosis, levibus, 4 μ . diam.

Hab. ad Hieracium, New Zealand (COLENZO).

13. **Cyphella æruginascens** Karst. Hedw. 1889. — Pileo oblique cu- 1017
pulari, irregulari, lateraliter adnexo, adscendente, sessili, mem-
branaceo, sicco convoluto curvatoque, subtiliter griseo-puberulo-
pruinoso, æruginascente, hymenio levi obscuriore, circiter 1 mm.
lato; sporis sphæroideis?

Hab. ad corticem arborum frondosarum in Minas Geraes, Sitio
Brasiliæ.

14. **Cyphella fulvodisca** Cooke et Mass. Grev. XVIII, pag. 59 et in 1018
Elliot Hedw. 1890, p. 67, t. I. — Phæospora, gregaria; cupulis
breviter stipitatis, cyathiformibus, albidis, pilis brevissimis hyali-
nis obductis $\frac{1}{2}$ mm. diam., margine tenui, incurvo; hymenio levi,
fulvo; sporis ellipticis, nucleatis, fulvis, 7-8 = 4-5.

Hab. ad ramos decorticatos, Fort Dauphin Madagascar (SCOTT
ELLIOT).

Fam. 5. **Clavariæ** CORDA.

CLAVARIA Vaill. — Syll. VI, p. 692.

1. Ramosæ.

1. **Clavaria?** *angulispora* Pat. Bull. Soc. Myc. 1888, p. 41, t. XIII, 1019

f. 4. — Omnino alba, e basi ramosa; ramulis tenuibus, flavis, erectis, elongatis, incisis, extremitate acutis, sæpe compressis; sporis subglobosis, $7 \approx 6$, levibus, angulosis, hyalinis, guttulatis.

Hab. ad terram, in ligno Venezuelæ. — Fungus 8-10 cm. alt.; stipes 5 mm. lat.; basidia 20-30 \approx 6-8.

2. **Clavaria pulchella** Boud. Champ. nouv. p. 2, t. 13, f. 2. — Mi- 1020
nuta stipitata, tenuis, pulchre cœruleo-violacea, sed decolorans; stipite simplici, gracili, ad basim albido, sæpe bulboso superne repetito et dichotome ramoso, ramis applanatis extremitate bi-denticulatis; sporis albis, ovatis, hyalinis, 4-5 \approx 2,5-3, intus nucleo medio zonatis, basidiis 2-4 sterigmatibus coronatis, 20-23 \approx 10-12.

Hab. ad terram argillaceo-sabulosam in nemoribus pr. Ecoeu Galliæ (H. HUA). — Fungus 1,5-2 cm. alt., *C. amethystinæ* subaffinis.

3. **Clavaria pteruloides** Pat. Bull. Soc. Myc. 1888, pag. 41, t. XIII, 1021
f. 3. — Ramosa, dichotoma, glabra, extremitate ramorum bi- vel tri-fida, acuta, flavo-fusca, tenuiter rosea, extremitatibus obscurioribus leviterque compressis; sporis hyalinis, globulosis, 5-7 μ . diam., 1-guttatis.

Hab. ad terram, locis humosis, Puerto Zamuro Venezuelæ. — Fungus tenax 4-6 cm. alt.; stipes 5 mm. lat., parce ramosus.

4. **Clavaria sphærospora** Ell. et Ev. Journ. Mycol. 1888, p. 74. — 1022
Tenuis, 8-10 cm. alt., cinerea vel pallide murina, laxe ramosa; ramis ultimis subulatis; sporis globosis, 5-7 μ . diam., albis (?).

Hab. ad terram in hortis St. Martinsville La. Amer. bor. (LANGLOIS). — Totus fungus gracilis; basi 1-2 mm. cr.; rami pauci, subundulati ubique æquales.

5. **Clavaria odorata** Karst. Symb. Myc. Fenn. XXIX, p. 103. — 1023
Receptaculo carnosio, 5-6 cm. alto, alutaceo-pallido, siccitate cinnamomeo, odoro, ramosissimo; trunco brevissimo, albotomentoso; ramis dichotomis, subarcuatis, compressis, sursum dilatatis, levibus, ultimis dentiformibus et mollioribus; sporis sphæroideis, basi vulgo apiculatis, chlorino hyalinis (sub lente), levibus, 5-7 mm. diam.

Hab. inter muscos in silva abiegna in Syrjä Fenniæ.

6. **Clavaria Kalchbrenneri** Muell. Linn. Soc. N. S. W. 1882, p. 105. 1024
— Tenuis, pallide luteo-aurantia, subcæspitosa; trunco tenui, nudo; ramis brevibus, acutis, dichotomis aut fasciculatis.

Hab. ad terram, Western Port Australiæ. — Inter *C. flaccidam* et *Cl. croceam* media.

7. **Clavaria amethystina** Bull. — Syll. VI, p. 693. — *Cl. cœrule- 1025

scens Karst. Symb. Myc. Fenn. XXIII, p. 2. — Tota cœrulescens; forma magnitudineque cum *Cl. flava* conveniens.

Hab. in parœcia Hollola Fennicæ (H. STJERNVALL).

8. **Clavaria Peckii** Sacc., *C. similis* Peck 43 Rep. p. 24 (1890) nec 1026
Bond. — Cœspitosa, subtenax, gracilis, 3-4-dichotomice ramosa, pallida, ramulis ultimis brevibus, axillis rotundatis; mycelio albo; sporis subglobosis, 6-6,5 μ . diam.

Hab. in silvis, Plattsburgh Amer. bor. — A *C. muscoide* vix diversa nisi colore pallidiore, apicibus ramulorum obtusis.

9. **Clavaria divaricata** Peck Bull. N. Y. Mus. n. 2, p. 11. — Stipite 1027
brevis, parvo, albo, valde ramoso; ramis late patentibus, teretibus, æqualibus vel leniter longitrorsus corrugatis, plus minus arcuatis, ultimis subattenuatis et in acumen unum v. plura terminantibus; sporis 10-12 \approx 5-6.

Hab. ad truncos, Sandlake Amer. bor. — Cœspites 5-10 cm. alt., subæqualiter lati.

10. **Clavaria lurida** Kalchb. Linn. Soc. N. S. W. 1882, p. 105. — 1028
Cœspitosa, ramosissima, sordide albida; trunco tenui; ramis ramulisque congestis, elongatis, acutis, siccitate fuscescentibus et subfiliformibus.

Hab. ad terram, Western Port Australiæ.

11. **Clavaria albida** Peck 41 Rep. pag. 79. — Albida; stipite brevi, 1029
crasso, deorsum plerumque attenuato, sursum in ramos paucos breves crassos valde ramosos diviso; ramulis ultimis dense confertis, in dentes paucos breves acutos terminantibus; carne firma, sicca, albida, dein acri, demum amara; sporis oblongis, 12-15 \approx 2, pallide ochraceis.

Hab. ad terram in silvulis, Menands Amer. bor. — Structura *C. Botrytis* et *C. flavæ*, cœspites 5 cm. alt.

12. **Clavaria densa** Peck 41 Rep. p. 79. — Cœspitibus albidis vel 1030
cremeis, a basi ramosis, 5-10 cm. lat.; ramis numerosissimis, subparallelis, confertis, teretibus, siccis rugulosis; apicibus dentatis, concoloribus; sporis leniter coloratis, subellipsoideis, 7-10 \approx 5-7.

Hab. ad terram in silvis, Selkirk Amer. bor. — Videtur valde affinis *C. condensatæ*, sed color alius.

13. **Clavaria sculpta** Beck Zur Pilzfl. Niederöst. V, pag. 75, t. XV, 1031
f. 1. — E stipite crasso subturbinato, 4 cm. crasso digitato-ramosa, ad 12 cm. alta.; ramis crassiusculis, parce ramosis, 3-4 cm. longis, ramulis in apice subturbinatis breviter denticulatis, omnibus ochraceis vel luteo-fuscescentibus, extus sculptura cerebri modo flexa

undulataque undique exaratis; flexuris convexis, 0,5-1 mm. latis; sporis oblongis, apiculatis fuscescentibus levibus, $12,3 \approx 3,7$; carne firma, alba, rarius rubescente, dulci.

Hab. in monte Sonntagsberg prope Rosenau Austriæ (Dr. A. ZAHLBRUCKNER).

14. **Clavaria Henriquesii** Bres. et Roum. Rev. Myc. 1890, pag. 36, 1032
t. 92, f. 5. — Trunco glabro, pallide flavo; ramis brevibus, subdichotomis, teretibus vel compressis, subrugulosis, flavo-vitellinis, glabris; carne albida inodora et insipida; sporis flavidis, globoso-ellipsoideis, interdum inæqualibus, $9-11 \approx 9$.

Hab. in ins. St. Thomæ Guineæ. — Truncus 2-3 cm. long., 1 cm. circ. cr. Totus fungus 5-6 cm. alt., 4-5 cm. crass. *Cl. aureæ* sat affinis.

2. Subsimplices.

15. **Clavaria cardinalis** Boud. et Pat. Journ. Bot. 1888, pag. 341, 1033
t. VIII, f. II. — Media, simplex sed fastigiata, pure miniata, siccitate pallens, præcipue ad basim; clavulis elongatis, rarissime furcatis, intus fistulosis vel farctis, cylindricis, dein canaliculatis vel compressis et tunc 3-5 mm. lat., ad apicem vel ad basim sæpius attenuatis, glabris, minute sed conspicue striatis; sporis rotundatis, albis, intus nucleo oleoso crasso præditis, hylo bene conspicuo, 5-7 cr., in basidiis elongatis cylindricis, tetrasporis suffultis; cystidiis filamentosis, flexuosis, sterigmata vix superantibus.

Hab. ad humum truncorum Todeæ barbaræ ex Australia misæ abundans, in calidariis Horti botanici Parisiensis. — Fungus 4-5 cm. alt.

16. **Clavaria spathuliformis** Bres. in litt. — Clavula spathulata, com- 1034
pressa, farcta, argillaceo-flavida, in stipitem albidum attenuata, 1-1½ cm. longa, 2-4 mm. crassa; stipite ¾ mm. crasso, farcto; sporis chlorino-hyalinis, ellipticis vel oblongis, granuloso-asperulis, $7-11 \approx 5-6$; basidiis clavatis, $50-60 \approx 6-7$.

Hab. in calidariis Hort. Bot. Beroliensis (P. HENNINGS). — *Clav. luticolæ* affinis.

17. **Clavaria Cyatheæ** P. Hennings. in litt. — Simplex, solitaria vel 1035
gregaria, spongioso-carnosa, elongato-clavata, farcta; clavula acuta ex albo subincarnata, 7-11 mm. longa, 1-1½ mm. crassa; stipite fibrilloso dein glabro ex albo-flavescente, 10-15 mm. longo, 1 mm. crasso; sporis subrotundatis, ferrugineis.

Hab. ad truncum Cyatheæ Burkei ex Africa australi introductæ 1885, in hortum berolin. hieme 1887-88 (P. HENNINGS).

18. **Clavaria similis** Boud. et Pat. Journ. Bot. 1888, tab. VIII e f. 1, 1036
Tab. anal. n. 686 (nec Peck), *Clavaria echinospora* Boud. et Pat. Journ. Bot. 1881, p. 341 (nec Berk.). — Clavulis plenis, elongatis (3-4 cm.), sparsis vel gregatis, cylindricis, generaliter simplicibus, interdum bifurcatis et compressis, basi apiceque attenuatis; basidiis 4-sterigmaticis; sporis globulosis, flavis, margine levi dein verruculosus, 5-7 μ . diam. — Fungus flavidus, inferne pallidior.

Hab. ad terram humidam in silvis, Jura Galliæ.

19. **Clavaria tenuis** Schw. — Syll. VI, p. 730. — ***Cl. muscorum** 1037
Karst. Hedw. 1889. — Receptaculis sparsis, simplicibus, filiformibus, apice attenuatis aut clavulatis, clavulis obtusis vel sæpius fusoideis, levibus, glabris, basi vulgo incrassatis vel compressis et villosis, albido-pallentibus, humectatis flavescens, impellucidis, hyphis varie flexuosis et curvatis contextis, 6-8 mm. longis, 0,2-0,3 mm. crassis.

Hab. supra Jungermannias vivas in Minas Geraes, Sitio Brasilæ. — A typo loco natali statim dignoscitur forteque est propria species. Stipes haud distinctus.

20. **Clavaria humilis** Cooke Grev. XIX, p. 2. — Gregaria, pusilla, 1038
alba, simplex vel parce ramoso-incisa, levis, nuda, glabra; stipite brevi, vix distincto, infra attenuato.

Hab. ad ligna putrida inter muscos Maingaroa Novæ Zelandiæ (BERGGREN). — Circiter 12 mm. alta.

Teste Cooke in Grev. XVII, p. 59 et 98, *Clavaria fragrans* Ell. et Ev. est *Lachnocladium Micheneri*; *Cl. velutina* Ell. et Ev. est *Lachnocladium semivestitum* B. et C. (sporis globosis, hyalinis, 4-5 μ . diam.); *Cl. clavata* Peck est *Cl. paludicola* Lib.

CALOCERA Fr. — Syll. VI, p. 732.

1. **Calocera Puiggarii** Spæg. F. Puigg. n. 166. — Laxe gregaria v. 1039
sparsa; stipitibus erectis, glabris, linearibus, simplicibus v. fusoideo-teretibus, tremelloideis, subsuccineis, apice acutis, fusco-purpurascens, deorsum pallidioribus, basi albescentibus, subiculo orbiculatim dilatato, 1-2 mm. diam., submucedineo albo adfixis.

Hab. in cortice vel ligno mucido putrescente in silvis prope Apiahy Brasilæ. — Stipites 5-7 mm. long., 0,5-0,6 mm cr. Species pulchella habitu *C. foveolari* Lév. simillima, foveola basali tamen deficiente recedens. *C. albipedi* Mont. cognata etiam, colore purpurascens abhorrens; an tantum varietates unius speciei omnes tres citatæ?

2. **Calocera platyceras** Speg. F. Puigg. n. 165. — Subsolitaria, suc- 1040
cineo-fulva; stipitibus erectis, subteretibus, glabris, apice simplici-
bus vel bifidis, late tenuiterque attenuato-spathulatis v. flabellatis,
pallidioribus.

Hab. ad ramos decorticatos putrescentes in silvis prope Apiahy
Brasiliæ. — Stipites 5-10 mm. alt., 0,7-1 mm. crass., clavula 3-4
mm. alt., 2-5 mm. lat.

3. **Calocera nutans** Sacc. in Hedw. 1890, p. 154. — Sparsa, tereti- 1041
clavata, compressa, apice obtusiuscula, flavo-succinea, eximie cur-
vata, glabra, stipite brevissimo sed discreto; basidiis tereti-clavu-
latis, indivisis (semper?); sporis ellipsoideo-oblongis, inæquilatera-
libus, $7 \approx 3,5$, hyalinis, 2-nucleatis, simulateve 1-septatis.

Hab. in truncis decorticatis, Mariatta Australiæ. — Fungus 2-3
mm. alt., 0,7 mm. lat. *C. hamatæ* affinis.

4. **Calocera digitata** Cooke et Mass. Grev. XVII, p. 7. — Ramosa, 1042
2,5-3,5 cm. alta, mollis, levis, pallida; trunco tenui, glabro, bis
ter furcato, ramis sursum spathulato-dilatatis apiceque 3-5 pro-
cessus scyphoideos, digitorum extensorum more dispositos ferenti-
bus; sporis albis, ellipsoideis, $5-6 \approx 3$.

Hab. in lignis udis (Fern gully) Dandenong Australiæ (FRENCH).

LACHNOCLADIUM Lév. — Syll. VI, p. 738 *).

1. **Lachnocladium simulans** B. et Br. Brisb. III, pag. 219, t. XXIX, 1043
fig. 8 a, b. — Siccum nigro-fuscum, tomentosum; stipite subtus
simplici, supra repetite ramoso, ramis gracilibus, apicibus furcatis,
acutis; sporis subglobosis vel ovoideis, $7,5-12,5 \mu$. long.

Hab. ad terram, Brisbane Australiæ (F. M. BAILEY). — Fungus
12-19 mm. alt. A *L. simulanti*, cui affine, differt colore in sicco
nigro-fusco.

2. **Lachnocladium Mollerianum** Bres. et Roum. Rev. Myc. 1890, p. 36, 1044
t. 92, f. 6. — Cæspitosum; stipitibus basi connatis vel liberis, dein
ramosis; ramis repetito-dichotomis, tenacellis, subrugulosis, apici-
bus subacutis et subbifidis, axillis arcuatis sulcatisque; sporis fla-
vidis, levibus, granulosis, $6-7 \approx 4-4,5$. = *L. strickum* XIV, 239, *L. Waburgi* XI, 139

Hab. ad ligna in ins. St. Thomæ Guineæ (MOLLER). — Stipites
4-6 mm. long. 1,5-2 mm. cr.; planta tota 3-4 cm. alt., 1-1,5. *Lachn.*
furcellato affine.

3. **Lachnocladium cirratum** Pat. Journ. Bot. 1889, p. 167. — Dense 1045

*) Conf. Pat. in Journ. de Bot. 1889, p. 23.

cæspitosum, 8-15 cm. diam., 8-10 cm. alt.; cæspitibus numerosissimis, 3-5 mm. long., 1-2 mm. cr., e basi in ramos plerumque 4-6, graciles 1 mm. cr., subcylindræcos, una facie albida et pulveracea, altera ochracea et glabra, repetitive ramulosos divisio, ramulis ultimis circinatis, inter se intricatis, acutis; sporis subhyalinis, ovoideo-rotundatis, levibus vel subangulosis, non echinulatis nec verrucosis, uniguttatis, 4 = 3.

Hab. ad terram, Guyana gallica Amer. merid. — *L. cartilagineo* vix affine.

4. **Lachnocladium vitellinum** Pat. in Rev. myc. 1890, p. 134, t. 107^{bis} 1046
f. III. — Parvum, simplex, raro dichotomum, flavidum vel ochraceum, elongatum, fusiforme, leve vel tenuiter canaliculatum, sporis pulverulentum; apice sterili, acuto; basidiis claviformibus, simplicibus 2-4-sterigmaticis, 15-20 = 6-8; sporis obovatis, oblique insertis, levibus, flavis 9-10 = 4.

Hab. ad truncos in silvis, Ma-eul-chan in Sina. — Fungus fibrosus, durus, 4 mm. alt. $\frac{1}{2}$ lat.

5. **Lachnocladium clavarioideum** Pat. Journ. de Bot. 1889, p. 27. — 1047
Stipite compresso, basi incrassato, striato, albo-rufescente, 2-4 cm. long., 3-4 mm. cr., in ramos fastigiatos, compressos, canaliculatos, bi-trichotomos, 0,5-1 mm. cr. abeunte, apicibus sterilibus, longis, fulvis; zona hymeniali albo-rufescente, unilaterali, glabra; sporis ovoideis vix flavidis (sub lente), levibus, 1-guttatis, 4-5 = 3.

Hab. ad terram in Guyana Gallica (MARONI). — Affine *L. cartilagineo*, sed sporæ minores.

6. **Lachnocladium violaceum** Pat. Journ. de Bot. 1889, p. 27. — Sti- 1048
pite basi tuberoso, 1-5 cm. long., exili, vix 2-3 mm. cr., compresso, albido, in ramos fastigiatos violaceo-griseos, 1 mm. crass., bi-trichotomos, compressos, canaliculatos, acutos abeunte; zona hymeniali unilaterali, glabra, albida; sporis ovoideis, flavidis, levibus, 4-5 = 3.

Hab. ad terram humidam in silvaticis in Guyana Gallica (MARONI). — Fungus tenax, 5-8 cm. altus.

7. **Lachnocladium albo-cinereum** Pat. Journ. de Bot. 1889, p. 33. — 1049
Lignoso-rigidum, albo-griseum, 4-5 cm. alt., trunco basi incrassato, curto v. 2 cm. alto, 5-7 mm. cr., villosio striato-canaliculato, in ramos curtos, latos, planos, canaliculatos, uni-bifurcatos, apice obtusos vel truncatos abeunte; hymenio unilaterali villosio, albo-cinereo; sporis ovoideo-apiculatis, flavo-brunneolis, minute verruculosis, 7-8 = 5.

Hab. in ligno putri in Guyana Gallica (MARONI).

8. **Lachnocladium leucoceras** Pat. Journ. de Bot. 1889, pag. 33. — 1050

Trunco curto, crasso, villosa, tuberculiformi, in ramos per 2-3 cm. simplices dein bi- trichotomos, planos, glabros, leves latere sterili, pulvereos vero et rugosos latere fertili abeunte; axillis rotundatis, acumine obtuso sæpe interjecto, extremitatibus obtuse rotundatis albis; hymenio unilaterali; sporis ovoideis, apiculatis, verrucosis, ochraceo-brunneis, 8-10 \approx 4-5.

Hab. in silvis in Guadalupa (L'HERMINIER). — Fungus 5-6 cm. in sicco brunneus, latere fertili ochraceus.

9. **Lachnocladium guyanense** Pat. Journ. de Bot. 1889, p. 35, t. I, 1051

f. 6. — Conferte cæspitosum, 8-10 cm. alt.; stipitibus numerosis, gracilibus, flexuosis, 2-3 cm. long., 1-2 mm. cr., in ramulos graciles extimos acutos dichotomice divisus; stipitibus ramisque uno latere canaliculatis, fertilibus pulvereis; sporis ochraceo-brunneis, ovoideis mucronatis, echinulatis, 6-8 \approx 4-5.

Hab. ad terram humidam, foliis dejectis tectam, in Guyana Gallica (MARONI).

10. **Lachnocladium giganteum** Pat. Journ. de Bot. 1889, p. 34, t. I, 1052

f. 1. — Lignosum, elasticum, 15-25 cm. alt.; trunco simplici, 5-6 cm. long., 8-10 mm. cr., rotundato, canaliculato, sursum furcato, ramis quinquies v. sexies dichotomico-ramosis, ramulis erectis sensim tenuioribus, æquilongis, ultimis vix incisus; dichotomiis semicircularibus, axillis compressis, ramulis subcompressis concavo-convexis; hymenio in lat. concavo axillisque extenso, pulvereo; sporis ovoideis, apiculatis, echinulatis, brunneis, 12-15 \approx 8-9.

Hab. ad terram in fragmentis ligneis in Guyana Gallica (MARONI).

11. **Lachnocladium insigne** Pat. Journ. de Bot. 1889, p. 34, t. I, f. 2. 1053

— Coriaceum, tenax, ramosissimum; stipite elongato 6-7 cm. long., 3 mm. cr., compresso, unifariam canaliculato, in ramos pluries dichotomos sensim tenuiores diviso, e tuberculo ligneo subgloboso oriundo; ramis compressis, canaliculatis, latere convexo sterili glabris, latere concavo axillisque fertilibus pulverulentis; ramulis terminalibus plus minus longis rectis flexisve acutis; sporis subglobosis ochraceo-brunneis, basi hyalino-mucronatis, 11-12 \approx 8-9, longe spinulosis.

Hab. in sabulosis humosis in Guyana Gallica (MARONI). — Fungus 10-15 cm. long.; rami primarii 4-5 cm. long.

PTERULA Fr. — Syll. VI, p. 740.

1. **Pterula divaricata** Peck 32 Rep. p. 36. — Cæspite laxo, albido v. 1054
rufescente, circ. 2½ cm. alt.; stipitibus gracilibus irregulariter ramosis; ramis late divergentibus gracilibus et in acumen longum subulatum sensim angustatis.

Hab. inter folia humi strata et in ligno putrescenti, South Corinth Amer. bor.

2. **Pterula subaquatica** Bres. et Roum. Rev. Myc. 1890, p. 36, t. 92, 1055
fig. 7. — Gregaria, filiformis, brunneo-rufa, glabra, rarissime simplex, generatim caule basi albo tomentoso prædita, mox diviso in ramos duos, teretes, apicibus subulatis, unum simplicem, alterum bi- v. tri-chotome divisum; sporis flavidis, obverse piriformibus, levibus, 12-13 = 6.

Hab. ad herbas aquaticas putrescentes in ins. St. Thomæ. — Fungus 1,5-2 cm. alt.; stipes 1-2 mm. long.

3. **Pterula secundiramea** (Lév.?) Speg. F. Puigg. n. 167, *Clavaria* Lév. 1056
— Sacc. Syll. VI, 716. — Stipitibus quandoque solitariis quandoque e basi communi cæspitosis v. brevissime subfasciculatis, filiformibus erectis, basi rectis, sursum incurvulis, 10-20 mm. long., 0,3-0,5 mm. crass., deorsum fuscis, ceterum pallescenti-rufescentibus v. carneis (in sicco tantum?) opacis glabris, levibus rigidulis, laxè alterne v. subopposite ramulosis; ramulis, 5-10 mm. long. patentibus, antice attenuato-acutatis, omnibus secundis, apice rectis vel incurvulis simplicibus v. rarius laxè sparseque ramulosis.

Hab. ad ramos dejectos putrescentes in silvis prope Apiahy Brasiliæ. — Species pulchella, sæpius cæspitosa, dense comata intricato-ramulosa, ramulis secundis mox dignoscenda.

TYPHULA Pers. — Syll. VI, p. 743.

1. **Typhula subfasciculata** Ell. et Ev. Proc. Phil. 1890, pag. 219. — 1057
Subfasciculata; clavulis binis, ternis v. singulis, cylindræis, curvis, 1-2 mm. alt., albo-farinosus, in apicem acutum saturatius coloratum contractis; basidiis 15-25 µ. long., apice obtuse capitatis, 6-8 µ. diam., deorsum cylindræis, 5-6 µ. crass.; sporis incertis, ut videtur, minutis 3 = 2.

Hab. in cortice emortuo Ulmi, London Canada (J. DEARNESS).

PISTILLARIA Fr. — Syll. VI, p. 752.

1. **Pistillaria mucedinea** Boud. Quelq. esp. p. 308. — Omnino alba, 1058

minutissima, $\frac{1}{2}$ - $\frac{3}{4}$ mm. alt.; clava elongata lineari, fertili usque ad extremitatem, interdum subattenuatam; hymenio crassiuscule, carnoso, basidiis tetrasporis formato; stipite distincto, albo-hyalino, glabro, $\frac{1}{4}$ clavæ long.; sporis hyalinis, subgranulosis, ovoideis v. fusiformibus, 7-8 = 3-5.

Hab. in cortice arborum vetustarum Catalpæ, Montmorency Gallia. — *P. acuminatæ* subaffinis.

2. **Pistillaria alnicola** Peck 42 Rep. p. 29, t. II, f. 22-24. — Clava 1059 ovoidea v. oblonga, obtusa, interdum compressa v. irregulari, 2-4 mm. alt., sessili vel vix stipitata, erumpente, glabra, e brunneo-ochraceo badio-rubra, intus albido et spongioso; basidiis 4-sporis; sporis ovoideis, uno apice acuminatis, 10-15 = 6-7,5.

Hab. ad ramos Alni incanæ, Adirondack Mountains, Cascadeville Amer. bor.

3. **Pistillaria viticola** Peck 42 Rep. p. 28, t. II, f. 25-27. — Clava 1060 ovoidea vel obovoidea, obtusa, glabra, alba; stipite clava æquilongus vel duplo longiore, cylindraco vel sursum attenuato, glabro; sporis ellipsoideis, 6-7,5 μ . long.

Hab. ad caules Vitis æstivalis, Ellenville, Ulster county Americæ borealis.

4. **Pistillaria? cinereo-alba** Bonord. Handb. p. 141, fig. 213 (*Scleromitra*). — Clavula obovata, griseo-cyanea; stipite albo, 6-8 mm. long., ex hyphis septatis formato; hyphis clavulæ ramosis, ramulis apice sporigeris; sporis cateuulatis ovoideis.

Hab. gregatim in fimetis in Guestphalia. — Vix *Pistillaria*.

PHYSALACRIA Peck. — Syll. VI, p. 759. —

1. **Physalacria orinocensis** Pat. Bull. Soc. Myc. 1884, p. 41, t. XIII, 1062 f. 2. — Pileo excavato, valde gracili, albido, pruinoso, stipite brevissimo suffulto; hymenio totam superficiem pilei obtegentæ; sporis ovoideis, parvis, hyalinis.

Hab. gregatim in ligno patri, Puerto Zamuro Venezuelæ. — Fungus 3-4 mm. alt.; stipes vix 1 mm. long.

2. **Physalacria stilboidea** (Cooke) Sacc. *Pistillina stilboidea* Cooke 1063 Grev. XIX, pag. 2, *Crinula stilboidea* Cooke in Herb. Kew. — Erumpens, minuta, carnosa, gregaria, tota pallide ochracea, stipitata, erecta, capitata, vix 3 mm. alt., glaberrima; capitulo globoso-depresso, cavo, hymeniifero $\frac{1}{4}$ -1 mm. diam.; stipite cylindrico, æquali, solido, pruinoso, $1\frac{1}{2}$ mm. long., ad basim cupulato-volva-

to; basidiis cylindrico-clavulatis, hyalinis; sporis ovatis, hyalinis, $4 \approx 3$.

Hab. ad folia Panacis in Nova Zelandia (BERGGREN, COLENZO).

— *Crinula* seu *Pistillina paradoxa* B. et C. sec. Grev. XVII, p. 18 est productio entomogena, *Erineo* proxima, sec. vero Grev. XIX, p. 2 inter fungos iterum recensetur.

3. **Physalacria Langloisii** E. et E. Journ. Myc. 1888, p. 73. — Mi. 1064
nuta, alba vel flavido-alba; stipite subpubescente, 300-400 \approx 50-70, contextu fibroso; capitulo subgloboso, elongatulo vel depresso, primo solido, dein cavo et interdum ob partem superiorem deciduam cupuliformi, $\frac{1}{4}$ - $\frac{1}{3}$ mm. diam., sub lente e basidiis minute pubescente; basidiis in strato compacto coalitis, oblongo-cylindræis; sporis hyalinis, 4-5 \approx 2,5; cystidiis urniformibus basidium superantibus, 30-35 \approx 15, supra in collum breve, rugulosum contractis.

Hab. ad lignum putre, Luisiana Amer. bor. (LANGLOIS).

Fam. 6. **Tremellinæ** FR.

EXIDIA Fr. — Syll. VI, p. 772.

1. **Exidia brunneola** Karst. Finl. Basidsv. pag. 450. — Receptaculis 1065
erumpentibus dein superficialibus, mollissimis, gelatinosis, elasticis, tenuibus, discoideis v. auriformibus, levibus, humectatis intumescens, brunneis, siccis membranaceis, fuscis, subtus costatis et punctato-scabris, stipite brevissimo, 2 cm. circ. latis; basidiis sphæroides, flavescentibus vel hyalinis, 10-12 μ . diam.; sporis cylindræis vel oblongis, curvatis, 16-24 \approx 3-5.

Hab. ad ramos exsiccatos Populi nigræ in Mustiala Fennicæ.

2. **Exidia albida** (Huds.) Bref. — Syll. VI, p. 777. — ***tuberculata** 1066
Karst. Finl. Basidsv. p. 452. — Receptaculis minute gyroso-tuberculatis.

Hab. ad ramos Betulæ et Tiliæ in regione Mustialensi.

3. **Exidia indecorata** (Somm.) Karst. Rev. Myc. 1890, p. 47, *Tremella* 1067
mella indecorata (Somm.) Karst. Hattsv. II, p. 197, vix Syll. VI, p. 786. — Receptaculis erumpentibus, pulvinatis, plicatis, subgelatinoso-mollibus, homosporis; hyphis ramosis, melleo-hyalinis v. hyalinis, circiter 2 μ . crassis, apice in basidia sphæroides obovoidea vel ovalia, mellea, demum cruciatim partita, 15-23 \approx 12-13 vel 13-16 μ . diam. desinentibus; sporis fusoides-oblongatis, 5-7-septatis, 50 \approx 8.

Hab. ad caules emortuos *Hederæ Ilicis* in Gallia Saint-Aubin prope Bernay Eure (EUG. NIEL), ad Salices per totam Fenniam. — Affinis videtur *Epidochio atrovirenti* Sacc. Syll. IV, p. 747, vix Fr. sec. descr. Conf. Karst. Symb. ad myc. Fenn. XX (1887), p. 101.

TREMELLA Dill. — Syll. VI, p. 780.

1. **Tremella subcarnosa** Peck 32 Rep. p. 37. — Parva, cæspitosa, 1068 compressa, irregularis, undulata vel contorta, subcarnosa, albida, roseo-alutacea, sicca brunneo-carnea et plus minus glauca; sporis obovatis, basi acuminatis, $5-7\frac{1}{2} \approx 4$.

Hab. ad ligna putrescentia, Carlisle Amer. bor. — Cæspites 5-10 cm. long. et lat.

2. **Tremella gummiformis** Speg. F. Puigg. n. 172. — E rimis erum- 1069 pens, late mucoso-diffluens, gyroso-undulata, pellucida, rufo-ferruginea, levis, glabra; sporis ellipsoideis vel ovato-subglobosis, hyalinis, 10-12 μ . diam., granuloso-farctis.

Hab. ad palos putrescentes in hortis pr. Apiahy Aut. 1881. — Species pulcherrima, e rimis corticis tuberculoso-erumpens, 2-20 mm. lat., undulato-gyrosa, sublobata, levissima glaberrima, mox mucoso-diffluens, obscure rufo-ferruginea subnitens; basidia non visa. An *T. mesentericæ* forma senescens tantum?

3. **Tremella Dulaciana** Roum. Rev. Myc. 1890, p. 1. — Gelatinosa, 1070 albido-ochracea, globulosa, usque ad 5-10 mm. diam.; plicis numerosis, circuliformibus obsita, demum tenuiter pruinosa; filamentis tenuibus, brevibus, perpendicularibus, lutescentibus.

Hab. parasitica ad *Clitocybem nebularem* in herbosis, Tarbes Galliæ.

4. **Tremella microscopica** B. et Br. Brisb. III, pag. 220, t. XXIX, 1071 fig. 10-14. — Minuta, punctiformis, hemisphærica, circ. $\frac{1}{2}$ mm. diam., maculas epiphyllas, atro-virides, siccas nigras, sparsas efformans, indeterminate gregaria; filamentis irregulariter ramosis et septatis, hyalinis vel pallide brunneis, hinc in basidia ovoidea, apiculata, $17,5 \approx 10-12,5$, interdum concatenata, illinc in conidia globulosa, 5 μ . diam., desinentibus; sporis non visis.

Hab. ad folium dejectum in fossa uda pr. Melbourne Australiæ (Miss. F. CAMPBELL).

5. **Tremella tremelloides** (Berk.) Masee Journ. of Myc. 1889. p. 184, 1072 *Sparassis* Berk., Syll. VI, p. 691. — Tremellina; lobis fasciculatis, elongatis, subrectis, basi sæpius liberis v. varie connatis, compressis, e basi contracta minute oriundis, extus papilloso-scabri-

dis, sordide aurantiacis; sporis ellipsoideo-oblongis, basi minute apiculatis, 11-12 \approx 5; basidiis amplis, sterigmata successive gerentibus.

Hab. ad ligna in Carolina inf. — Lobi 7-10 cm. long.

NÆMATELIA Fr. — Syll. VI, p. 792.

1. **Næmatelia coccinea** Wettst. Vorarb. Steierm. I, p. 28. — Receptaculo sessili, forma variabili, globoso vel claviformi-elongato v. depresso, furcato et undulato, coccineo (et in sicco) cartilagineo-carnoso; sporis globosis vel breviter ellipticis, 4-5 μ . long., hyalinis, glabris.

Hab. in asseribus putrescentibus pr. Mixnitz Stiriæ.

DACRYOMYCES Nees. — Syll. VI, p. 796.

1. **Dacryomyces paradoxus** Karst. Hedw. 1886, fasc. VI. — Forma varius, rotundato-applanatus, elongatus, curvatus, subpersistenter aurantiaco-luteus v. aureus, circiter 5 mm. latus, subiculo communi, crassiusculo, gelatinoso-molli fluxili, livido v. pallescenti insidens; sporis oblongatis, curvulis, 10-21 \approx 5-7.

Hab. in ligno pineo carie consumto prope Mustiala Fennicæ.

2. **Dacryomyces tremelloides** Karst. Hattsv. II, p. 241. — Adscendens vel erectus, subrotundo-depressus, 1 cm. diam., margine undulato-crispus, constanter flavo-aurantius, basi stipitiformi pallidior; sporis oblongis, curvulis, flavidis, 6-7-septatis, 16-22 \approx 6-7.

Hab. in truncis mucosis Mustiala Fennicæ. — Affinis *Tremellæ mesentericæ*.

3. **Dacryomyces levis** Karst. Finl. Basidsv. p. 458. — Receptaculis subrotundis, sæpe levibus, mollissimis, gelatinosis, ex hyalino flavis, 3-4 mm. lat.; sporis oblongis, vulgo curvatis, continuis, 16-18 \approx 4.

Hab. ad lignum vetustum Alni incanæ in Mustiala.

4. **Dacryomyces mesentericus** Karst. Finl. Basidsv. p. 459. — Receptaculis erumpentibus, rotundis, oblongatis vel elongatis, alte undulato-plicatis, flavis, siccitate brunnescentibus, 0,5-1,5 cm. lat.; sporis oblongatis, curvatis, dilute flavescentibus, 3-7-septatis, 18-21 \approx 5-7.

Hab. ad Betulam pr. Mustiala et Kola Fennicæ.

5. **Dacryomyces radicellatus** Karst. Hedw. 1890, p. 178. — Receptaculis gelatinosis, convexo-planis, levibus vel subundulatis, radicatis, subtus albo-pulverulentis, flavis, 1 cm. circ. lat.; sporis oblon-

gatis, basi curvatis, dilute flavescentibus, tandem 7-9-septatis, 27-31 = 11-13.

Hab. ad truncos corticatos Betulæ albæ pr. Mustiala. — *D. lutescenti* affinis.

6. **Dacryomyces conglobatus** Peck 32 Rep. p. 37, t. I, f. 1-4 (fig. non 1079 vidi). — Sparsus, sessilis, levis, pezizoideus, circ. 2 mm. lat., margine incurvus, roseo-rufus, intus pallidior, in sicco obscure rufus, margine plicato-lobatus; ramis gracilibus, ramosis, subtiliter rugulosis; sporis ad apices ramorum in glomerulos subglobosos congestis oblongis, obtusis, arcuatis, subinde guttatis.

Hab. ad corticem Thuiæ occidentalis, Adirondack Mountains Amer. bor.

7. **Dacryomyces microsporus** Karst. Finl. Basidsv. p. 459. — Rece- 1080 ptaculis initio discoideis, sessilibus levibus, pallidis, dein undulato-plicatis, flavo-pallidis sæpeque stipite plus minus distincto fulvescente auctis, siccis in aurantiacum vergentibus; sporis cylindraceis vel oblongatis, continuis, 7-10 = 3.

Hab. in ligno vetusto pineo ad Mustiala Fenniae. — *Dacryomyces hyalinus* Lib. Crypt. n. 333, Syll. VI, p. 801, præbet conidia (paraphyses?) filiformia, dense fasciculata, 80-90 = 1, basidiis brevissimis fulta. Forte non differt a *D. succineo*, qui sistit statum conidicum *Calloriæ succineæ*.

DITIOLA Fr. — Syll. VI, p. 813.

1. **Ditiola phyllogena** Cooke et Mass. Grev. XVII, p. 75. — Stipitata, 1081 ad basim confluens, albo-floccosa, cupula planiuscula, disco læte aureo; sporis fusiformibus, uniseptatis, demum triseptatis, hyalinis, 12-13 = 4-5.

Hab. in foliis coriaceis Carsle Bruce in ins. Dominica (G. A. RAMAGE). — Gen. *Ditiola*, sec. Karst. Hedw. 1889, p. 113, basidia habet tereti-clavata, adulta bifurcata, hinc *Dacryomyceteis* adnumeranda.

SEISMOSARCA Cooke Grev. XVIII, p. 25 (1889) [Etym. *seio* agito et *sarx* caro]. — Tremelloidea, mollis, fere mobilis, subglobosa, lobata vel gyrosa, sessilis, ubique hymenio tecta. Basidia clavata. Sporæ continuæ, coloratæ.

1. **Seismosarca hydrophora** Cooke l. c. — Inflata, gelatinosa, lobata, 1082 5-7 cm. lat., sordide pallide fuliginea, aquoso-mollis, setis spar-

sis coloratis, sæpe furcatis, apice acutis, 50-60 \approx 8, conspersa; basidiis clavatis; sporis ellipsoideis, continuis, late brunneis, 7 \approx 4.

Hab. ad ligna Clarence River Australiæ (WILLCOX). — Habitus fere *Tremellæ* sed fabrica diversa.

HORMOMYCES Bon. — Syll. VI, p. 812.

1. **Hormomyces abietinus** Karst. Hedw. 1890, p. 271. — Recepta- 1083
culis sparsis, rarissime confertis concretescentibusque, superficialibus, subrotundis, pulvinatis, levibus subgelatinoso-ceraceis, mollissimis, deliquescentibus, siccis cartilagineis, subaurantiacis, colore persistente, 2-3 mm. latis; hyphis parce ramosis, 2-3 mm. crassis, ramulis ultimis concatenato-cellulosis; cellulis (seu conidiis) oblongatis, elongatis vel cylindraceutis, rectis vel flexuosis, interdum inæqualibus, apicibus truncatis, guttulatis, hyalinis, 10-18 \approx 3-5.

Hab. ad lignum mucidum Pini et Abietis in Mustiala Fenniæ. — Forma, magnitudine, colore *Dacryomycti abietino* (Pers.) similis.

GASTEROMYCETÆ W. — Syll. VII, p. 1, *).

Fam. 1. **Phalloideæ** FR. **).

DICTYOPHORA Desv. — Syll. VII, p. 3.

1. **Dictyophora Braunii** P. Hennings in Jahrbuch des botanischen Museums in Berlin, 1890. — Pileo conico-campanulato, flavo-albo, reticulato, apice (ad transitum in stipitem) vix incrassato, 3 cm. alto, 3 cm. basi diametro; stipite reticulato, albo, 12 cm. circiter longo, superne attenuato, infra pilei annulo angusto ornato; indusio campanulato-conico, brevi, infra apicem stipitis oriente, usque ad dimidiam stipitis partem dependente, roseo, margine inferiore integro; ramis indusii plano-compressis, interstitiis irregulariter polygonis, 1-1½ cm. diam. 1084

Hab. in silvis pr. Malimba Kamerun (J. BRAUN). — Volva circiter 4 cm. alta, alba; sporæ ellipsoideæ, 3-4 \approx 1-2, in multitudine olivaceo-fuscæ.

2. **Dictyophora? collaris** (Crag.) De-Toni. — Syll. VII, p. 469.

ITHYPHALLUS Fr. — Syll. VII, p. 8.

1. **Ithyphallus Balansæ** Pat. Journ. Bot. 1890, p. 55. — Volva ovoidea, rubra; stipite superne attenuato, zona unica cavitatum formato, superficie longitudinaliter reticulato; pileo digitaliformi, apice rotundato; stipite vix crassiore, tenui, aurantio-rubescente, tenuissime tuberculoso-ruguloso, imperforato, membrana tenui, levi, brunnea et sterili involuta, 1 cm. longa tecto. 1085

Hab. in cultis Fu-Phop Tonkin. — Volva 3 cm. long., 2½ cm. lat.; pileus 1½-2 cm. long., 12-15 mm. lat.; totus fungus 9-15 cm. alt. *I. calyptrato* affinis.

2. **Ithyphallus aurantiacus** (Mont.) Fisch. — Syll. VII, p. 9. — Var. **pusillus** Pat. Journ. Bot. 1890, p. 55. — Volva angusta, elongata, 1086

*) Ut in hoc volumine omnes species in operis appendicibus jam descriptæ simul habeantur et supplementum vere universale dici possit, nomina hic repetuntur et illarum specierum quas in Addendis vol. VII, part. I, p. 469-492 cl. prof. De-Toni descripsit.

**) Cfr. Fischer, Untersuchung. z. vergleich. Entwickl. und Syst. d. Phall. Zürich 1890, cum tab.

rubra; stipite gracili, rubescente, basi subalbido, minute reticulato; pileo regulariter conico, extremitate obtuso, aurantiaco, superficie fertili, non perforato, alveolis minutis, rotundis, non sinuose-anastomosantibus reticulato.

Hab. in culturis, Fu-Phop. — Pileus 12 mm. long., 4-5 lat.; totus fungus vix 6 cm. alt.

3. **Ithyphallus cucullatus** Pat. Journ. Bot. 1890, p. 198, c. icone. — 1087

Volva ovoidea, albida; stipite fusiformi, extremitatibus attenuato, albo-rubente, perforationibus rotundatis irregulariter notato, pariete stratis pluribus cellularibus formata; stipitis apice annulo incrassato homogeneo, compacto latam perforationem terminalem circumdante, in laminam tenuem, viscosam, ad pileum adhærentem expanso; pileo obtuso, pendente, digitaliformi, tenui, ruguloso; parte sporifera olivaceo-fusca, per totam pilei superficiem expansa.

Hab. ad terram, Cambridge Mass. Amer. bor. (FARLOW). — Pileus 15 mm. long., 12 mm. lat.; totus fungus 8-10 cm. alt. *I. Ravenelii* proximus.

4. **Ithyphallus purpuratus** Cragin. — Syll. VII, p. 469.

MUTINUS Fr. — Syll. VII, p. 12.

1. **Mutinus minimus** Pat. Journ. Bot. 1890, p. 56, t. II, f. 3. — Fungo 1088
6-7 cm. long.; volva ovali, rubescente; stipite gracili, superne attenuato, reticulato; parte sporifera conica, imperforata, rugosa; fungo pallide rubro; odore subspermaticeo.

Hab. in culturis, Fu-Phop Tonkin. — Volva 2 cm. long., 10 mm. lat.; pars sporifera $\frac{1}{6}$ - $\frac{1}{7}$ lat. tot., inferne 6 mm. lat. *M. lambusino* sat affinis. In *M. canino* (Huds.), sporæ 6 \approx 4; in *M. lambusino* (Zoll.) Fisch., sporæ 6 \approx 4. Cfr. Grev. XVII, p. 17, t. 173, ex quo patet speciem ultimam recenter in Anglia quoque repertam fuisse.

2. **Mutinus sulcatus** Cooke et Mass. Grev. XVII, pag. 69. — Stipite 1089
cylindrico, cervino, 10 cm. long., $1\frac{1}{2}$ cm. crass., parte sporifera, $\frac{1}{5}$ totius receptaculi altitudinis longa, campanulato, longitudinaliter sulcato, transverse ruguloso, apice demum pervio v. lacerato, margine contiguo, atro-olivaceo; volva ampliata, alba; sporis 3 \approx $1\frac{1}{2}$.

Hab. ad terram, Brisbane Australiæ (BAILEY).

3. **Mutinus bovinus** Morgan, Journ. Cincinn. Soc. 1889, p. 147, t. III, 1090
Fisch. Unters. Phall. p. 92, — Receptaculo majusculo, 10-17 cm. long.; parte sporifera a stipite non discreta; stipite albo v. rubente, sursum sensim attenuato, nitide rubro; vertice peridii aperto.

Hab. ad terram fimetosam, Ohio Amer. bor. — Teste Fisch.
l. c., *Mut. elegans* forte idem.

4. **Simblum rubescens** Ger. var. **kansense** Crag. — Syll. VII, p. 469.

CLATHRUS Mich. — Syll. VII, p. 18.

1. **Clathrus parvulus** Bres. et Roum. Rev. Myc. 1890, p. 37, t. 92. 1091
f. 8. — Receptaculo obovato, undique cancellato, interstitiis poly-
gonalibus apice duplo quam basi majoribus, ramis quadrangulis,
compressis, transverse rugosis, extus rufescentibus, intus fusco-
olivaceis, humectatis undique olivaceo-fuscis; volva albido-aluta-
cea, subrufescente, lobata, in radicem multipartitam desinente; spo-
ris chlorino-hyalinis, cylindraceis, $4 \approx 1-1,5$.

Hab. ad truncos cariosos putridos in ins. St. Thomæ. — Re-
ceptaculum 2 cm. alt., 1-1,5 cm. lat.

2. **Clathrus cameroensis** P. Hennings, Jahrburh. d. botan. Museum, 1092
zu Berlin 1890. — Receptaculo ovoideo, 5 cm. circiter albo, a basi
e 9 ramis cancellato, interstitiis rotundis vel irregulariter polygo-
nis (usque $1\frac{1}{2}$ cm.), ramis tenuissimis ($1\frac{1}{2}$ -2 mm. latis), compres-
so-rotundis, fusco-olivaceis, transverse rugoso-favosis; volva al-
bida, 2 cm. circiter longa, 2 cm. diametro.

Hab. ad terram Kamerun prope Malimbo (F. BRAUN). — *Cl.*
cancellato affinis, sed colore receptaculi et ramis tenuissimis satis
distinctus.

COLUS Cav. — Syll. VII, p. 21.

1. **Colus Muelleri** E. Fisch. Unters. Phall. p. 61, t. V, f. 38. — Re- 1093
ceptaculo inæqualiter clathrato, interstitiis superioribus isiodiame-
tricis, latiusculis, inferioribus verticaliter valde elongatis; stipite
brevis.

Hab. prope flumen Murray Australiae. — *C. hirudinoso* sub-
affinis.

2. **Colus fusiformis** E. Fisch. Unters. Phalloid. p. 64, t. V, f. 39. — 1094
Receptaculo stipitato, supra fusoideo, ad maximam latitudinem ri-
mis 4-5 (?) prædito, rubro, parte clathrata, ramis validis plurilo-
cellatis; massa sporigera atra, virescenti-nigra.

Hab. ad terram humosam silvaticam in ins. Réunion Afr. orient.
(G. DE L'ISLE).

LYSURUS Fr. — Syll. VII, p. 22.

1. **Lysurus australiensis** Cooke et Mass. Grew. XVIII, p. 6. — Re- 1095

ceptaculo fusco, plerumque quinque-lobato, lobulis sursum attenuatis, primo conniventibus, demum subreflexis, medio longitudinaliter depressis, transverse rugosis; stipite cylindrico, cavo, celluloso, albido; volva globosa, lacerato-lobata, alba; pulpa sporifera rufofusca, nigrescente; sporis $3 \approx 1$.

Hab. ad terram, Brisbane River Australiæ (BAILEY). — Peridium 2,5-3 cm. long.; stipes 12 cm. long., 1,8 cm. cr.

ASEROE Lab. — Syll. VII, p. 25.

1. **Aseroe corrugata** Colenso Trans. N. Z. Inst. 1883, pag. 362. — 1096

Volva parva, globosa vel late obovata, circ. 2,5 cm. diam., rugulosa, sessili, extus atro-umbrina, intus alba, radicibus centralibus albidis; stipite subcylindraco, valido, 3,5-4 cm. long., obconico, apice 3,5 cm., basi 1,5 cm. lat., leviusculo vel subruguloso, subtranslucido, nervoso-reticulato, basi cavo; receptaculis laciniis 6 læte rubris, intus obscurioribus, conniventibus, 4,5 cm. long., basi 4 mm. lat., intus et extus irregulariter rugosis, profunde furcatis, deorsum sulco profunde percursis, ad basim loborum excavatis.

Hab. in silvis Hawke's Bay Novæ Zelandiæ.

2. **Aseroe arachnoidea** E. Frisch. Unters. Phall. p. 76, t. VI, f. 43. 1097

— Stipite subcylindraco, supra in segmenta 10, simplicia, singula e locello efformata et in flagellum longum producta, extus subrugulosa, extus levia, diviso.

Hab. in fimetis, Laos Cochinchinæ.

Fam. 2. **Nidulariaceæ** FR.

NIDULARIA Fr. — Syll. VII, p. 28,

1. **Nidularia pisiformis** (Roth) Finl. — Syll. VII, pag. 32. — Var. 1098

Broomei Mass. Brit. Gastr. p. 58. — Sporis anguste ellipsoideis, episporio crasso et hyalino, $10 \approx 4-5$.

Hab. in pinetis, Batheaston Angliæ.

2. **Nidularia Berkeleyi** Mass. Brit. Gastr. p. 59, t. 38. — Subglo- 1099

bosa, dein late aperta, non radicans; peridio crasso, pannoso, extus hirto-tomentoso, læte cinnamomeo, intus concolori, velutino; sporangiolis numerosis (40-50), circularibus, biconvexis, circ. 2 mm. diam., læte brunneis, levibus, lucentibus, siccis valde corrugatis; sporis ellipsoideis, 9-10 \approx 5-6, levibus, hyalinis, dein pallide brunneo-olivaceis.

Hab. ad lignum, ramulos etc., in horto Powerscourt Angliæ (M. J. BERKELEY). — Peridium 5-7 mm. lat. et alt., solitarium v. bi-trinum. *N. farctæ* affinis.

CYATHUS Hall. — Syll. VII, p. 32.

1. **Cyathus Puiggarii** Speg. F. Puigg. n. 179. — Olla; peridio obconico extus fusco-fulvo longe denseque strigoso-hirsuto, epiphragmate tenui albo, ore integerrimo, intus levissimo plumbeo-nitente; sporangiolis lenticulari-rhomboideis atro-plumbeis, levibus subnitentibus in quoque peridio 12-16, 2 mm. lat., 1,3-1,5 mm. cr.; sporis ellipsoideis crasse tunicatis, hyalinis, 30 \approx 20. 1100

Hab. in fimo vetusto putrescente in pratis prope Apiahy Brasiliæ. — Peridia 4-20 aggregata, 5-6 mm. alt., 4-5 mm. cr. *C. stercoreo* peraffinis; an varietas tantum?

2. **Cyathus umbrinus** Rabenh. in Hedwigia 1871, p. 22. — Anguste cyathiformis, 8-12 mm. alt., ore 6 mm. vix superans, e fulvo umbrino-fuscescens, rugulosus, nudus, intus levigatus, nigrescens, albedo-zonatus; sporangiolis patelliformibus, disco gilvo, extus albedo-fuscescentibus; sporis ovoideis, 10-13 \approx 7,2-8. 1101

Hab. prope Tiflis Armeniæ, — Genus *Thelebolus*, hucusque ad Nidulariaceas relatum, observantibus cl. Zukal et Heimerl, ad Ascoboleas ducendum est.

Fam. 3. **Lycoperdaceæ** EHRENB.

SECOTIUM Kunze. — Syll. VII, p. 51.

1. **Secotium virescens** Masee Grev. XIX, p. 47. — Peridio ovato, apice acuto, basi primitus stipite fulto, demum libero et expanso, cortice coriaceo, levi, glabro, nitidulo, pallide-viridi; stipite brevi incrassato, sursum attenuato, solido, glabro, levi, basi flavido, glabro læte ferrugineo-aurantio; loculis minutis, subæqualibus, regularibus, dissepimentis tenuibus; basidiis majusculis clavatis tetrasporis; sterigmatibus elongatis; sporis elliptico-oblongis, levibus, læte rubiginoso-aurantiis, 18-20 \approx 7-8. 1102

Hab. ad terram in Nova Zelandia (COLENZO). — Peridium 3 cm. long., 2 cm. cr.; stipes 0,5 cm. long. Habitus fere *S. acuminati*, in quo peridii color diversus et sporæ tantum 5-6 \approx 4.

2. **Secotium lilacense** Berk. in Hook. Handb. New Zeal. Flor. p. 617. 1103

— Azureum; stipite brevi, pallido, fibroso, pruinoso; pileo subglobo-
boso, lilacino, maculato, 12 mm. alto.

Hab. in ligno, in Novæ Zelandiæ insulis centralibus (HAAST).

4. **Cycloderma platysporum** C. et M. — Syll. VII, p. 470.

PODAXON (Desv.) Fr. — Syll. VII, p. 58 *).

1. **Podaxon Schweinfurthii** Pat. Bull. Soc. Myc. 1890, pag. 165. — 1104

Peridio olivæformi, 5 cm. long., 2 cm. lat., adpresse remote squa-
muloso, rufo; stipite rigido, 6 mm. cr., basi incrustato, sursum
attenuato, fibroso-striolato; peridio paullo pallidiore, intus cavo,
gleba pulverea, juniore flava, adulta aurantio-ferruginea; basidiis
hyalinis, fasciculatis, 20-22 \approx 8-10, tetrasporis, capillitio nullo;
sporis ovoideo-elongatis, e hyalino flavis, demum aureis, 16-18 \approx 8-10.

Hab. ad terram Hodeida pr. mare rubrum (SCHWEINFURTH).

2. **Podaxon Emerici** Berk. herb., Masee Mon. Podax. p. 15, t. 294, 1105

fig. 11. — Peridio elliptico-oblongo, squamis fibrilloso-squarrosis,
saturate coloratis tecto; stipite elongato, sursum attenuato, cavo,
gleba olivaceo-brunnea; sporis late ellipticis, levibus, ex olivaceo
brunneis, 20-22 \approx 12-14, hilo apiculato, capillitio obsoleto.

Hab. ad terram Musalapatam Himalayæ (Capt. EMERIC BERKE-
LEY). — Peridium 6-8 cm. long., 4 cm. lat; stipes 14-16 cm. long.

3. **Podaxon Deflersii** Pat. Bull. Soc. Myc. 1890, p. 165. — Peridio 1106

ovoideo, obtuso, 2,5 cm. long., albo, dein vix brunneo maculato,
tenui papyraceo, levi vel apice subsquamuloso, in lobos inæquales
sursum dehiscente; stipite molli, gracili, tereti, basi incrassato,
levi, albo-virente, basi aurantio-maculato, 7-8 cm. long., 5-6 mm.
cr., intus subcavo, gleba olivaceo-brunnea, compacta, capillitio
nullo; basidiis fasciculatis, piriformibus, 20 \approx 10, tetrasporis, rarius
2-5-sporis, sterigmatibus brevissimis; sporis late ellipticis, 10-12
 \approx 6-9, stramineo-viridulis.

Hab. ad terram prope Schugra in regione halepensi Asiæ, ubi
vulgo Chourl-el-Ga'r.

4. **Podaxon Farlowii** Mass. Monogr. Podax. p. 15, t. 295, f. 19-26. 1107

— Peridio obovato-oblongo, apice valde obtuso, margine basali
libero, irregulariter lacerato; stipite elongato, subæquali, sæpius
contorto, farcto, basi non vel vix incrassato; massa sporifera ni-
gricante brunnea; capillitii filamentis perraris, indistincte spirali-

*) Cl. Masee (Journ. of Bot. 1890) generi *Podaxo* ascos tribuit, sed con-
trarium docuit cl. Patouillard (Bull. Soc. Mycol. 1890), cui assentior.

ter notata; sporis irregulariter globosis v. late ellipsoideis, levibus, pallide atro-brunneis, $10 \approx 12$ vel $10-12 \mu$. diam.

Hab. ad Rio Grande Novi Mexici. — Peridium 6–8 cm. long., 3–4 cm. lat.; stipes 14–18 cm. long.

5. **Podaxon arabicus** Pat. Bull. Soc. Myc. 1887, p. 122, t. XI, f. 1. 1108
— Peridio subgloboso-ovato, 4–5 cm. alt., sicco brunneo-rufo, membranaceo, 1–2 mm. cr., apice parce adpresso-squamoso, deorsum usque ad dimidium altitudinis in 5–7 lacinias acutas diviso; stipite basi incrassato, 12 cm. circ. alt., 1,5 cm. subtus diam., apice attenuato, usque ad peridii apicem in columellam producto, durissimo, sublignoso, hinc inde scarioso-squamoso, longitudinaliter tenuissime striato-fibroso, flavo-aurantio, maculis saturate rubris marmorato, intus floccoso-meduloso; sporarum massa compacta, brunneo-rufa, cinnabarino-maculata; sporis globulosis, rufis, levibus, eguttatis.

Hab. ad planities sabulosas inter Sheick Osman et Lahaj, pr. Aden Arabiæ. — *P. calyptrato* affinis.

CHÆNODERMA Masee Grev. XIX, p. 46 [1890] (Etym. *chaino* hisco et *derma*). — Peridium elongato-fusoideum v. clavatum, in basim brevem stipitiformem abiens, crassiusculum, unistratosum. Columella crassa, compacta, usque ad peridii apicem producta et cum eo firme concreta. Gleba ex hyphis copiosis septatis hinc inde basidia clavata 4-spora fasciculata gerentibus formata. Sporæ continuæ, coloratæ. — Dehiscencia longitudinaliter valvata ob columellæ contractionem. — A gen. *Podaxo* dignoscitur gleba haud lacunosa, sterigmatibus distinctis quaternis, dehiscentiæ modo.

1. **Chænoderma Drummondii** Masee l. c., *Secotium Drummondii* 1109
Berk. herb. — Clavato-fusoideum, 5–6 cm. alt., 1,5 cm. cr., sordide brunneum, glabrum, leve; columella pallida; gleba brunnea; basidiis $50 \approx 12$, clavatis, fasciculatis; sporis late ellipsoideis crasse tuniatis, levibus, $10 \approx 8$, sæpius sterigmatibus fragmento auctis.

Hab. ad terram, Swan River Australiæ (DRUMMOND).

TYLOSTOMA Pers. — Syll. VII, p. 60.

- Sachmocladium* *cont. Syll. XI, 160*
1. **Tylostoma Mollerianum** Bres. et Roum. Rev. Myc. 1890, pag. 37, 1110
t. 92, f. 9. — Cæspitosum, stipitibus basi connatis v. liberis, dein ramosis; ramis repetito-dichotomis, tenacellis subrugulosis, apicibus subacutis et subbifidis, axillis arcuatis sulcatisque; tota planta brun-

neo-rubiginosa, glabra, pulvere tabacino ex sporis conspersa; sporis sub microscopio flavidis, levibus, protoplasmate granuloso, 6-7 = 4-4,5.

Hab. ad ligna in ins. St. Thomæ ad Angolares. — Fungus 3-4 cm. alt., 1-1,5 cm. lat. *Tyl. furcellato* proximum.

2. **Tylostoma cæspitosum** Trab. in litt. — Hypogæo-emergens, cæspitosum; peridio globoso-depresso albido; annulo infra peridium araneoso-prominente; ore breviter tubuloso, sæpe obsoleto; stipite impolito vulgo crasso, firmo, sicco subtorto, farcto, ad basim volva membranacea fugaci aucto; gleba ochraceo-fulva; sporis sphaerico-subangulosis, 5-6 μ . diam., ex hyalino chlorinis. 1111

Hab. ad terram arenosam, Alger Africa boreal. — Cæspites e 2-5 individuis compositi, qua nota præcipue species dignoscitur.

3. **Tylostoma Wightii** Berk. Herb. Kew, Cooke Linn. Trans. 1888, 1112 pag. 129. — Peridio globoso, albido, ore submammoideo pertuso; stipite rigido æquali, longitudinaliter striato, initio squamoso; sporis 6 μ . diam., levibus capillitioque aureo-testaceis.

Hab. in Hari rud valley, Affghanistan. — Peridium 1-2,5 cm. diam.; stipes 6-7 cm. long.

4. **Tylostoma pulchellum** Sacc. in Bull. Soc. Myc. V, p. 118, t. XIV, 1113 f. 4. — Minutum, breve stipitatum; stipite cylindræo glabro, longitrorsum striato albido, basi bulboso-dilatato, 5 mm. long., 1,5 cr.; bulbo infra applanato; peridio membranæo subgloboso, 7-8 mm. diam., infra medium indumento crassiusculo asperulo friabili, amœne ochraceo vestito, supra nudo, cinereo-luteolo, tenuissime (sub lente) puberulo; ostiolo subrotundo pertuso, margine ostioli æquali; gleba cinnamomea, mox pulverea; sporis subglobosis, 5-6 μ . diam., 1-guttatis, flavo-ferrugineis; floccis parce furcatis, hyalinis, inæqualibus, 4-7 μ . crass.

Hab. ad ramos? in Australia merid. — Species eximia a vero *T. pusillo* Berk. Lond. Journ. 1845, p. 157, t. VII, f. 10, differt indumento peridium dimidium obducente, ochraceo, scabro; sporis omnino levibus, etc.; a *T. Cesatii* Sacc. (*T. pusillum* Cesati et Syll. Fung. VII, p. 64, nec Berk.) recedit quia triplo minus, non rigidum nec corneum; stipite non setoso etc.

5. **Tylostoma pusillum** Berk. Lond. Journ. Bot. 1842, p. 157, t. VII, 1114 f. 10, nec Cesati Born., nec Syll. — Stipite curto, æquali farcto subsquamoso a peridio distincto; peridio proportionem magno, papyraceo ovato vel globoso-depresso, ore prominulo mammoso; floccis ramosis; sporis globosis, minutissimis, echinulatis, rufis.

- Hab.* sabulo semimmersum, Surinam (HOSTMANN). — Fungus 2 cm. alt.; stipes 8-9 mm. long., 3 mm. cr.
6. **Tylostoma Cesatii** Sacc. in Bull. Soc. Myc. V, p. 118, *Tyl. pusillum* Cesati et Syll. Fung. VII, p. 64, nec Berk. — In Syll. l. c. corrigenda est mensura sporarum quæ est 3,5-4 μ ., nec 1,5 μ .
7. **Tylostoma Jourdani** Pat. — Syll. VII, p. 470.
8. **Tylostoma patagonicum** Speg. — Syll. VII, p. 470.

BATTARREA Pers. — Syll. VII, p. 65.

1. **Battarrea Tepperiana** Ludw. Centralbl. 1889, I, p. 337. — Peridio intus membrana regulariter disrupta sporisque remotis candidante, campanulato-mitrato, lignoso, intus cavo, fibris pallidis per totam cavitatem decurrentibus; stipite longissimo, sursum incrassato, toto squamis paleisve, in superiore parte magnis, membranaceis laceratis, in parte inferiore lineari-lanceolatis imbricatis reflexis vestito, extus intusque brunneo; sporis brunneis, globosis, vix verrucosis, 5-5,5 μ . diam., capillitii fibris, 5,5-6 μ . cr., spirabilibus intermixtis. 1115

Hab. ad terram arenosam, Balaclava Australiæ (J. G. O. TEPPER). — Peridium circ. 3 cm. lat.; stipes 26 cm. long., basi 4 mm., supra 18 mm. apiceque 2 mm. cr.

MITREMYCES Nees. — Syll. VII, p. 68.

1. **Mitremyces Berkeleyi** Mass. Monogr. Calost. p. 39, t. III, f. 33 (Calostoma). — Exoperidio extus ochraceo, intus rubido-brunneo, apice irregulariter dehiscente; endoperidio subgloboso, levi, ochraceo; peristomio rubro, erecte acuteque 5-dentato; sacco sporigero pallido; sporis globosis, minute verrucosis, pallidissime ochraceis, 7-9 μ . diam., basi in stipitem ochraceum, irregulariter lacunosum. 1116

Hab. in regione australi ins. Ceylon (GARDNER). — A *M. lutescente*, cui similis, sporis globosis differt.

2. **Mitremyces oriruber** Cooke MS. *Calostoma* Masee Monogr. Cal. p. 40, t. III, f. 31. — Fascicularis; exoperidio atro-brunneo, mox verrucis acuminatis, magnis, persistentibus erumpente; endoperidio late ovoideo vel ellipsoideo; osculo coccineo, dentibus 4-5 erectis, initio conum efformantibus; sacco sporigero, ochraceo-pallido; sporis sphaericis, grosse tuberculatis, pallidissime ochraceis, 14-17 μ . diam. 1117

Hab. ad terram, Larut, Perak, Archipel. malacens. — Endope-

ridium 2,5-4 cm. alt.; stipites terni vel quaterni, in massam subglobosam, lacunosam confluentes. *M. Junghuhnii* valde affinis.

GEASTER Mich. — Syll. VII, p. 70.

1. **Geaster hygrometricus** Pers. — Syll. VII, p. 90. — Var. **paucilobatus** Wettst. Vorarb. Steierm. I, pag. 51. — Peridio exteriore usque ad basim in lobos quinque (rarius 4-6) fisso; lobis crassis, carnosiss, siccis coriaceis, intus pallide fuscis, siccis profunde reticulatim excavatis, extus glabris, fuscis vel canis, integris, rarius in apice inciso-2-4-dentatis; peridio interiore, gleba ac sporis ut in typo.

Hab. in silva uliginosa, Cilli Striæ. — Nomen *G. stellatus* (Scop.) Wettst. [*Lycoperdon* Scop. 1772] *hygrometrico* multo anterius.

2. **Geaster Berkeleyi** Masee Brit. Gastr. p. 79, f. 41. — Exoperidio subtenui, centro in segmenta 7-9 inæqualia, acuta, initio expansa, dein subinvoluta dehiscente, strato interiore continuo; endoperidio pedicello brevi, crasso suffulto, late ovoideo, pallide brunneo, grosse papilloso; peristomio prominente, conico, sulcato-striato, zona depressa, sericea, levi cincto; columella brevi, hemisphærica; sporis in massa brunneo-umbrinis, globosis, verrucosis, 4-6 μ . diam.; capillitii filamentis simplicibus, fusoides, usque ad 10 μ . crass.

Hab. ad terram in Britannia et Australia. — Exoperidium expansum, 7,5-9 cm. diam.; endoperidium 2,5 cm. alt. *G. striato* affinis.

3. **Geaster affinis** Colenso Trans. N. Z. Inst. 1883, p. 363. — Exoperidio sessili, 8 cm. diam., expanso-plano, extus prope basim concentricè 2-3 annullato, tenui, extus pallide brunneo et levi segmentis 8 anguste deltoideo-acuminatis, intus rugosis et saturate brunneis fere ad basim dehiscente; endoperidio 3 cm. diam., globuloso, pallide fusco, sessili, basi libero, intus sulco circulari percurso, apice coronula, 6 mm. diam., obsito; osculo elevato, lato, conico, ultra 2 mm. diam., laciniato.

Hab. ad terram in silvis Glenross Novæ Zelandiæ. — *G. tenuipedi* affinis.

4. **Geaster coronatus** Colenso Trans. N. Z. Inst. 1883, pag. 362. — Exoperidio circ. 5 cm. diam., expanso, basi applanato, crassiusculo, segmentis late triangularibus, obtusis, suberectis papillatis dehiscente, extus semi-papillato et atro-brunneo, intus nigricante-

brunneo denseque pubescente, segmentorum basi interiore margine continuo elevato; endoperidio 2 cm. diam., globoso, levi, sessili, omnino libero, rubido-brunneo, sursum obscuriore, apice punctis minutis, nigris, coronula depressa, 4 mm. diam. cinctis, obtecto, scabro, centro subelevato, osculo parvo, plano.

Hab. ad terram in silva Norsewood Novæ Zelandiæ. — *G. Archeri* subaffinis.

5. **Geaster Pillotii** Roze Bull. Soc. Myc. 1888, p. XXXV, c. ic. — 1122

Exoperidio tenui, laciniis 6, cuneato-acutis, 2 vero aliis latioribus et profundioribus, fulvis, intus strato nigricante et rugoso vestitis; endoperidio pedicello crassiusculo, pallide ardosiaco suffulto, levi, fulvo, basi globoso, sursum subpiriformi; peristomio subpallidior, ciliis erectis, 5 mm. long., levibus, hyalinis, contortis coronato; capillitii filamentis tenuissime scabris, basi ochraceo-pallidis, apice hyalinis; sporis ochraceis, hispidulis, 4-5 μ . diam.

Hab. in silva Compiègne Galliæ (PILLOT).

6. **Geaster argenteus** Cooke Grev. XVII, p. 75. — Exoperidio 8-10 1123

fido, 3-4 cm. diam., laciniis anguste lanceolatis, apice passim bifidis, tenuibus, siccitate arcte involutis, extus albido-nitidis, intus fuligineo-umbrinis; endoperidio globoso, 1,7 cm. diam., sessili, glabro, pallido; peristomio dentato-lacerato; capillitio delicatulo, hyalino, 4-6 μ . diam; sporis globosis, glabris, pallide fuscis, pellucidis, 4 μ . diam.

Hab. ad Saskatchewan Amer. boreali-occid. — Affinis *G. floriformi*.

7. **Geaster Spegazzinianus** De-Toni Syll. VII, p. 87. — Var. **vittatus** Sacc. in Soc. Myc. V, p. 117, t. XIV, f. 6.

8. **Geaster turbinatus** Crag. — Syll. VII, p. 471.

9. **Geaster campester** Morgan. — Syll. VII, p. 471.

10. **Geaster Thwaitesii** Berk. — Syll. VII, p. 471.

11. **Geaster Archerii** Berk. — Syll. VII, p. 471.

12. **Geaster Readeri** Berk. — Syll. VII, p. 472.

13. **Geaster australis** Berk. — Syll. VII, p. 472.

14. **Geaster Guilfoylei** Müll. — Syll. VII, p. 472.

15. **Geaster Menziesii** Berk. — Syll. VII, p. 473.

16. **Geaster delicatus** Morgan. — Syll. VII, p. 472.

STELLA Masee Journ. Myc. 1889, p. 185 (Etym. *stella* ob peridii formam). — Peridium bicorticatum; exoperidium discretum a vertice ad basim in lacinias stellatim fissum; endoperidium tenue, in-

dehiscens. Gleba lamellis tramæ anastomosantibus cum endoperidio continuis percursa. Columella et capillitium nulla. Sporæ subglobosæ continuæ, mox pulverulentæ. — Structura glebæ cum *Sclerodermate*, exoperidii cum *Geastere* fere congruit; præterea dignoscitur defectu capillitii etc.

1. **Stella americana** Mass. Journ. Myc. 1889, p. 185, t. XIV, fig. 2. 1124

— Exoperidio globoso-depresso, crasso, levi, ochraceo-brunneo, apice in 4-6 segmenta subæqualia stellatim dehiscente; endoperidio levi, tenui, brunneo, matura supra everso; tramæ parietibus albidis, evanescentibus; sporarum massa umbrina; sporis globosis, minute verrucosis, 6-7 μ . diam.

Hab. ad terram, Carolina infer. Amer. bor. — Fungus 2,5-5 cm. diam., solitarius vel gregarius.

DIPLODERMA Link. — Syll. VII, p. 92.

1. **Diploderma album** Cooke et Masee Grev. XVI, p. 2. — Subglo- 1125

bosum, pallidum; peridio exteriore tenui, persistente, interiore albo-cartilagineo; capillitio simplici, radiato, contexto, nucleo centrali suberoso; sporis globosis, levibus, hyalinis, 5 μ . diam.

Hab. ad terram, Cudgegong River Australiæ (HAMILTON).

2. **Diploderma fumosum** Cooke et Masee Grev. XVI, p. 2. — Glo- 1126

boso-depressum, album; peridio exteriore, fibroso, interiore, pallido, fragili, capillitio radiato, intertexto hyalino, attenuato; sporis globosis, echinulatis, fumosis, 6-8 μ . diam.

Hab. ad terram, New South Wales Australiæ (F. CAMPBELL).

3. **Diploderma pachythrix** Cooke et Mass. Grevill. vol. XVIII, p. 50. 1127

— Subglobosum; exoperidio tenui, fragili, cinereo; endoperidio subcartilagineo, tenui, persistente, pallido; capillitii fibris parallelis, ex hyphis fascicularibus, pachypleuris, e nucleo lignoso centrali endoperidium versus radiantibus; sporis pallide ochraceis, ellipsoideis, minute verrucosis, 9-10 \approx 4-5.

Hab. ad terram, Tarwin, Victoria Australiæ. — Fungus subterraneus, circ. 2 mm. diam.

BOVISTA Dill. — Syll. VII, p. 96.

1. **Bovista ochracea** Wettst. Vorarb. Steier. I, p. 50. — Globosa, 1128

sessilis, rarius subdepressa; mycelio parvo, floccoso, insidente; peridio exteriore luteo vel albido mox dehiscente et in farinam tenuem luteam, basim versus ochraceam dissoluto, interiore (saltem

siccò) membranaceo, tenui, ochraceo, nitente, ad basim plicato, reliquiis peridii exterioris oblecto vel maturo, nudo, apice ore orbiculari, dehiscente; capillitio ochraceo-fusco, ramis tenuibus dichotome divisus in apicem longe attenuatis; sporis ochraceis v. ochraceo-virescentibus, globosis, 2-4 μ . diam., levibus.

Hab. in herbosis pr. Feistritz Stiria.

2. **Bovista? Puiggarii** Speg. F. Puigg. n. 181. — Peridiis gregariis, 1129 globoso-obovatis, parvulis, levibus, testaceo-roseis, pruinulosis, inferne pallescentibus plicatulis; gleba cinerescenti-olivascente, subcelluloso-squamulosa elastica peridio adnata; sporis globosis, spinulosis, ecaudatis, chlorinis, 4-5 μ . diam.

Hab. ad truncos dejectos putrescentes in silvis prope Apiahy Brasiliae. — Peridium 10-15 mm. diam. Specimina nonnulla in basi a larva cujusdam comesa excavataque; an huc *Coilomyces* B. et C.?

3. **Bovista anomala** Cooke et Masee Grev. XVIII, p. 6. — Subglo- 1130 bosa, antice posticeque depressa; cortice tenui, fragili, ad basim plus minus regulariter subcupulatum persistenti, albido; peridio crasso, coriaceo, subtiliter velutino, sordide ochraceo, superne ostiolo cylindrico, elevato-prominente, subsericeo, disco orbiculari depresso cincto; floccis hyalinis, nodulosis, 3-4 μ . cr.; sporis globosis, verruculosis, brevissime pedicellatis, olivaceis, 4-5 μ . diam.

Hab. ad terram, Victoria Australiae (Mrs. MARTIN). — Habitus fere *Geasteris*, 0,5-1,5 cm. diam. — **Bovista cepaeformis** (Bull.) Mass. Brit. Gastr. p. 65, f. 72. Hoc titulo nominandum est, teste Masee l. c., *Lycop. cepiforme* (Bull.), Syll. VII, 1, p. 486.

4. **Bovista yunnanensis** Pat. in Rev. Myc. 1890, pag. 134, tab. 107^{bis} 1131 f. III. — Globulosa, brunnea, in radicem $\frac{1}{2}$ cm. long. attenuata; peridio exteriori furfuraceo-squamuloso, minute squamuloso, fusco, apice copiosiore; peridio interiori albido; basi sterili nulla; gleba brunnea; capillitio abundante, filamentis elongatis, parum ramosis brunneis, cylindricis formato; sporis brunneis, levibus, subglobosis, 1-guttatis.

Hab. in silvis, Kou-toui Yunnan (DELAVAY).

5. **Bovista argillacea** Pat. Bull. Soc. Myc. 1888, p. 93. — Peridio 1132 subgloboso, tenaci, sessili, papyraceo, griseo-brunneo, intus obscuriore, glabro, ostiolo parvo, parum prominente margineque subfilamentoso pertuso, cortice albo dein griseolo, deorsum tantum membrana fragili, rugosa, plicata persistente, vestito; gleba argillacea, rufa, pondere levi; capillitio abundante, e filamentis graci-

libus, levibus, fulvis, 3 μ . diam.; sporis globulosis, echinatis, ex-
appendiculatis, fulvis, 5 μ . diam., 1-guttatis.

Hab. ad Savane d'Atures Venezuelæ (A. GAILLARD). — Fungus
1,5-3 cm. diam.

6. **Bovista pachydermica** Speg. — Syll. VII, p. 473.
7. **Bovista echinata** Hazsl. — Syll. VII, p. 473.
8. **Bovista arachnoides** Speg. — Syll. VII, p. 473.
9. **Bovista amethystina** Cooke et Masee. — Syll. VII, p. 474.
10. **Bovista olivacea** Cooke et Masee. — Syll. VII, p. 474.
11. **Bovista magellanica** Speg. — Syll. VII, p. 474.
12. **Bovista antarctica** Speg. — Syll. VII, p. 475.
13. **Bovista cinerea** Ellis. — Syll. VII, p. 475.
14. **Bovista ovalispora** C. et Masee. — Syll. VII, p. 475.
15. **Bovista hyalothrix** C. et Masee. — Syll. VII, p. 476.
16. **Bovista debreceniensis** (Hazsl.) De-Toni. — Syll. VII, p. 476.

LYCOPERDON Tourn. — Syll. VII, p. 106 *).

1. **Lycoperdon bovistoides** Sacc. in Bull. Soc. myc. V, p. 118, t. XIV, 1133
fig. 5. — Peridio subsessili, basi lata adnato, e globoso rotundato
depresso, membranaceo, lutescente, parte basilari sterili, distincta,
flavida, compactiuscula; sporis sphaericis laxè verrucosis 5-7 μ .
diam. ochraceo-fuligineis; floccis subhyalinis, 4 μ . crass., eximie
contortis, sæpe breve furcatis.

Hab. ad terram sub Callitribus, Murray Bridge Australiæ. —
Affine *L. Vittadini*, a quo differt parte basilari satis distincta,
sporis majoribus.

2. **Lycoperdon silvaticum** Wettst. Vorarb. Steierm. 1, p. 49. — Ob- 1134
conicum v. late clavato-ovoideum, ochraceum, basim versus palli-
dius, mycelio molli albo insidens; peridio exteriori mox dehiscenti
in verruculas minimas numerosissimas dissoluto, interiore ochra-
ceo, nitente, ad basim plicato, verruculis minimis exterius obsito,
lobis cincto dehiscente; gleba sporigera e basi sterili in columel-
lam longam elongatam linea distincta separata; capillitio ochraceo-
fusco; ramis simplicibus vel irregulariter divisus, tenuibus irregu-
lariter verrucosis; sporis pallide fuscis vel olivaceis, globosis circ.
3-5 diam., valde aculeatis.

Hab. in silvis acerosis, Thanneben pr. Peggan Stiria.

*) Cfr. in Additamentis vol. VII, pag. 476-488, hujus generis specierum
omnium novam recensionem, sporarum characteres etc.

3. **Lycoperdon piriforme** Schaeff. — Syll. VII, p. 117. — Var. **globulosum** Karst. Finlands Basidsv. pag. 15. — Peridiis globulosis, exumbonatis, superne areolatim sulcatis, rufescentibus, cortice adnato aculeisque verruciformibus obsesso, 3 cm. circ. diam. 1135

Hab. in terra arenosa in horto mustialensi.

4. **Lycoperdon simulatum** Peck in Trelease Mor. a. Puff-balls Mad. p. 117. — Depresso-globosum, intus roseum, basi radicans, apice subumbonatum, 2-4 cm. diam.; peridio fusco-carneo, tenui, glabro, rimuloso, anastomosanti-sulcato; sporis purpureis, rugoso-verrucosis, 5-6,5 μ . diam. 1136

Hab. ad terram in pascuis silvaticis, Madison, River Falls Ohio et New York. Amer. bor. — *L. constellato* affine.

5. **Lycoperdon caudatum** Schroet. Pilze I, p. 698. — Peridio 4-5 cm. long. et lat., supra rotundato, subtus 2-3 cm. lat., stipitiformi-contracto, cortice externo supra in aculeos fasciculatos, crispas, 2-3 mm. long. divisio, subtus minute aculeolato, flavido-ochraceo; capillitio fibris longis, parce ramosis, luteis vel olivaceis; sporis capillitio concoloribus, globosis vel late ovoideis, 4,5-5 μ . long., pedicello concolore, 9-30 μ . long. suffultis, exosporio levi, flavo-brunneo. 1137

Hab. in silvis, Zwicker et Fürstenstein Silesiæ.

6. **Lycoperdon brasiliense** Speg. F. Puigg. n. 182. — Peridiis turbinatis sordide tabacino-subpurpurascensibus, superne obtuse rotundatis, dense minuteque puberulis levibus glabris sessilibus, flaccidissimis; gleba lutescenti-vel fulvescenti-tabacina gossypina, cum basi sterili fusco-subcarnea grosse cellulosa continua; sporis globosis ecaudatis flavis, 4 μ . diam. 1138

Hab. ad terram sabulosam in pratis pr. Apiahy Brasiliæ. — Peridium 25-30 mm. alt., 30-50 mm. diam., colore *cupri nitidi*.

7. **Lycoperdon pseudopiriforme** Speg. F. Puigg. n. 183. — Peridio clavato-piriformi superne rotundato, irregulariter dehiscente, cinereo pruinuloso v. glabrato; areolis argenteo-cinereis, 0,5 mm. latis; basi sterili magna olivascente, grosse cellulosa, a gleba plane discreta; capillitio molliusculo plumbeo; sporis globosis papillosis chlorinis, 4 μ . diam. 1139

Hab. ad terram humosam inter gramina in pratis prope Apiahy Brasiliæ. — Peridium 30 mm. alt., 14-16 mm. diam. Species pulchella habitu externo cum *L. piriformi* perfecte conveniens, sed gleba a basi sterili discreta ad *L. hiemale* accedens.

8. **Lycoperdon roseum** Zoll. in Flora 1847, p. 301. — Peridio ses- 1140

sili, subcompresso-globoso, membranaceo, granulibus æqualibus minutis tecto, roseo; capillitio compacto contiguo, peridio concolori.

Hab. in fissuris ligni putridi prov. Melang Javæ orient. — Peridia subconnato-gregaria, 3-5 in seriem irregularem connexa, 4 mm. alt. et cr., 6-8 mm. lat.

9. **Lycoperdon tropicale** Speg. F. Puigg. n. 184. — Peridio obovato- 1141
turbinato majusculo fulvo-testaceo, glabro irregulariter dehiscente; gleba grumoso-gossypina fulvo-cervina cum basi sterili gossypino-constipata flavo-virescente continua; sporis globosis subcaudatis verruculosi chlorinis, 4 μ . diam.

Hab. ad terram humosam inter muscos in silvis prope Apiahy Brasilæ. — Peridium 60-70 mm. alt., 30-46 mm. diam. Species pulchella colore basis sterilis præcipue mox dignoscenda.

10. **Lycoperdon missouriense** Trel. Bot. Centr. 1889, I, p. 271. —
Teste Cooke Grevillea vol. XVII, p. 58, est sine dubio idem ac *L.*
lilacinum (B. et M.) Speg., Syll. VII, p. 126.
11. **Lycoperdon violascens** Cooke et M. — Syll. VII, p. 477.
12. **Lycoperdon rima-spinosum** Cragin. — Syll. VII, p. 478.
13. **Lycoperdon sigillatum** Cragin. — Syll. VII, p. 478.
14. **Lycoperdon natalense** C. et M. — Syll. VII, p. 478.
15. **Lycoperdon elatum** Masee. — Syll. VII, p. 479.
16. **Lycoperdon Colensoi** C. et M. — Syll. VII, p. 479.
17. **Lycoperdon tabacinum** Ellis. — Syll. VII, p. 480.
18. **Lycoperdon capense** C. et M. — Syll. VII, p. 480.
19. **Lycoperdon Cookei** Masee. — Syll. VII, p. 480.
20. **Lycoperdon Sinclairii** Berk. — Syll. VII, p. 482.
21. **Lycoperdon pertusum** Sow. — Syll. VII, p. 483.
22. **Lycoperdon candidum** (Rost.) Bon. — Syll. VII, p. 483.
23. **Lycoperdon lætum** Berk. — Syll. VII, p. 483.
24. **Lycoperdon velutinum** B. et Curt. — Syll. VII, p. 483.
25. **Lycoperdon Vittadini** Masee. — Syll. VII, p. 483.
26. **Lycoperdon substellatum** B. et Curt. — Syll. VII, p. 485.
27. **Lycoperdon grumosum** B. et Curt. — Syll. VII, p. 485.
28. **Lycoperdon flavum** Masee. — Syll. VII, p. 486.
29. **Lycoperdon cubense** Berk. — Syll. VII, p. 486.
30. **Lycoperdon tephrum** Berk. — Syll. VII, p. 486.
31. **Lycoperdon albinum** Cooke. — Syll. VII, p. 487.
32. **Lycoperdon rubro-flavum** Cragin. — Syll. VII, p. 487.

HIPPOPERDON Mont. — Syll. VII, p. 132.

1. **Hippoperdon pisiforme** (Kalchbr.) Bres. Bull. Soc. Myc. 1890, p. 48, *Polyporus* Kalchbr. — Syll. VI, p. 74. — Gleba luride flava, cellulosa, cellulis polygonali-labyrinthiformibus, vacuis; sporis globosis laxe echinulatis, luteolis, 4 μ . diam. Cl. Kalchbrenner ætate jam provectus, verruculas pro poris habuit.

SCLERODERMA Pers. — Syll. VII, p. 134.

1. **Scleroderma aureum** Masee Grevill. Vol. XVIII, p. 26. — Peri. 1142
dio globoso, crasso, levi vel minute verruculoso, flavido-olivaceo, intus læte flavo, subtus basi brevissima stipitiformi; mycelio læte flavo insidente, attenuato; capillitio flavido-olivaceo, denso, elastico; sporis umbrinis, olivaceo-tinctis, globosis, levibus, 5 μ . diam.

Hab. ad terram in Nova-Guinea.

2. **Scleroderma australe** Masee Grevillea Vol. XVIII, pag. 26. — 1143
Subglobosum, sessile, subtus subplicatum; peridio crasso, superficie subæquali, extus minute furfuraceo vel pannoso, sordide ochraceo, basi radicante, fibrosa, abrupta; gleba purpureo-brunnea, indistincte locellata; sporis globosis, parce minuteque verruculosis, 6-7 μ . diam.

Hab. ad terram, Endeavour River, Queensland Australiæ.

3. **Scleroderma venosum** Boud. Quelq. esp. p. 309, t. 4, f. 4. — Exo. 1144
peridio tenui, senio in areolas plus minus latas, valde irregulares, tandem secedentibus; endoperidio crasso, flavo-fuligineo vel flavo-olivascenscente, levi, subtus non verrucoso, venis 6-10 erectis, applanatis, apice evanescentibus, semel vel bis ramosis percurso; massa sporigera plus minus saturate nigro purpurascenscente, venis albis, dein flavis instructa; sporis violaceo-nigricantibus, rotundatis, verrucosis, 1-nucleatis, 8-10 μ . diam.

Hab. in quercetis in Silva Blois Galliæ. — Fungus 4-7 cm. v. ultra diam.

4. **Scleroderma Dugesii** de Seynes Bull. Soc. Bot. Fr. 1886, pag. 78 1145
(*Mycenastrum*). — Peridio initio piriformi, dein irregulariter lobis sex fassis, extrorsum recurvis dehiscente, 7-8 cm. diam., subereo, tenui, demum 1 mm. cr., saturate brunneo, squamis tenuibus, stellatis, obscuris, areolis pallidioribus, fulvo-flavidis cinctis; facie interiore fulvo-flavida; capillitio brunneo-flavo, e filamentis longis, ramosis, levibus, æqualiter crassis formato; sporis minutis, pallide brunneo-flavidis, levibus, basi breviter productis.

Hab. in Mexico.

5. **Scleroderma umbrinum** Cooke et Masee Grev. XIX, pag. 45. — 1146

Stipitatum; peridio globoso, 2,5-3 cm. diam., infra grosse rugoso (in sicco), superne tenui, fragili et perfecte glabro, irregulariter dehiscente, sordide pallido-ochraceo, infra obscuriore; stipite æquali, 2,5 cm. long., 0,5 cm. cr., grosse et inæqualiter striato (in sicco), atro-brunneo, deorsum in massam bulbosam mycelicam abeunte; gleba atro-umbrina; sporis globosis echinulatis, brunneis, 10 μ . diam.; dissepimentis maturitate fere obsoletis.

Hab. ad terram, Queensland Australiæ.

6. **Scleroderma Corium** (Guern.) Grav. — Syll. VII, p. 142. — Var. 1147
Kara-Kumianum Sorok. Rev. Myc. 1890, n. 46, p. 49, f. 354, 371, 372. — Exoperidio in lamellas tenues dilabente; endoperidio levi, stellatim dehiscente; mycelii vestigiis nullis; massa sporifera fere nigra; capillitii filamentis compressis, crassis, subramosis, acute et longe dentatis; sporis saturate brunneis, spinulosis.

Hab. gregarium in sabulosis ad Kara-Kum Asiæ Centr.

7. **Scleroderma flavo-crocatum** Sacc. et De-Toni — Syll. VII, p. 489.
 8. **Scleroderma bovistoides** C. et M. — Syll. VII, p. 489.
 9. **Scleroderma olivaceum** C. et M. — Syll. VII, p. 489.

XYLOPODIUM Mont. — Syll. VII, p. 143.

1. **Xylopodium ochroleucum** Cooke et Mass. Grev. XV, p. 95. — Sti- 1148
 pitatum; peridio globoso, verrucoso; verrucis magnis, pyramidatis, persistentibus; stipite erecto, firmo, crasso, indurato, solido, æquali, imbricato-squamoso; sporis capillitioque ochroleuco; filamentis subsimplicibus, tenuibus; sporis globosis, levibus, 8. μ . diam. cum corpusculis sporiformibus, allantoideis, hyalinis, 15-20 \simeq 4-5 immixtis.

Hab. ad terram pr. Darling River Australiæ (BENNETT). — Peridium 5 cm. diam.; stipes 7 cm. long., 2 cm. cr.

2. **Xylopodium Aitchisonii** Cooke et Masee. — Syll. VII, p. 489.

PHELLORINA Berk. — Syll. VII, p. 145.

1. **Phellorina californica** Peck 43 Rep. p. 35. — Peridio subobconi- 1149
 co, tenui vel leniter rimoso-areolato, 2-2,5 cm. alt., apice 2,5-4 cm. lat., albido dein rubiginoso-ochraceo, vertice convexo; stipite subæquali, solido sed intus molliore, albido-corticato, peridio continuo et concolori, 6-7,5 cm. long., 8-10 mm. cr.; capillitio sparso; sporis globosis, ochraceo-ferrugineis, 6-7,5 μ . diam.

Hab. in deserto Mohave Californiæ.

Areolaria? venosa (Boud.) De-Toni. — Syll. VII, p. 489.

Polysaccum confusum Cooke. — Syll. VII, p. 490.

Polysaccum microcarpum C. et M. — Syll. VII, p. 490.

Fam. 4. Hymenogastraceæ VITT.

OCTAVIANIA Vitt. — Syll. VII, p. 158.

1. **Octaviana alveolata** Cooke et Mass. Grev. XVI, p. 2. — Subglo- 1150
bosa vel irregularis, albida, dein subochracea, basi sterili obsoleta,
intus pallidiori, lacunosa; sporis globosis, alveolatis 10 μ . diam.
pallide fuscis.

Hab. sub terra Cudgegong River Australiæ (HAMILTON). — Pe-
ridium 1-2,5 cm. cr.

2. **Octaviana lutea** Hesse. — Syll. VII, p. 491.

3. **Octaviana galatheja** (Quél.) De-Toni. — Syll. VII, p. 491.

RHIZOPOGON Fr. — Syll. VII, p. 161.

1. **Rhizopogon virescens** Karst. Finl. Basidsv. p. 18 (nec *R. vires* 1151
A. et S.). — Peridiis lobato-diformibus, vulgo oblongato-sphæroi-
deis, basi fibrillis radicanibus, laxis obsessis, primitus albidis, dein
sordide spadiceis, intus viridi-cinereis; sporis fusoideo-oblon-
gis, luteolo-hyalinis vel hyalinis, guttulis 2 demum evanescentibus,
levibus, 10-17 \approx 5-6.

Hab. in pineto ad latera viarum arenosa prope Mustiala. —
Peridia 1-2 cm. diam.

2. **Rhizopogon lapponicus** Karst. Finlands Basidsv. p. 19. — Peridiis 1152
rotundatis, reniformibus, ovoideis, irregularibus, basi fibrillis pau-
cis, laxis obsessis, primitus extus intusque albis, dein sordide brun-
nescentibus; sporis ellipsoideis, dilute luteolis vel subhyalinis, 2-
guttulatis, levibus, 6-7 \approx 3-4.

Hab. locis silvaticis in terra humosa ad Kajäscha guba pagum
Laponiæ Rossicæ infimæ. — Peridia 2-3 mm. diam.

HYDNANGIUM Wallr. — Syll. VII, p. 175.

1. **Hydnangium monosporum** Boud. et Pat. Tab. anal. n. 692 et Journ. 1153
Bot. 1888, pag. 445. — Peridio subglobuloso vel ovali piriformi,
papilloso-tomentoso, sæpe apice depresso, ferrugineo; gleba firma,
alba dein flavescens, cavitatibus minimis flexuosis, hymenio ve-
stitis excavata; basidiis claviformibus, 30-40 \approx 12 sterigmate uni-
co; sporis globulosis, tenuiter echinulatis, 1-guttatis, diu incolori-

bus, dein ochraceis, 15-16 μ . diam.; odore acuto; fungo simplici vel cæspitoso, 3-4 cm. lat.

Hab. semihypogæum in terra argillosa, Nice.

Hymenogaster flavidus Bon. — Syll. VII, p. 491.

Hysterangium rubricatum Hesse. — Syll. VII, p. 491.

PHLYCTOSPORA Corda. — Syll. VII, p. 179.

1. **Phlyctospora Magni-Ducis** Sorok. Cfr. Sorok. in Rev. Myc. 1890, p. 13, t. XXIII, f. 318-338. — **Phl. fusca** Corda. Cfr. G. Beck in Ber. Deutsch. bot. Gesell. 1889, p. 212, cum icon. (sporæ cum tegumento 14-17 μ . diam., nudatæ 9-12 μ .). Genus et species l. c. docte illustrantur et ad Hymenogastreas pertinentia demonstrantur.

LEUCOGASTER Hesse in Pringsh. Jahrb. XIII, 2, p. 189-194, B. S. B. Fr. (1883), p. [102]. — Gleba pluricellulosa; cellulæ, ob basidia dein labentia, pulpa gelatinosa farcta; sporæ in apice basidii sæpius ternæ; endosporio ab exosporio dein remoto, gelatina hyalina demum cincto. — Genus ab omnibus Hymenogastraceis ob sporarum structuram mox distinctum.

1. **Leucogaster floccosus** Hesse in Bot. Centralbl. 1889, IV, pag. 1, 1154 t. I-II. — Peridio tenuissimo, floccoso, tunica 0,2-0,5 mm. crassa, initio alba, demum citrina, subinde albo maculata; gleba a peridio non separabili, æque citrina, loculis plerumque polygoniis magnitudine variis; basidiis filiformibus flexuosis summo apice clavato-capitatis; sporis globosis vel subovoideis, vel subreniformibus, 2-3 sessilibus, 12 μ . diam., strato gelatinoso intus crenulato obvolutis.

Hab. in silvis, Marburg Germaniæ. — Odor alliaceus.

2. **Leucogaster liosporus** Hesse in Pringsh. Jahrb. XIII, 2, p. 189. — 1155 Differt a *L. floccoso* peridio robustiore non floccoso, subporoso; sporis magis regularibus et odore alliaceo nullo.

Hab. in silvis, Marburg in Germania.

HYPODERMEÆ de Bary. — Syll. VII, 2, p. 449.

Fam. 1. **Ustilagineæ** TUL.

USTILAGO Pers. — Syll. VII, 2, p. 451.

1. **Ustilago Trabutiana** Sacc. in litt. ad Trab. — Soris fuligineo-¹¹⁵⁶
nigricantibus, inter semen et pericarpium effusis, pulvereis; sporis globosis vel subglobosis, 3,5-4 μ . diam. levibus, fuligineis, initio in glomerulos laxè connexis, mox liberis.
Hab. intra baccas *Dracænæ Draconis* in Algeria (TRABUT). — Mycelium abundans, ramosum, apicibus sæpe botryoideo-dilatatis sporigeris. Sporæ germinando promycelium filiforme subsimplex gerunt, sporidiolis pleurogenis, oblongis. Affinis *U. Phœnicis* et *U. Ficum*, a quibus colore numquam violaceo recedit.
2. **Ustilago Pinguiculæ** Rostr. Ustil. Dan. pag. 30. — Soris pallide¹¹⁵⁷
rufo-violaceis; sporis subhyalinis, tenuiter reticulatis, globosis, 5-6 μ . diam. v. ovoideis, 7-8 = 6.
Hab. in antheris *Pinguiculæ vulgaris* in Dania (WARMING).
3. **Ustilago Oxalidis** Ell. et Tracy Journ. Myc. 1890, p. 77. — Spor-¹¹⁵⁸
rarum massa interiorem ovarii partem omnino replente; sporis globosis, 10-12 μ . diam., rubido-brunneis, episporio crassiusculo, acute echinulato.
Hab. in ovariis *Oxalidis strictæ*, Starkville, Missouri Americæ borealis.
4. **Ustilago Treubii** Solms Ann. Jard. Buitenz. 1886, p. 79 cum tab.¹¹⁵⁹
et in Bot. Jahresb. 1886, pag. 467. — Sporis intra gallas dense stratosis, violaceis, germinando promycelium sporidiola nonnulla gignens emittentibus.
Hab. in gallis peculiaribus, ex ipso fungo generatis ad petiolos *Polygoni sinensis* pr. Buitenzorg Javæ.
5. **Ustilago sclerotiformis** Cooke et Mass. Grev. XVII, p. 8. — Ni-¹¹⁶⁰
gra, compacta, obovata, majuscula, 2 mm. diam., numquam pulverulenta; sporis subglobosis, atro-umbrinis, 16-18 μ . diam., episporio granuloso.
Hab. in *Unciniæ cæspitosæ* ovariis, quæ exhaurit, Taheraite Novæ Zelandiæ (KIRK). — Accedit ad *U. marmoratam*, cujus specimen typicum, observante Cookeo, sporas præbet distincte verrucosas nec leves, ut habet F. de Waldheim.

6. **Ustilago Avenæ** (Pers.) Jens. Charb. Cereal. 1889, p. 4, Rostr. Ust. 1161
 Daniæ p. 25, Kell. et Sw. II Rep. Agr. Kans. p. 214, 216, t. IV, V, *U. segetum* Auct. p. p. (in *Avena*). — Massa sporarum laxiuscula, atro-brunnea; sporis globosis vel breve ovoideis, 6-8 μ . diam. vel 7-9 \simeq 6-7, tenuiter verruculoso-punctatis, germinando promycelium articulatam, ad articulos sporidiola oblonga mox gignens efficientibus.
- Hab.* in ovariis *Avenæ* sativæ, orientalis, fatuæ, strigosæ in Europa, Amer. bor. — Var. **levis** Kell. et Swingle l. c. p. 25, t. V, f. 56-60: sporis omnino levibus, paullo obscurioribus. Cum specie sed rarior in Amer. bor.
7. **Ustilago perennans** Rostr. Ust. Dan. p. 25. — Mycelio in rhyzomate nutricis perennante; sporis globosis, levibus vel vix asperulis; promycelio ad septa constricto ibique sporidiola gerente; sporidiolis dein utrinque gemmantibus; cetera *Ust. Avenæ*. 1162
- Hab.* in inflorescentia *Avenæ* elatioris in Dania.
8. **Ustilago Tritici** (Pers.) Jens. in Kell. et Sw. II Rep. Agr. Kans. 1163
 p. 262 et 214, t. II et VI, *Ur. segetum* b. *Ur. Tritici* Pers. Syn. p. 224, *Ust. Hordei* Bref. p. p., *Ust. segetum* Auct. p. p. — Massa sporarum atro-brunneo-olivacea, laxa; sporis ovoideis, ellipsoideis v. subglobosis, 5,5-7,5 \simeq 5-6, minutissime verruculosis, subolivaceis, germinando promycelium ramosum, septatum emittentibus; sporidiolis hucusque non visis.
- Hab.* in ovariis *Tritici* sativi in Europa et Amer. bor.
9. **Ustilago nuda** (Jens.) Kell. et Swingle II, Rep. Agr. Kans. p. 215 1164
 et 277, t. II, f. 7-17, *Ust. segetum* Auct. p. p., *Ust. nuda Hordei* Jens. in litt. — Massa sporarum brunneo-olivacea, laxa mox libera; sporis ovoideis, ellipsoideis vel subglobosis, 5-7 \simeq 5-6,5, subolivaceis, germinando promycelium parce ramosum, apicibus sæpe inflatum gignentibus; sporidiolis hucusque non visis.
- Hab.* in ovariis *Hordei* vulgaris in Europa Amer. bor., Japonia. — *Ust. Osmundæ* Peck. — Syll. VII, 2, p. 468, teste ipso auctore (42 Rep. p. 31), est potius forma *Uredinis* aberrans.
10. **Ustilago Hordei** (Pers.) Kell. et Sw. II, Rep. Agr. Kans. p. 215 1165
 et 268, tab. II, f. 2-6, *Uredo segetum* a. *U. Hordei* Pers. Syn. p. 224, *Ustilago Jensenii* Rostr. Ustil. Dan. p. 24, *Ust. segetum* v. *Hordei* f. *tecta* Jens., *Ust. Hordei* v. *tecta* Jens., *Ust. segetum* Auct. p. p. — Massa sporarum nigra, compactiuscula, intra ovaria inclusa; sporis globosis, obtuse angulatis, 6,5-7,5 μ . diam., le-

vibus, brunneo-atris, germinando promycelium 3-4 articulatum ad articulos sporidiola gerens gignentibus.

Hab. intra ovaria Hordei distichi in Europa et Amer. bor.

11. **Ustilago montaniensis** E. et E. Journ. Myc. 1890, pag. 119. — 1166

Massa sporarum atro-brunnea, subnigricante; sporis subglobosis, 10-14 μ . diam. vel ovato-oblongis, 12-16 \simeq 10-12, episporio subtuberculoso-reticulato, pallide brunneo.

Hab. in inflorescentia Mühlenbergiæ glomeratæ quæ abortiva manet intra vaginas, Sand Coulee, Mont. Amer. bor. (ANDERSON).

12. **Ustilago diplospora** E. et E. Journ. Myc. 1890, p. 119. — Massa 1167

sporarum atro-brunnea; sporis dimorphis, minoribus globosis, rugosis, brunneis, 7-8 μ . diam., majoribus 12-15 μ . diam., globosis, levibus, pallidioribus fere hyalinis.

Hab. in ovariis Panici sanguinalis, Holly Springs Miss. Amer. bor. (TRACY).

13. **Ustilago Brunkii** Ell. et Gall. Journ. Myc. 1890, p. 31. — Vagi- 1168

nis inclusa, absque membrana obtegente; sporis partim adglutinatiss, non pulveraceis, globosis vel ovoideis, 16-18 μ . diam., sæpe apiculatis, olivaceo-brunneis demum subopacis, episporio levi, 3-4 μ . crass.

Hab. in vaginis Andropogonis argentei inflorescentiam destruens, College Station, Brazos County Tex. Amer. bor. (H. S. JENNINGS).

14. **Ustilago Buchloës** Ell. et Tracy Journ. Myc. 1890, pag. 77. — 1169

Soris amphigenis, cylindraceutis, plerumque circ. 1 cm. long., 2 mm. cr., membrana tenui et grisea tectis; sporis nigris, subglobosis, minutissime echinulato-asperatis, 12-15 μ . diam.

Hab. ad folia Buchloës dactyloidis, Cooledge, New Mexico Amer. bor.

15. **Ustilago Andropogonis** Kell. et Sw. Journ. Myc. 1889, pag. 12, 1170

t. I, f. 11-25. — Soris nigerrimis; sporis atro-brunneis vel nigris, subglobosis vel subovoideis, interdum oblongo-ellipsoideis vel ovoideis, subangulosis, 12-19 \simeq 9,5-16, membrana $\frac{3}{4}$ -2 μ . cr., minutissime et dense echinulatis, contextu granuloso vel homogeneo.

Hab. in ovariis Andropogonis provincialis et A. Hallii, Kansans, Seward County et Harper County Amer. bor.

16. **Ustilago Boutelouæ** Kell. et Sw. Journ. Myc. 1889, p. 13, t. I, 1171

f. 26-40. — Soris brunneolis; sporis atro-brunneis v. subinde dilute brunneis, e subgloboso ellipsoideis, regularibus vel interdum

subangularibus, 8-12 \approx 6-10, membrana circ. 0,5 μ . cr., irregulariter et parce tuberculato-aculeatis, aculeis 1,5-3 μ . long., contextu homogeneo vel sæpe magne 1-nucleato; tubo promycelico simplici v. raro ramoso, hyalino, 2-4-septato, 25-50 \approx 2-4; sporidiolis cylindræis, utrinque subacutis, hyalinis, 9-13 \approx 2-2,5.

Hab. in ovariis *Boutelouæ oligostachyæ*, Manhattan, Kansas Amer. bor.

17. **Ustilago axicola** Berk. F. S. Domingo n. 55, nec *Cintractia axi-* 1172
cola Cornu. — Syll. VII, 2, p. 481 ex p. — Pilulæformis, axim spicarum deformans; sporis subglobosis majusculis, 13-14 μ . diam., subpellucidis, levibus, nucleatis, immixtis filamentis hyalinis.

Hab. in parte inferiore axis spicularum speciei *Scirpoideæ* cujusdam in S. Domingo et Australia. — Globulos minutos pulveraceos ad basim inflorescentiæ format. Observante cl. Cooke Grev. XIX, p. 53, species domingensis et australiana est vere *Ustilago*, dum species boreali-america est *Cintractia*.

CINTRACTIA Cornu. — Syll. VII, 2, p. 480.

1. **Cintractia Avenæ** Ell. et Tracy Journ. Myc. 1890, p. 77. — Ova- 1173
ria in massas compactas, nigras, e sporis formatas, mutans; sporis subglobosis, 5-6 μ . diam., primo hyalinis, dein brunneis, episporio levi, sat tenui.

Hab. in ovariis *Avenæ elatioris*, Starkville, Missouri Americæ borealis.

2. **Cintractia cryptica** Cooke et Mass. Grev. XVIII, p. 34. — Intra 1174
ovaria latitans, minuta, inconspicua; sporis aggregatis, ovato-globosis, 30-40 μ .; sporis singulis, compresso-globosis, ad apicem minute verruculosis, brunneis, 12-14 μ . diam.

Hab. in *Pollinia argentea*, Munepore Indiæ (G. B. CLARKE).

3. **Cintractia pulverulenta** Cooke et Mass. Grev. XVIII, pag. 34. — 1175
Ovaria implens, tumefaciens, massam atram, duram, demum pulveraceam efficiens; glomerulis subrotundis vel ovoideis, 40-50 μ .; sporis circa 40, coacervatis, globosis, subtiliter verruculosis, 8-10 μ ., fuscis.

Hab. in *Eriantho*, Nungklo, Khasia Indiæ (C. Baron CLARKE).

4. **Cintractia patagonica** Cooke et Mass. Grev. XVIII, p. 34. — In- 1176
tra ovaria matura orta; sporis in globulos adglutinatis, demum secedentibus, globosis, verruculosis, læte fuscis, 7-9 plerumque 10 μ . diam.

Hab. in Bromo unioloide, Bahia Blanca, N. Patagonia (G. CLARAZ).

TILLETIA Tull. — Syll. VII, 2, p. 481.

1. **Tilletia verrucosa** Cooke et Mass. Grev. XVII, p. 16. — Ovariis 1177
inflatis, pallido-fuscis; sporis globosis, solitariis, fuscis, 15-16 μ .
diam., episporio verrucoso, verrucis obtusis.

Hab. in ovariis Panici miliaris, Lupata inter et Tette Africae austr. (KIRK).

2. **Tilletia buchloëana** Kell. et Sw. Journ. Myc. 1889, pag. 11, t. I, 1178
f. 1-11. — Soris sordide brunneis; sporis fuscis vel fusco-brunneolis, sphaericis vel levissime ovoideis, 16,5-21 μ . (absque strato hyalino) diam., exosporio fusco, sparse et regulariter aculeato vel subreticulato, 1,5-2 μ . cr., strato hyalino 1,5-4 μ ., omnino cincto, endosporio dilutius colorato, $\frac{3}{4}$ -1 μ . cr.; contentu granuloso, guttula saepius sphaerica, 7-10 μ . diam., praedito.

Hab. in ovariis Buchloës dactyloidis, Kansas Amer. bor.

3. **Tilletia Oryzæ** Pat. Bull. Soc. Myc. 1887, p. 124, t. X, fig. 2. — 1179
Sclerotiformis, dura, atro-virens; sporis globosis v. ovoideis, 3-5 μ . diam., brunneo-olivaceis, verrucosis, filamentis gracilibus, hyalinis, margine irregularibus.

Hab. ad caryopsides Oryzæ sativæ, pr. Yokoska in regione Japonica Asiæ.

4. **Tilletia? Sphagni** Kawaschin Bot. Centralbl. 1890, III, p. 290. — 1180
Massa pulverea, brunnea Sphagnorum sporangia implente et, operculo secedente, erumpente; sporis sphaericis, 11-12 μ . diam., laete brunneis, polygonali-reticulatis.

Hab. in capsulis Sphagnorum in Rossia alibique. — Sporæ hujus *Tilletiæ* hucusque pro microsporibus Sphagnorum perperam habitæ sunt.

ENTYLOMA de Bary. — Syll. VII, 2, p. 487.

1. **Entyloma hydrophilum** Sacc. et Paol. Mycet. Sibir. p. 9, f. 4. — 1181
Acervulis amphigenis, suborbicularibus, utrinque prominulis, nigricantibus, in maculis flaveolis indefinitis foliorum innatis, nunquam erumpentibus; sporis in quaque cellula matricis pluribus dense stipatis, subglobosis vel angulosis, 24 μ . diam., episporio crasso brunneo, nucleo sphaerico, 15 μ . diam., subhyalino.

Hab. ad folia Sii cicutæfolii in paludosis prope Minussinsk Sibiriae (MARTIANOFF).

2. **Entyloma Ellisii** Halst. in Bull. New Jers. n. 70, p. 10, cum icone. 1182
— Hyphis exilibus, fere imperspicuis; oosporis in glomerulos subcutaneos, præsertim sub stomate nidulantes, congestis, sphaericis crasse tunicatis; conidiis (*Cylindrosporii*) bacillaribus, hyalinis, in acervulos supra oosporas sitos congestis et per ostiolum stomatis exsurgentibus.

Hab. in foliis Spinaciæ oleraceæ, quæ uniformiter decolorantur, New Jersey Amer. bor. — Dimensiones nullæ exhibentur.

3. **Entyloma Ossifragi** Rostr. Ustil. Dan. p. 19. — Maculis griseis, 1183
sæpe subrectangularibus, ad 4 mm. diam.; sporis subglobosis, 9- μ . diam., membrana brunnea.

Hab. in foliis Narthecii ossifragi in Dania.

4. **Entyloma caricinum** Rostr. Fung. Groenl. p. 532. — Soris oblongatis, gregariis, atris, 1-2 mm. diam.; sporis arctissime coalescentibus, difformibus, angulatis, levibus, atro-fuscis, 15-22 μ . diam., episporio atro-fusco. 1184

Hab. ad folia Caricis rigidæ, Groënlandia. — *Protomyces Fergussonii* B. et Br., Syll. VII, 1, p. 320, teste Trail, idem est ac *Entyloma canescens* Schröt., quod tunc *E. Fergussonii* nuncupandum.

5. **Entyloma catenulatum** Rostr. Ustil. Dan. p. 19. — Maculis griseis 1185
oblongis, 1 mm. longis; sporis ellipsoideis, 6-7 \approx 5, rarius globulosis, atro-brunneis, sæpe in catenulas connexis.

Hab. in foliis Airæ cæspitosæ in Dania. — Sporis minutis ab *E. crastophilo* differt.

RHAMPHOSPORA Cuning. Bot. Centr. 1889, I, p. 135 (Etym. *rhamphos* rostrum et *spora*). — Sporæ solitariae, subterminales, appendiculato-rostratae. Promycelium constans ex hypha elongata, sursum subverticillato-ramosa, ramulis septatis, sporidiola acrogena gerentibus.

1. **Rhamphospora Nymphææ** Cunn. l. c. — Characteres generis; appendicula sporarum, initio cava dein solida et in episporium abiens. 1186

Hab. in foliis Nymphææ stellatæ, N. Loti, N. rubræ in Indiæ. — Ab *Entylomate* notis datis diversissima.

ENTORRHIZA C. Web. — Syll. VII, 2, p. 497.

1. **Entorrhiza digitata** Lagerh. in Hedw. 1888, fasc. 9-10, *Schinzia* 1187
digitata (Lag.) Magn. Erst. Verz. Graub. Pilze pag. 7. — Sporis

globosis, 18-30 (plerumque 20) μ . diam., episporio verrucis æqualibus vel subæqualibus ornatis.

Hab. in radicibus Junci articulati, gallas efformans, ad Tissee Germaniæ et in Val Roseg, ad Pontresina Helvetiæ.

SCHIZONELLA Schröt. — Syll. VII, 2, p. 500.

1. **Schizonella subtrifida** E. et E. Journ. Myc. 1890, p. 119. — Spor¹¹⁸⁸is violaceis v. purpureo-brunneis, subglobosis v. ellipsoideis, mox 1-septatis, demum in duos articulos hemisphæricos secedentibus, episporio valide tuberculato-rugoso, 12-20 \approx 12-16.

Hab. in capitulis Cirsii ochrocentri, quæ sterilesunt, Wet Mount. Valley, Colo. Amer. bor. (DEMETRIO). — Sporæ rarius *Triphragmii* instar triloculares.

SCHROETERIA Wint. — Syll. VII, 2, p. 500.

1. **Schroeteria annulata** E. et E. Journ. Myc. 1890, p. 117. — Massa¹¹⁸⁹ sporarum brunneo-atra, pulverulenta; sporis binis v. subinde ternis, basi contigua applanatis, initio hyalinis, 12-15 μ . diam., demum brunneis et in sporas binas, 7-10 μ . diam., secedentibus, episporio sublevi.

Hab. in ovariis Andropogonis annulati, India (in herb. TRACY).

DOASSANSIA Cornu. — Syll. VII, 2, p. 502.

1. **Doassansia Lythropsidis** Lagerh. Ustil. Ured. Welw. p. 127. —¹¹⁹⁰ Soris amphigenis, rotundato-pulvinatis, punctiformibus, parvis, gregariis, prominulis, fuscis; sporis arcte conjunctis, polygonis, incoloribus, membrana tenui, levi præditis, 12-16 μ . diam., tegumento communi cellularum polygonarum, brunnearum, levium circumdatis.

Hab. in foliis Lythropsidis peploidis in ericetis humidis inter Torre et Perum tr. Tagum Lusitaniæ (WELWITSCH).

SOROSPORIUM Rud. — Syll. VII, 2, p. 511.

1. **Sorosporium Ellisii** Wint. — Syll. VII, 2, p. 513. — Var. **provinciale** Ell. et Gall. Journ. Myc. 1890, p. 31. — Differt a typo¹¹⁹¹ glomeruli involucri supra producti; sporis magis regularibus, episporio crassiore, glomerulis majoribus, subglobosis, 35-150 μ . diam. vel oblongis, 100-200 \approx 75-80.

Hab. in inflorescentia Andropogonis provincialis, Saline

County, Mo. (DEMETRIO) et Cester County, Nebr. (WEBBER) Americæ borealis.

2. **Sorosporium Everhartii** Ell. et Gall. Journ. Myc. 1890, p. 32. — 1192

Glomerulis compactis, opacis, 50-120 μ . diam., globosis v. oblongis, e sporis 100-300 v. pluribus efformatis; sporis e subhyalino brunneis, e subgloboso oblongis, 8-10 μ . diam. v. 10-12 \approx 8-10, episporio levi, mediocriter crasso.

Hab. ad glumas *Andropogonis virginici*, Newfield, New Jersey Amer. bor.

3. **Sorosporium granulosum** Ell. et Tracy Journ. Myc. 1890, p. 77. 1193

— Inflorescentiam fatiscentem omnino involvens; glomerulis globosis vel irregularibus, 50-75 μ . diam., e 20-50 sporis formatis; sporis levibus, globosis vel ob mutuam compressionem irregularibus, 12-16 μ . diam.

Hab. ad inflorescentiam *Stipæ viridulæ*, Trinidad, Colorado Amer. bor. (TRACY).

4. **Sorosporium vivianum** Schröt. Bot. Centr. 1886, II, pag. 27. — 1194

Massa sporarum compactiuscula, anthracino-nigra; sporis in glomerulos inæqualiter globoso-oblongos, 75-170 \approx 60-120, numeroso-congestis, exterioribus paullo majoribus, 10-12 μ . diam., atro-castaneis, interioribus minoribus, ochraceis, 8-11 \approx 9.

Hab. in ovariis graminum majorum, Vivi prope Congo Africae (LEDDIN). — Ovaria in gallas corniformes vel sacciformes, sæpe curvas, 1 cm. long., mutantur. *Sor. argentino* forte affinis species.

5. **Sorosporium caledonicum** Pat. Champ. N. Caled. pag. 6. — Soris 1195

numerosis, destruentibus rotundatis vel ovoideis, valde opacis, nigris, 60-100 μ . diam.; sporis brunneis, rotundatis v. ovoideis, plus minus angulosis, 10 \approx 13, episporio levi.

Hab. in floribus *Heteropogonis contorti* in Nova Caledonia.

THECAPHORA Fingerh. — Syll. VII, 2, p. 507.

1. **Thecaphora Pimpinellæ** Juel in Bot. Centr. 1891, p. 274. — Glo. 1196

merulis sporarum majusculis; sporis seu articulis exterioribus, 20-35 μ . diam.

Hab. in fructibus *Pimpinellæ Saxifragæ*, Tanum prov. Bohuslän Sueciæ (OERTENBLAD). — Ovaria mycete invasa normalibus rotundiora et breviora. Sporæ a *Th. Convolvuli* vix diversæ.

UROCYSTIS Rab. — Syll. VII, 2, p. 515.

1. **Urocystis Junci** Lagerh. Rev. myc. 1889, p. 66. — In parte media foliorum non tumidorum parasitica; glomerulis sporarum forma rotundata vel plus minus elongata, 20-70 μ . long., plerumque applanatis, pellucidis; sporis fertilibus rotundato-angulatis, binis vel ad 15 consociatis, 14-16 μ . diam., membrana fusca præditis; sporis sterilibus numerosis, applanato-semiglobosis, dilute fuscis pellucidis, 6-10 μ . diam., 3-4 μ . crass. 1197

Hab. in foliis Junci filiformis, qui sterilescit, Berninabach pr. Pontresina Helvetiæ. — Var. **Johansonii** Lagerh. loc. cit. In foliorum Junci bufonii parte inf. tantum.

2. **Urocystis Hypoxydis** Thaxt. Rep. Connect. Agric. 1889, tab. II, f. 12-14 cum diagn. in expl. tabulæ. — In ovariis pedunculisque parasitica, atra; sporis in glomerulos inæquales globosos vel oblongos, majores 50-60 \approx 50, minores 25 μ . diam., consociatis, fertilibus sphaericis vel subpolygonis 1-10 (rarius 14-15), 13-15 μ . diam.; sterilibus periphericis, subcompressis, variis, 8-15 μ . diam. 1198

Hab. in Hypoxyde erecta, New Haven Conn. Amer. bor.

3. **Urocystis Kmetiana** Magn. in Verhandl. Brand. XXXI, p. XIX. — Ab *Urocysti Violæ*, quacum convenit forma et magnitudine sporarum, præcipue differt habitatione semper in omnibus ovariis plantæ affectæ nec in excrescentiis caulis, foliorum florumque partium. 1199

Hab. in ovariis *Violæ tricoloris* var. *arvensis* prope Schemnitz Hungariæ (A. KMET).

CEREBELLA Ces. — Syll. VII, p. 523.

1. **Cerebella Andropogonis** Ces. — Syll. VII, 2, p. 523. — Huc, teste Cooke Grev. XVIII, p. 19, spectat *Polycystis macularis* B. et Br.
2. **Cerebella Paspali** C. et M. — Syll. VII, pag. 524. — Huc, teste Cooke Grev. XVIII, p. 19, spectat *Thecaphora inquinans* B. et Br. anterior, hinc species *C. inquinans* dicenda.

APPENDIX

ELÆOMYCES Kirchn. in Bericht. Deutsch. bot. Ges. 1887, pag. CI. (Etym. *elæon* oleum et *myces*). — Cellulæ gemmiparæ medio oleoso immersæ, ovoideæ vel elongatæ, siccitate in glomerulos vulgo unistratosos congestæ, tunc paucae ex iis in sporas limoniformes, globosas v. elongatulas, membrana crassa præditas demum abeun-

tes. — Genus quoad locum omnino dubium, ab Ustilagineis tota biologia diversum.

1. **Elæomyces olei** Kirchn. loc. cit., t. XIV. — Cellulis ovoideis vel 1200 valde elongatis, gemmiparis, plerumque $1,5 \mu$. v. rarius usque ad $3,5 \mu$. diam., protoplasmate vacuolifero et granuloso repletis, in oleo sicco in glomerulos sæpius unistratosos, forma valde variabiles congestis et ex iis paucis tantum in sporas (ob copulationem seu contentus migrationem?) mutatis; sporis globosis, subelongatis vel limoniformibus, $4-8 \mu$. diam., membrana circ. $\frac{2}{3} \mu$. cr. præditis, contentu læte brunneo.

Hab. in oleo Papaveris in Germania.

Fam. 2. Uredineæ BRONGN.

UROMYCES Link. — Syll. VII, 2, p. 531.

1. **Uromyces rugulosus** Pat. Journ. Bot. 1888, p. 151. — Soris te- 1201 leutosporiferis amphigenis, parvis, nigris, epidermide elevata cinctis; teleutosporis atro-brunneis, apice papillatis, rotundatis v. ovoideis, gibboso-rugosis (nec echinatis), $22-26 \approx 16-20$; pedicello hyalino, teleutospora æquilongo.

Hab. ad folia *Lespedezæ yunnanensis*, Yun-nan Sinarum (DELAVAY).

2. **Uromyces Argophyllæ** Seym. in Proc. Bost. 1889, p. 185. — Ma- 1202 culis nullis; soris teleutosporiferis amphigenis, parvis, sparsis, inconspicuis, folii pilis obscuratis; teleutosporis e subgloboso oblongis, $22-45 \approx 17-25$, episporio tenui, apice interdum subincrassatis et papillatis; pedicello fragili.

Hab. in foliis *Psoraleæ argophyllæ*, Valley City et Bismarck Dak. Amer. bor. — *U. Psoraleæ* cui affinis, differt teleutosporis longioribus simul et angustioribus pedicellisque caducioribus.

3. **Uromyces phyllodii** Cooke et Mass. Grev. XVII, p. 70. — Maculis 1203 ellipticis, bullatis, fuscis; soris minutis, orbicularibus, congestis, compactis, brunneis, demum nudis, nec pulverulentis, maculis $3-5$ mm. long.; uredosporis nondum visis; teleutosporis ellipticis, obtusis, rarius apiculatis, fuscis, episporio minute verruculoso, crassiusculo, hyalino, ad apicem incrassatis, $40-45 \approx 16-18$.

Hab. in phyllodiis *Acaciæ*, Brisbane Australiæ (BAILEY). — Affinis *Ur. fusisporo* sed certe distinctus.

4. **Uromyces Tepperianus** Sacc. Hedw. 1889, p. 126, t. II, f. 1, Dietel 1204

Gatt. Pileol. p. 24, f. 7. — Longe lateque effusus, applanatus, sub peridermio ramulorum viventium oriens, mox corticem findens et excutiens ramosque deformans et necans, læte cinnamomeus, tandem pulvereus; teleutosporis sphæroideis depressis, longe stipitatis, cinnamomeis, 20-24 \approx 18-20, longitrorsum tenuissime, crebre canaliculato-striatis margineque (e fronte visis) crenulatis, nucleatis infra subexcavatis; stipitibus bacillaribus dense fasciculatis, 40-60 \approx 3-5, hyalinis, basi teleutosporarum hilo circulari affixis.

Hab. in ramis vivis *Acaciæ salicinæ*, quam necat, in Australia merid. (J. G. O. TEPPER). — Cum nulla specie cognita comparanda. *Uromyces deformans* Berk. (in Thuiopside) forte analogus, certe diversissimus. Teleutosporæ juniores subhyalinæ, æque tamen striatæ: uredosporæ non visæ.

5. **Uromyces Trigonellæ** Pat. Tab. anal. n. 695. — Soris uredosporiferis, amphigenis, iis teleutosporiferis commixtis; uredosporis subglobosis 20-23 μ . diam., brunneo-pallidis, 2-4 poros gerentibus, membrana levi, non verrucosa; soris teleutosporiferis sparsis vel approximatis, subepidermicis dein superficialibus; teleutosporis ovoideis vel clavatis, apice obtusis, membrana crassa, hyalinis, dein atro-brunneis, levissime asperulis, 23-26 \approx 16; pedicello hyalino, teleutospora æquilongo. 1205

Hab. ad folia *Trigonellæ Fœni-græci* in Gallia. — Species uredosporis levibus mox distincta.

6. **Uromyces Glycyrrhizæ** (Rabenh.) Magn. Ber. Deutsch. Bot. Gesell. 1206
1890, p. 383, t. XX, *Puccinia* Rabenh. in Kl. H. M. n. 1396, Syll. VII, p. 725. — Soris hypophyllis, rarius et epiphyllis, minutis, late crebre effusis; uredosporis subglobosis, brunneis, verruculosis, 23 μ . diam.; poris germinativis binis contraposis; teleutosporis minoribus, 17,5 \approx 15,3-16,9, levibus, obovoideis, papilla impressa, brevissime stipitatis, brunneis.

Hab. in foliis caulibusque tenellis et adultis *Glycyrrhizæ glabræ*, *G. hirsutæ*, *G. glanduliferæ*, *G. violacæ*, *G. lepidotæ* in Italia inf., Cyrenaica, Anatolia, Persia, America boreali.

7. **Uromyces lapponicus** Lagerh. Bot. Notis. 1890, p. 274. — Pseudoperidiis hypophyllis, plerumque totam superficiem folii inferiorem tegentibus, brevibus, urceolatis, margine recurvato, lacerato; æcidiosporis angulato-rotundatis, membrana achroa, verruculosa, contentu aureo, 16-21 μ . diam.; spermogoniis epiphyllis, in tota superficie folii sparsis; soris teleutosporiferis amphigenis atro-brunneis, epidermide primo textis, mox liberis sparsis vel confluentibus; 1207

teleutosporis subglobosis vel ovoideis, membrana fusca, glabra, apice subincrassata, pedicello fragilissimo suffultis, 24-30 \approx 21-24.

Hab. in foliis *Astragali* sp. in Suecia et Norvegia. — Status æcidiosporus sistit *Æcidium Astragali* Eriks. Exs. n. 282 seu *Æc. carneum* Lag. Paras. Skand. p. 155.

8. **Uromyces Mac-Intirianus** Barc. Descript. List Ured. Simla III, 1208 p. 79. — Pustulis minutis, subcircularibus, confluentibus, sæpius hypophyllis; teleutosporis ovoideis, basi contractis, apice rotundatis et subincrassatis, levibus, 24-33 \approx 18-26, rarius utrinque rotundatis, 2-ocularibus, 32-38 \approx 16-24, rarissime æque continuis sed multo majoribus, 34-36 \approx 22-27.

Hab. in pagina inferiore *Hemigraphidis latebrosæ*, Simla Indiæ.

9. **Uromyces Limosellæ** Ludw. in Diet. Hedw. 1888, p. 182. — *Æci-* 1209 diis amphigenis, nunc sparsis, nunc gregariis; pseudoperidiis albidis, ambitu irregularibus nec profunde incisis; æcidiosporis rotundato-angulosis, hyalinis, levibus, circ. 15 μ . diam.; soris teleutosporiferis æcidiis commixtis, sæpius confertis, epidermide diu tectis, pulvinatis, atro-brunneis; teleutosporis obovatis, oblongis vel clavatis, raro rotundatis, 32-40 \approx 18-22, membrana flavo-brunnea, crassa, levi, apice valde incrassata et plerumque dilutiore; pedicello teleutospora æquilongo vel breviora.

Hab. ad folia *Limosellæ* sp. in insul. Kangaroo Australiæ (J. G. O. TEPPER). — Ab *U. Scrophulariæ* cui affinis, differt magnitudine et colore sporarum.

10. **Uromyces Cunninghamianus** Barc. Descript. List Ured. Simla III, 1210 pag. 76. — *Æcidiosporis* rotundis vel ovoideis, flavidis, 16 μ . diam., tuberculatis, pseudoperidiis stellato-dehiscentibus inclusis; pseudoperidii cellulis unistratosis, 26 \approx 19; spermogoniis concomitantibus, 145 μ . diam., parcis; teleutosporis ovoideis, 36 \approx 20, apice incrassatis, brunneis, basi stromaticæ firmiter adhærentibus et cum pedicelli fragmento secedentibus; sporidiolis promycelii ovoideis, 12-14 \approx 8-10.

Hab. in foliis ramisque tenellis *Jasmini grandiflori*, Simla Indiæ.

11. **Uromyces Holmbergii** Speg. F. Puigg. n. 202. — *Hemiuromyces*; 1211 maculis nullis; soris amphigenis, minutis, tectis, fuliginis; teleutosporis obovatis, 35-40 \approx 26-30, apice subtruncato-rotundatis, rarius subumbonatis, crasse tunicatis fuligineo-cinnamomeis, levibus; stipite brevi fulvescente, 30-40 \approx 6-9, suffultis, aparaphysatis.

Hab. ad folia viva *Mitracarpi* speciei cujusdam in herbosis pr. Apiahy Brasiliæ. — Ab *Ur. Spermacoces* pedicello conspicue brevior differre videtur.

12. **Uromyces Diploglottidis** Cooke et Mass. Grev. XVII, p. 55. — 1212
Epiphylla; soris sparsis, convexis, minutis, diu tectis, demum rimosis, pallide fuscis, maculis orbicularibus virentibus insidentibus; teleutosporis ellipticis, apice obtuse acuminato, basi in stipitem brevi attenuato, episporio hyalino, crasso, plasmate granuloso, pallido, 50-60 \approx 20-30.

Hab. in foliis languidis *Diploglottidis*, Brisbane Australiæ (BAILEY).

13. **Uromyces Azorellæ** Cooke Grev. XIX, p. 2. — Soris plerumque 1213
elongatis bullatisque, in petiolis, rarioribus in foliis, fuscis, pulverulentis; teleutosporis ovatis, levibus, breviter pedicellatis, episporio ad apicem incrassato, 12 \approx 8.

Hab. in foliis et petiolis *Pozoæ trifoliatæ* in Nova Zelandia (COLENZO).

14. **Uromyces Holwayi** Lagerh. in Hedw. 1889, p. 108. — Soris uredo- 1214
et teleutosporiferis amphigenis, initio tectis, fuscis, sparsis, non confluentibus; uredosporis rotundatis, membrana flava, echinulata et poris 4-5 præditis, 20-30 μ . diam.; teleutosporis ellipsoideis vel ovoideis, vertice apiculo hyalino ornatis, longitudinaliter plicato-lineolatis, cinnamomeis, 27-33 \approx 21-27.

Hab. in foliis *Lini superbi* ad Ann Arbor, Mich. Amer. bor. (HOLWAY). — *U. Erythronii*, *U. affini* et *U. Lilii* valde affinis.

15. **Uromyces Pontederiæ** Speg. F. Guar. II, n 31. — Maculis am- 1215
phigenis, subdeterminatis, ellipticis, 2 mm. diam., intense violaceo-purpurascens, sæpe confluentibus; acervulis amphigenis centro macularum insidentibus, solitariis v. 1-3-aggregatis, erumpentibus, parvulis 250-400, compactiusculis, intense ferrugineo-cinnamomeis; teleutosporis obovatis, lanceolatis v. trigonis, superne acute vel obtuse rotundatis ibique crassissime tunicatis, inferne cuneatis, levissimis 35-30 \approx 15, fulvo-fuligineis; stipite crassiusculo tereti, 30 \approx 4-5, subfulvescente, medio subattenuato, levi.

Hab. ad folia viva *Pontederiæ cordatæ* in paludosis prope Areguá Brasiliæ. — Status uredosporicus *Uredinem Pontederiæ* Speg. sistit.

16. **Uromyces Anomathecæ** Cooke Grev. XIX, p. 6. — Amphigena; 1216
soris subtransversalibus, ellipticis, brunneis, compactis, minutis; teleutosporis piriformibus v. subtriangularibus, apice incrassatis, ba-

dio-fuscis, deorsum pallidioribus, breviter stipitatis, episporio levi, 25 \approx 25.

Hab. in foliis *Anomathecæ cruentæ*, Natali Africae (J. M. Wood).

17. **Uromyces citriformis** Bab. Flor. New. Zeal. vol. II, p. 195, Hook. 1217
Handb. New Zeal. pag. 625. — Maculis oblitteratis; soris sparsis, cuticula persistente obtectis; sporis magnis, linearibus, brunneis, breviter stipitatis.

Hab. ad folia *Microtidis?* vel *Thelymitræ?* in Insula Sept. Novæ Zelandiæ (COLENSO).

18. **Uromyces purpureus** Lagerh. Ustil. Ured. Welw. pag. 128. — 1218
Æcidiis cum soris teleutosporiferis amphigenis in maculis elongatis amœne purpureis insidentibus; pseudoperidiis fere nullis; æcidiosporis sphæroideo-angulatis, 20-24 μ . diam., membrana tenui, incolori, aculeata præditis; soris teleutosporiferis punctiformibus, atro-purpureis, primo epidermide tectis; teleutosporis globosis, ovoideis, obovatis vel angulatis, 30-44 \approx 28-36, membrana crassa, castanea, levi, apice sæpe incrassata præditis; pedicello caduco.

Hab. in foliis *Liliacæ* sp. *asphodeloideæ* in pratis humidis pr. Muta-Lucala, Angola Africae.

19. **Uromyces scaber** E. et E. Journ. Myc. 1890, p. 119. — Soris 1219
ellipticis nudis, atro-castaneis vel subnigricantibus, 0,5-1 mm. long., 0,5-0,7 mm. lat., pulvinatis, gregariis vel subconfluentibus; teleutosporis globosis vel ellipsoideis, 22-25 \approx 20-22, vel 20-22 μ . diam., dense echinato-scabris, episporio vix apice incrassato; pedicello subæquali, hyalino, 40-50 \approx 4.

Hab. in foliis cujusdam *Graminacæ*, Swift Creek, Custer C. Amer. bor.

20. **Uromyces Vossiae** Barc. Descript. List Ured. Simla III, pag. 76, 1220
t. 3, f. 1. — Pustulis brunneis, ovatis vel linearibus; uredosporis brunneo-aurantiis, deciduis, ovoideis, 24 \approx 19, minute verrucosis; teleutosporis cum parte pedicelli mox secedentibus, crassiuscule tunicatis, ellipsoideis, 24-29 \approx 21-22, atro-brunneis.

Hab. in pagina inferiore foliorum *Vossiae speciosæ* (*Graminacæ*) Simla Indiæ.

21. **Uromyces Alopecuri** Seym. Proc. Bost. 1889, pag. 186. — Soris 1221
uredosporiferis, epiphyllis, parvis, sparsis, inconspicuis, epidermide plerumque tectis; uredosporis e subgloboso ellipsoideis, episporio crasso, verrucoso, 15-24 \approx 12-20; soris teleutosporiferis epiphyllis, parvis, nigricantibus, epidermide tectis; teleutosporis ex obovato

ellipsoideis, apice late rotundatis vel truncatis, 23-32 \approx 17-23, episporio subæqualiter crasso; pedicello persistente, teleospora æquilongo vel brevior.

Hab. in foliis *Alopecuri geniculati* var. *aristati*, Brainerd Minnesota Amer. bor.

22. **Uromyces perigynus** Halst. Journ. Myc. 1889, pag. 11. — Soris 1222
0,5-2 mm. diam., cæspites subglobosos, atro-brunneos formantibus; teleosporis 8-10 \approx 4-6, apice brunneo, prominente præditis, subcuneatis, contentu vulgo granuloso, sæpe magne l-guttatis; pedicello hyalino, gracili, teleospora duplo vel triplo longiore.

Hab. in bracteis nec non in foliis junioribus *Caricis intumescens* prope Ames, Jowa Amer. bor.

MELAMPSORA Cast. — Syll. VII, 2, p. 586.

1. **Melampsora Euphorbiæ-dulcis** Otth. Mittheil. Naturf. Gesellsch. 1223
Bern. 1858, n. 654-683, p. 70, *Melampsora congregata* Dietel Bericht. Deut. Bot. Gesell. 1888, p. 400. — Soris uredosporiferis parvis, solitariis vel in circulos dispositis, non confluentibus, paraphysibus præditis; uredosporis ellipsoideis vel globosis, membrana achroa, echinulata præditis, contentu aurantiaco, 16-24 \approx 16-20; soris teleosporiferis minimis, numerosis, dense gregariis, interdum confluentibus, maculas magnas formantibus, spadiceis; teleosporis, oblongo-cylindræis vel ovoideis, episporio præditis, fuscis, 18-30 \approx 12-22.

Hab. in pagina inferiore foliorum et in caulibus *Euphorbiæ dulcis* prope Lipsiam Germaniæ. — *M. Helioscopiæ* admodum affinis.

2. **Melampsora Sancti-Johannis** Barc. Descript. List Ured. Simla III, 1224
p. 84, t. IV, f. 1-4. — Pustulis sæpius epiphyllis, suborbiculatis, usque 5 mm. diam., zona rufo-brunnea cinctis; uredosporis breve catenulatis, irregularibus, pallide aurantiis, tenuiter tuberculatis, 25 \approx 21; paraphysibus nullis; teleosporis hypodermicis, demum epidermide secedente nudis, dense verticaliter stipatis, angustis, 26 \approx 6-8, numquam horizontaliter sed subinde oblique divisis; spermogoniis uredosoros tangentibus, 250-350 μ . diam.

Hab. in foliis junioribus *Hyperici cernui*, quod sæpe decoloratum vel hypertrophicum evadit, Simla Indiæ.

3. **Melampsora arctica** Rostr. Fungi Groenl. p. 535. — Soris uredo- 1225
sporiferis hypophyllis, gregariis, flavis; uredosporis sphæroideis v. ovoideis, 18-20 μ . diam., echinatis; paraphysibus claviformibus;

soris teleutosporiferis hypophyllis, sparsis, minutissimis, atrofuscis; teleutosporis prismaticis, rufo-fuscis.

Hab. ad folia Salicis groenlandicæ, glaucæ et herbaceæ, in Groënlandia.

4. **Melampsora Leptodermidis** Barc. *Descript. List Ured. Simla III*, 1226 p. 86, t. IV, f. 5-6. — Pustulis croceis hypophyllis, maculis flavidis contrapositis; uredosporis catenulatis, rotundis vel ovatis, spinulosis, flavis, $25 \approx 20$; teleutosporis læte flavo-aurantiis, sæpius continuis, apice incrassatis, $30-35 \approx 13$.

Hab. in foliis Leptodermidis lanceolatæ, Simla Indiæ. — In ejusdem ramulis hypertrophicis occurrit *Puccinia Leptodermidis*.

5. **Melampsora punctiformis** Barcl. et Diet. *Hedw.* 1891, pag. 267, 1227 t. XV, f. 2. — Soris punctiformibus, uredineis amphigenis, parcis epidermide cinctis; uredosporis ellipsoideis v. subpiriformibus, muriculatis, $22-34 \approx 16-20$; soris teleutosporeis hypophyllis, atro-brunneis, gregariis vel confluentibus; teleutosporis stratosis, oblongis, superioribus vertice obtuso incrassatis, $24-50 \approx 15$, inferioribus apice subacuto et haud incrassato.

Hab. in foliis, quæ flavescunt, Galii Aparines, Simla Indiæ.

MONOSPORIDIUM Barcl. *Descript. List Ured. Simla I*, p. 367, (1888) [Etym. *monos* unus et *sporidium*). — Sporæ (*teleutosporæ*?) catenulatim generatæ, subglobosæ, continuæ, achromæ. Spermogonia (*Æcidiola*) adsunt. — Sec. auctorem sporidiola genuina nulla adsunt, quorum loco sporæ ultimo formatæ habendæ sunt. Præcipue sporis achrois distinguendum genus « An tamen genuinum? ».

1. **Monosporidium Euphorbiæ** Barcl. loc. cit. t. XIV, f. 4-7. — Ma- 1228 culis subcircularibus, purpureo-marginatis, pallidis; acervulis innatis sed epidermidem bullatim inflantibus, pallidis; cellulis pseudoperidii globosis, $30-32 \mu$. diam. levibus; sporis subglobosis levibus, hyalinis $19-20 \mu$. diam.

Hab. in foliis Euphorbiæ cognatæ, Simla Indiæ.

2. **Monosporidium Andrachnes** Barcl. loc. cit. t. XV, f. 10-14. — Ma- 1229 culis subcircularibus, incrassatis, sanguineis, flavo anguste marginatis, supra concavis; acervulis hypophyllis circa spermogonia circinantibus; sporis globoso-ovoideis, hyalinis vel pallidissime brunneis, $18-20 \mu$. diam., catenulatis; cellulis pseudoperidii angulosis, imbricatim connexis, $18-24 \mu$. diam.

Hab. in foliis Andrachnes cordifoliæ, Simla Indiæ.

CRONARTIUM Fr. — Syll. VII, 2, p. 597.

1. **Cronartium paraguayense** Speg. F. Guar. II n. 32. — Maculis ¹²³⁰
 amphigenis v. hypophyllis tantum, indeterminatis, 3-4 mm. diam.,
 pallescentibus; pseudoperidiis hypophyllis in maculis irregulariter
 v. subcircinatis 6-18 laxè aggregatis, parvulis 1-2 mm. long., 75-
 110 μ . crass., teretibus, apice obtusis, basi non v. vix subincrassatis,
 rectis v. subflexuosis, glabris, pallide testaceo-olivascentibus, con-
 textu densissime minuteque subparenchymatico-oblongo, pellucido,
 olivaceo; sporulis ellipticis v. elliptico-angulosis, utrinque subtrun-
 cato-rotundatis, e mutua pressione sæpe difformibus, 30 \approx 14-18,
 tenuissime tunicatis, non vel grosse 1-guttulatis, levibus, pallide
 fulvescentibus.

Hab. ad folia viva Bardanesiæ cujusdam in dumetis prope
 Guarapí Brasilæ. — Adest status microstylosporicus.

PUCCINIA Pers. — Syll. VII, 2, p. 600.1. *Æcidiosporæ* et *uredosporæ* ignotæ.

1. **Puccinia Wattiana** Barc. Descript. List. Ured. Simla III, p. 109. ¹²³¹
 — Maculis subcircularibus, nigricantibus; soris hypophyllis, co-
 piosis, atro-brunneis, subcircinantibus; teleutosporis levibus, oblon-
 gis, utrinque rotundatis, castaneis, 37-42 \approx 20-21, medio leniter
 constrictis, subinde 2-3-septatis v. unilocularibus; sporidiolis pro-
 mycelii ovoideis, 14-15 \approx 7-8.

Hab. in foliis Clematidis puberulæ, Sutley Valley prope
 Suni Indiæ.

2. **Puccinia vesiculosa** Schlecht. in Ehrenb. Fung. Chamisso p. 97, ¹²³²
 t. XX, f. 14. — Soris teleutosporiferis subepidermicis, hypophyllis,
 sparsis, irregulariter rotundatis v. ovoideis, usque ad 5 mm. lat., dein
 rima longitudinali irregulariter fissis, maculis rufo-fuscis parum
 elevatis contraposis; teleutosporis oblongo-ellipsoideis, ad septum
 constrictis, loculis subæqualibus, papillatis, breve pedicellatis.

Hab. in foliis Anemonis narcissifloræ, Vnalashka (50° lat.
 sept.).

3. **Puccinia singularis** Magnus Sitzungsber. Gesell. naturf. Fr. 1890, ¹²³³
 n. 8, p. 145, *P. Bäumlerei* Lagerh. *Æsterr. bot. Zeit.* 1890, n. 5.
 — Soris teleutosporiferis hypophyllis et epiphyllis, primo epi-
 dermide tectis, magnis, fuscis; teleutosporis oblongis vel ellipsoi-
 deis, plerumque utrinque paullo attenuatis, medio non vel parum

constrictis, apice papilla pallida auctis, membrana tuberculata fusca, pedicello deciduo præditis, 39-54 \approx 20-27.

Hab. in foliis vivis *Anemones ranunculoidis*, Austria, Hungaria et Serbia.

4. **Puccinia Holboelli** (Horn.) Rostr. Fungi Groenl. p. 534, Syll. VII, 1234
2, p. 734, *Æcidium Holboelli* Hornem. Fl. Dan. t. 2220. — Soris erumpentibus, confertis, folii-cauliculis, brunneo-rufis; teleutosporis crasse clavatis, levibus, apice incrassato-rotundatis, 35-38 \approx 15-20, pedicellis elongatis, subhyalinis, 70-80 \approx 6.

Hab. in foliis caulibusque *Arabidis Holboellii* et *Erysimi hieracifolii* in Dania.

5. **Puccinia Rosæ** Barcl. Descript. List Ured. Simla II, p. 233, t. XII, 1235
f. 6-8. — Maculis expallentibus; acervulis majusculis, brunneis, pulvereis, olentibus; teleutosporis oblongo-ellipsoideis, utrinque rotundatis, 36 \approx 18-22, aurantio-rufis, ad septum vix constrictis, longitrorsum oblique substriatis, crassiuscule breve stipitatis; promycelio elongato, septato; sporidiolis globosis, 10 μ . diam.

Hab. in foliis ramulisque tenellis *Rosæ macrophyllæ*, Narkanda Indiæ.

6. **Puccinia Rumicis-scutati** (DC.) Wint. — Syll. VII, n. 2214. — 1236
Var. **Mühlenbeckiæ** Cooke Grev. XIX, p. 47. — Epiphylla, sparsa; soris initio bullatis; teleutosporis medio constrictis, loculis subtriangulis, 36 \approx 12.

Hab. in foliis *Mühlenbeckiæ adpressæ*, Victoria Australiæ (Mrs. MARTIN).

7. **Puccinia Araliæ** Ell. et Ev. Journ. Myc. 1890, p. 120. — Soris 1237
cauliculis et foliiculis, minutis hinc inde congestis, nudis, atro-brunneis, maculis vagis flavicantibus; teleutosporis oblongis v. oblongo-ellipticis, intus minute granulosus vix constrictis, 25-35 \approx 15-20, episporio pallide brunneo, minute ruguloso, apice vix incrassato, obtuso v. minute papillato; pedicello tenui teleutosporam subsuperante.

Hab. in foliis caulibusque, qui contorti fiunt, *Panacis bifolii*, Massachusetts Amer. bor. (Miss C. H. CLARK et CARTER). — Teleutosporæ tantum notæ.

8. **Puccinia Saxifragæ-ciliatæ** Barcl. Descrip. List Ured. Simla II, 1238
p. 234, t. XIII, f. 7-8. — Pustulis minutis brunneis, sparsis, epiphyllis; teleutosporis elongatis, medio constrictis, apice obtuso cuspidatis, breve stipitatis, 51-65 \approx 14-16, læte brunneis.

Hab. in foliis *Saxifragæ ligulatæ* v. *ciliatæ*, Simla Indiæ.

9. **Puccinia Urticæ** Barclay Descript. List Ured. Simla II, p. 234, 1239

t. VII, f. 9. — Acervulis hypophyllis, 1-3 mm., convexis, in areis pallide flavis, viridulo-marginatis; teleutosporis firme adhærentibus, apice incrassatis, elongato-clavatis, $40 \approx 17$, levibus, brunneis; sporidiolis $18 \approx 8$.

Hab. in foliis *Urticæ parvifloræ*, Simla Indiæ. — Huc spectat ut st. æcidiosporus *Æcid. Urticæ v. himalayense*.

10. **Puccinia guaranitica** Speg. F. Guar. II, n. 30. — Maculis nul- 1240
lis v. toto folio pallescente, acervulis hypophyllis, obscure ferrugineo-cinnamomeis, pulvinatulis, compactiusculis, subhemisphæricis $300-500 \mu$. diam., sæpe confluentibus et tandem linearibus atque longissimis, teleutosporis, pulcre ferrugineo-fulvis, ellipticis vel obovatis, utrinque obtusis $30 \approx 20$ medio non v. vix subconstrictis, apice non v. parcissime lateque umbonatis, episporio ubique crassiusculo vix apice incrassatulo vestitis, levissimis, loculis non v. 1-guttulatis, supero nonnihil crassiore; stipite longiusculo, gracili, $70-80 \approx 5$, sursum chlorinulo, inferne hyalino, levi, tereti; uredosporis nullis.

Hab. ad folia viva *Tricuspidis latifoliæ* in silvis umbrosis prope Guarapi Brasilæ.

11. **Puccinia Coprosmæ** Cooke Grev. XIX, p. 2. — Hypophylla; ma- 1241
culis orbicularibus 1 cm. diam. fuscis; soris congestis, convexis, umbrinis, compactis; teleutosporis ellipticis, compressis difformibusque, constrictis; cellulis inferioribus elongatis, hyalino-fuscis, pedicellis abbreviatis $28-30 \approx 10$.

Hab. in foliis *Coprosmæ lucidæ*, Stewart Island New Zealand (KIRK).

12. **Puccinia Winteri** Pазschke in Hedw. 1890, p. 158. — Soris hy- 1242
pophyllis, sparsis, in annulos irregulares dispositis, liberis, atrobrunneis, maculas pallidiores amphigenas generantibus; teleutosporis rectangularibus, uniseptatis, medio paullo constrictis, episporio reticulato, utrinque incrassato, apiculis multis, $4-6 \mu$. altis præditis et pedicello hyalino, fragili, $40-80 \mu$. longo, suffultis, flavobrunneis, $27-40 \approx 20-25$.

Hab. in foliis vivis *Xylopeæ* sp., Rio de Janeiro, Brasilia Amer. austr. (E. ULE).

13. **Puccinia albulensis** P. Magn. Verz. Graub. p. 27, *P. Veronicæ* 1243
Schum., Wint. p. p. — Soris teleutosporiferis solitariis, primo sub epidermide orbiculatis, dein erumpentibus, forma irregulari; teleutosporis medio subconstrictis, utrinque rotundatis, $31,4 \approx 13,7$, apice leniter incrassatis.

Hab. ad caules, rarius ad folia *Veronicæ* alpinæ in rupestribus Cresta Mora pr. Albula-Hospiz, Graubünden Helvetiæ. — A *P. Veronicæ* habitu, loco et sporis paullo brevioribus differt.

14. **Puccinia Schizocodonis** Pat. Bull. Soc. Myc. 1887, p. 124. — 1244

Soris teleutosporiferis hypophyllis, orbicularibus, sparsis, prominulis, atro-brunneis, compactis, macula alba rubido-cincta contrapostis; teleutosporis loculo supero apice attenuato, infero cuneato, medio subconstrictis, 55-60 \approx 22-26; pedicello elongato, pallido, rubido, 50 μ . long.

Hab. in foliis *Schizocodonis soldanelloidis* in regione Japonica Asiæ.

15. **Puccinia Sidæ** Pat. Bull. Soc. Myc. 1888, p. 97. — Soris teleu- 1245

tosporiferis orbicularibus, 2-3 mm. diam., sparsis v. confluentibus, brunneo-rufis, compactis, duris, primo epidermide tectis, dein nudis; teleutosporis flavis, obovoideis v. elongatis, levibus, rectis v. ad septum constrictis, apice obtusis, 50-80 \approx 16-20; pedicello hyalino, valde elongato, gracili, cylindraceo, 180-200 \approx 8-10.

Hab. ad folia *Sidæ rhombifoliæ*, Caracas Venezuelæ.

16. **Puccinia Crucianellæ** Desm. XIV, Not. p. 12. — Maculis nullis; 1246

soris teleutosporiferis oblongis, compactis, convexis, nigris, sparsis, rarius confluentibus, epidermide rupta persistente marginatis; teleutosporis oblongis, medio constrictis, loculo inferiore turbinato, subluteo, superiore fusco, globoso v. obtuso; pedicello æquali, hyalino.

Hab. in foliis, bracteis et caulibus *Crucianellæ* in Gallia.

17. **Puccinia variiformis** Pat. Journ. Bot. 1890, p. 57, f. 2. — Ma- 1247

culis brunneis, amphigenis; soris hypophyllis, parvis, 0,5 mm. diam., brunneis, plus minus secus orbem dispositis, epidermide tectis, dein erumpentibus; teleutosporis 25-30 \approx 15-25, septo verticali vel horizontali vel positione intermedia; pedicello hyalino, gracili, elongato, 45 μ . long.

Hab. in foliis *Hoyæ*, Mont Bavi, Tonkin Asiæ orient.

18. **Puccinia Cynanchi** Lagerh. in Bol. Soc. Brot. 1889, p. 129. — 1248

Soris teleutosporiferis rotundato-pulvinatis, compactis, fuscis, in pagina inferiore folii in maculis pallidis congregatis; teleutosporis rotundatis, ovoideis, apice rotundatis vel in pedicellum angustatis, ad septum non constrictis, episporio crasso, brunneo, levi, apice paullulum incrassato, pedicello persistente, longo, dilute brunneo, varie inserto (plerumque lateraliter) præditis, 24-30 \approx 22-28.

Hab. ad folia viva *Cynanchi parviflori* in insula Martini-
ca Amer. centr.

19. **Puccinia Schneideri** Schröt. — Syll. VII, 2, p. 677. — Var. **con-** 1249
stricta Lag. Hedw. 1889, pag. 106. — Soris atro-brunneis, hypophyllis v. cauliculis; teleutosporis biglobosis, constrictis castaneis, 36-42 \approx 21-27; pedicello hyalino deciduo.

Hab. in Teucrio montano, Istein Baden.

20. **Puccinia compacta** Berk. Flor. Nov. Zeal. vol. II, p. 195, Hook. 1250
Handb. New Zeal. Flor. p. 624. — Cæspitulis orbicularibus, pallidis, magnitudine variis; soris solitariis gregariisque, depressis; sporarum massa compacta, spongiosa; teleutosporis elongatis, 60-80 μ . longis, sæpe obliquis; nucleo distincto.

Hab. ad folia Myosotidis capitatae Lyall., in Novæ Zelandiæ insula meridionali.

21. **Puccinia glomerata** Grev. in Smith. Fl. Brit. V, p. 365, Plowr. 1251
Brit. Ured. p. 209. — Soris teleutosporiferis nigris, circinantibus, mox pulvereis, in greges subrotundos vel elongatos gregariis; teleutosporis ellipsoideis, elongatis vel irregularibus, subconstrictis, loculo infero sæpe minore, supero rotundato vel attenuato, papilla hyalina sæpius productis, levibus demum granulosis, atro-brunneis, 30-40 \approx 20-25.

Hab. in foliis Senecionis Jacobææ in Britannia.

22. **Puccinia Cardui** Plowr. Brit. Ured. p. 216. — Soris teleutospori- 1252
feris parvis, circinantibus, in greges magnos, 3-4 mm. diam., confertis et confluentibus, hypophyllis, epidermide diu tectis, maculis pallidis contraposis; teleutosporis fusoides, subcylindraces vel clavatis, distincte constrictis, levibus, pallide brunneis, basi attenuatis, apice sæpius incrassatis et rotundatis, 45-50 \approx 16-18; pedicello pallide brunneo, persistente, 50 μ . long.

Hab. in foliis Cardui lanceolati et crispi in Britannia.

23. **Puccinia Xanthifoliæ** E. et E. Journ. Myc. 1890, pag. 120, P. 1253
Compositarum Ellis N. A. F. n. 2252, nec Schlecht. — Soris hypophyllis, sparsis, nudis, nigris, 0,5-1 mm. diam., tuberculiformibus, compactis; teleutosporis ellipsoideis v. obovato, levibus, apice rotundatis incrassatisque sæpe papillatis, ad septum constrictis, atro-fuligineis, 35-45 \approx 18-23; pedicello tenui subpersistenti, 70-80. μ . l.

Hab. in foliis Ivæ xanthifoliæ, Manhattan Kans. Amer. bor. — Teleutosporæ tantum notæ. *Pucc. Bigeloviæ* E. et E., N. A. F. n. 2248, teste Anderson Journ. Myc. 1890, p. 122, est revera in *Gutierrezia euthamia* et vix diversa a *P. Tanaceti*.

24. **Puccinia Tanaceti** DC. — Syll. VII, 2, p. 637. — Var. **Actinellæ** 1254
Webb. in Bess. et Webb. Rep. Nebraska 1889, p. 66. — Amphige-

na; soris plus minus confertis, prominentibus, orbiculari-ellipsoideis, 0,5-1 mm. diam., subconfluentibus, sæpius epidermide disrupta cinctis; teleutosporis valde variabilibus, late ovoideo-oblongis, vulgo profunde constrictis, levibus, 26-76 \simeq 19-38, plerumque 50 \simeq 22, membrana tenui præditis, apice conspicue acuminato, rotundato v. truncato, sæpius subincrassato, pedicello hyalino vel subcolorato, valido, teleosporâ 1-3 longiore.

Hab. ad folia *Actinellæ* acaulis, Nebraska Amer. bor. — Mesosporæ (unicellulares) 28-53 \simeq 19-26 et teleosporæ biseptatæ 50-76 \simeq 19-22 occurrunt frequentes.

25. **Puccinia amboinensis** Thuem. Pilz. d. Gazell. p. 4. — Acervulis 1255 hypophyllis in macula plus minus orbiculata infuscata densissime gregariis, verruciformibus, brunneis vel obscure fusco-ochraceis, hemisphæricis, sat induratis; teleutosporis elongato-ellipsoideis, medio valde constrictis, cellulis fere æqualibus, utrinque parce angustato-subrotundatis, episporio levi, subcrasso, 48-58 \simeq 18-24, fuscis, pedicello longiore, semper curvatulo, 60-65 μ . long., basi 9, apice 5 μ . crass., hyalino; paraphysibus nullis.

Hab. in foliis vivis fruticis ignoti in silvis littoralibus, Amboina.

26. **Puccinia Leptodermidis** Barc. Descript. List Ured. Simla III, 1256 p. 86 et 109, t. IV, f. 7. — Soris atris, ramulos hypertrophicos occupantibus; teleutosporis ovato-ellipsoideis, apice obtuse conicis, 42-47 \simeq 20-24, ad septum leniter constrictis, crasse tunicatis, brunneis; pedicello prælongo, 5-10 μ . cr.

Hab. in ramulis *Leptodermidis lanceolatæ*, Simla Indiæ.

27. **Puccinia Arundinellæ** Barcl. Descript. List Ured. Simla II, p. 245, 1257 t. XIV, f. 7-8. — Teleutosporis in soros ovato-elongatos hypophyllos digestis, ellipsoideis, brunneis, medio leniter constrictis, apice rotundato subincrassatis, 46 \simeq 20, longe stipitatis; uredosporis in soros læte rubros digestis; sporidiolis ovoideis, 9-11 \simeq 5-7.

Hab. in foliis *Arundinellæ setosæ* et *A. Wallichii*, Simla Indiæ. — Forma in *A. Wallichii* leniter differt (t. XIII, f. 11).

28. **Puccinia Caricis-filicinæ** Barcl. Descript. List Ured. Simla II, 1258 p. 250, t. XIII, f. 1-2. — Soris perexiguus, circularibus, brunneis; teleutosporis elongato-oblongis, conspicue medio constrictis, crasse stipitatis, 44 \simeq 12, brunneis; sporidiolis ovoideis, 9-12 \simeq 6.

Hab. in foliis vaginisque *Caricis filicinæ*, Simla Indiæ. —

Uredo et *Æcidium* hucusque nulla inventa.

29. **Puccinia Bolleyana** Sacc. in Henr. L. Boll. Heter. Pucc. p. 169 1259 cum icone. — Soris teleutosporiferis (hucusque tantum notis) hy-

pophyllis dense gregariis, mox erumpentibus pulvinatis, compactiusculis, 0,5-0,7 mm. diam., castaneis; teleutosporis clavato-oblongis, apice rotundatis, membrana crassiuscula levi, cinnamomeis, septo constrictis, intus nucleatis, $45-55 \approx 20-25$; stipite filiformi, prælongo, teleutosporâ duplo triplove longiore, hyalino; promycelio tereti-clavato 3-4-septato e poro apicali et medio exeunte; sporidiolis ovatis.

Hab. in pag. inf. Caricis speciei, Lafayette Indiana. Legit H. L. BOLLEY, comm. Doct. ARTHUR. — Affinis potius *Pucc. Moliniæ*, quam ceteris speciebus in Carice vigentibus.

30. **Puccinia Anthistiria** Barcl. Descript. List. Ured. Simla II, p. 246, t. XIV, f. 6. — Pustulis linearibus vel ovatis, nigris, folii-glumiculis; teleutosporis oblongo-clavatis, apice basique conoideis, longissime stipitatis, pallide brunneis ad septum leniter constrictis, $45 \approx 13$; sporidiolis ovoideis, $8 \approx 6$. 1260

Hab. in foliis, vaginis glumisque Anthistiriae anatheræ (an Bromi, dubitante ipso auct.) Simla Indiæ. — Auctor ipse serius ad *Pucc. graminis* duxit.

31. **Puccinia Chrysopogi** Barcl. Descript. List. Ured. Simla II, p. 247, t. XIV, f. 9-10. — Pustulis ovato-elongatis, atro-brunneis; teleutosporis compactis obovatis, utrinque rotundatis, $43 \approx 24$, leniter constrictis, binucleatis, longiuscule stipitatis; uredosporis in soros ovatos aurantios digestis, subglobosis, $28 \approx 26$. 1261

Hab. in foliis Chrysopogonis Grylli, Simla Indiæ.

2. Uredosporæ adsunt.

32. **Puccinia Bignoniacearum** Speg. F. Guar. II, n. 28. — Maculis nullis v. amphigenis, indeterminatis parum perspicuis, superne fuscescentibus, inferne pallescentibus, parvulis 1-3 mm. diam., sparsis v. hinc inde paucigregariis sæpeque confluentibus; acervulis hypophyllis, macularum centro insidentibus, e lenticulari subglobosis, pallide fusco-fulvescentibus, parum manifestis, subpulverulentis, parvulis 100-150 μ . diam., sparsis vel 3-4-confluentibus; teleutosporis ellipticis v. elliptico-obovatis, utrinque late obtuseque rotundatis $35-40 \approx 22-24$, medio parum constrictis, episporio crassiusculo, laxè minuteque verruculoso-hirto donatis, loculis, 1-guttulatis, supero non v. vix majore, pallide testaceis; stipite subhyalino v. chlorino, breviusculo $35-40 \approx 5-6$, sursum tereti deorsum sensim attenuato ac laxè verruculoso; paraphysibus nullis v. paucis 1262

cylindræis, arcuatis, continuis sursum crassiuscule tunicatis levibus atque obscure fulvescentibus 35-40 \approx 6-7.

Hab. ad folia viva v. languida *Bignoniæ* cujusdam scandentis in silvis subvirgineis pr. Guarapí *Brasilæ*. — Adsunt sæpe etiam uredosporæ. Cfr. *Uredo Bignoniacearum*.

33. **Puccinia ornata** Harkn.) *Proced. Calif. Acad.* 1889, II, pag. 231, 1263 =
t. XII. — Soris minutis, hypophyllis, pulvinatis, atro-brunneis; *P. Tecomæ*
uredosporis cum teleutosporis mixtis, initio rotundatis vel obovoideis, echinatis, dein oblongis v. ovoideis et fere levibus, circ. 20 μ . diam.; teleutosporis atro-brunneis, oblongis, medio constrictis, *Sacc. X Syll.*
utrinque rotundatis, episporio apice incrassato, parce tuberculato, *Syll. XIV, 358*
50-70 \approx 30-40; pedicello teleutosporâ duplo longiore, valido, hyalino, flexuoso, basi incrassato et lobulato, supra verticillis circ. 3 processuum hyalinorum, ramosorum diametro æquilongiorum vel paulo longiorum instructo.

Hab. ad folia viva *Tecomæ* stantis, Comodu *California* infer. (T. S. BRANDEGEE).

34. **Puccinia paraguayensis** Speg. *F. Guar.* II, n. 29. — Maculis nullis; 1264
acervulis hypophyllis, sparsis v. hinc inde densiuscule gregariis ac sæpe subconfluentibus, minutis 350-500 μ . diam., non v. vix pulvinulatis, pulverulentis, ferrugineo-cinnamomeis; teleutosporis ellipticis v. subclavulatis, obscure cinnamomeis, apice umbone crassiusculo subhyalino coronatis, inferne obtuse rotundatis 34-38 \approx 24-26, medio constrictulis, episporio ubique crassiusculo laxè minuteque verruculoso-papilloso vestitis, loculis non v. grosse 1-guttulatis, supero non v. vix crassiore; stipite recto, hyalino 35-40 \approx 5, late fistuloso, medio subattenuato, basi non v. vix subincrassato, verrucis paucis majusculis (sæpe subspiniformibus) ornato; paraphysibus nullis.

Hab. ad folia viva *Lippiæ* arborescentis cujusdam in dumetis pr. *Paraguari Brasilæ*. — Adsunt sæpe etiam uredosporæ. Cfr. *Uredo paraguayensis*. Species *Pucc. tuberculatæ* Speg. peraffinis, vix teleutosporis brevioribus stipiteque verrucoso diversa! *Paraguay*

35. **Puccinia Taraxaci** Plow. *Brit. Ured.* pag. 186. — Spermogoniis 1265
maculis flavis, ovoideis vel rotundatis insidentibus; paraphysibus non conspicuis; spermatis globosis vel ovoideis, 1-2 μ . diam.; soris uredosporiferis primariis raris magnis, atro-brunneis, elongatis vel circinantibus; uredosporis primariis ovoideis, rotundis vel subpiriformibus, echinulatis, brunneis, 25-30 \approx 25; soris uredosporiferis secundariis parvis, numerosis, rotundis, cinnamomeo-brun-

neis, mox pulverulentis, sæpe confluentibus; uredosporis secundariis subglobosis, brunneis, echinulatis, 20-25 μ . diam.; soris teleutosporiferis amphigenis, minutis, nigricantibus, rotundis, pulvereis, epidermide rupta cinctis; teleutosporis obtusis, breviter ovoideis, ovoideis vel subglobosis, vix constrictis, brunneis, apice præcipue echinulatis, 30-40 \simeq 20-25; pedicello brevi, hyalino, deciduo.

Hab. in foliis *Taraxaci* in Britannia. — Huc spectant pro parte *P. variabilis* et *P. Flosculosorum*. Cfr. Syll. VII, p. 634.

36. **Puccinia Collettiana** Barcl. in Sc. Mem. by Med. Off. of India, 1266
V, Calcutta, 1890. — Acervulis uredosporiferis hypophyllis, sæpius circinatis; uredosporis brunneis, spinulosis, globosis vel ovoideis, 27 \simeq 22; acervulis teleutosporiferis sæpe circinatis plerumque epiphyllis; teleutosporis ovato-oblongis, septo constrictis, utrinque rotundatis, apice incrassatis, 49-54 \simeq 13-15, atro-brunneis.

Hab. in foliis *Rubiæ cordifoliæ* Simla Indiæ. — A *P. helvetica* æcidiosporis deficientibus mox distinguenda.

37. **Puccinia fastidiosa** Sacc. et De-Toni Myc. Sibir. pag. 5, f. 3 1267
(*Hemipuccinia*). — Acervulis clado-phylogenesis, minutis, oblongis, tectis, dein rimose erumpentibus, dense gregariis, vix $\frac{1}{2}$ mm. longis, ochraceis, pulvereis, uredosporis, teleutosporis intermixtis, sphaeroideis, minutissime asperulis 18-20 μ . diam., pallide ochraceis, decidue stipitatis; teleutosporis ellipsoideis medio-constricto-uniseptatis (abnormiter rarissime biseptatis) utrinque rotundatis levibus cinnamomeis, tunica ubique æquali saturatiore, 30-32 \simeq 20-22; stipite cylindræo teleutosporam subæquante hyalino, mox deciduo.

Hab. in caulibus foliisque languidis *Dianthi sinensis* β . silvatici (*D. brachylepidis* Reich.) in rupestribus pr. flumen Golubaja Sibiricæ. Cum *P. Arenariæ* (Schum.), *P. Dianthi* (DC.) ne comparanda quidem.

38. **Puccinia Kamtschatkæ** Anders. Journ. Myc. 1890, pag. 125. — 1268
Sor. amphigenis, majusculis, variis; uredosporis globoso-obovatis, sublevibus, flavo-brunneis, 13-17 \simeq 13-30; teleutosporis ovato-oblongis, ad septum parum constrictis, vertice rotundatis, rarius acutatis, non apiculatis, læte brunneis episporio ruguloso, 20-54 \simeq 13-37; pedicello brevi, fugaci, flavido-hyalino, sporam superante; paraphysibus intermixtis teretibus vel clavulatis.

Hab. in foliis *Rosæ* spec., Petropaulovski Kamtschatka (ex herb. U. S. North Pac. Explor. Exped. sub nom. *Coleosporii pinguis*).

39. **Puccinia Fagopyri** Barcl. Journ. of Bot. 1890, p. 261 et Descript. 1269

List Ured. Simla III, p. 107, t. III, f. 9. — Soris uredosporiferis hypophyllis, brunneis, numerosissimis; uredosporis pallide brunneis, echinulatis, ovoideis, $23 \approx 18$; soris teleutosporiferis nigris; teleutosporis deciduis, pedicelli fragmento præditis, atro-brunneis, forma varia, ad septum leniter constrictis, levibus, apice subincrassatis, $25-36 \approx 11-13$, loculo superiore inferiore sæpius multo crassiore et plus minus globoso.

Hab. ad folia Fagopyri esculenti, Simla Indiæ.

40. **Puccinia nitida** Barc. Descript. List Ured. Simla III, p. 107, t. III, 1270
f. 10. — Soris copiosissimis, plerumque hypophyllis, aliis brunneis, aliis nigricantibus; uredosporis globoso-ovoides, læte brunneis, spinulosis $24 \approx 22$; teleutosporis ellipsoideo-oblongis, utrisque rotundatis, saturate brunneis, levissime constrictis, 2-guttatis, $26-30 \approx 18-19$.

Hab. in foliis Polygoni amplexicaulis, Maskobra prope Simla Indiæ.

41. **Puccinia Cressæ** Lagerh. Bol. Soc. Brot. 1889, p. 131. — Teleu- 1271
tosporis ovoideis, apice parum angustatis v. rotundatis, medio constrictis, basi in pedicellum attenuatis, membrana apice non v. paululum incrassata, levi, fusca instructis, $40-44 \approx 24-26$; uredosporis ovoideis, membrana fusca, aculeata præditis, $25-32 \approx 22-24$.

Hab. ad folia Cressæ villosæ ad Fagum prope Villa nova La Rainha Lusitaniæ (WELWITSCH). — Cfr. *Æcidium Cressæ* Syll. VII, 2, p. 781.

42. **Puccinia Roscoeæ** Barcl. Descript. List Ured. Simla II, pag. 237, 1272
t. XII, f. 1. — Pustulis minutis, subconfluentibus, hypophyllis, halone arescente cinctis; uredosporis ovoideis parce spinulosis, intus aurantio-granulosis, $28 \approx 18$; teleutosporis oblongis, medio constrictis, $32 \approx 15-17$; cellula sup. crassiori, apice obtuse conoidea, brunneis.

Hab. in foliis Roscoeæ alpinæ, Simla Indiæ.

43. **Puccinia mutabilis** Ell. et Gall. Journ. Myc. 1889, pag. 67. — 1273
Soris suborbicularibus vel ellipsoideis, parvis, 0,5 mm. diam., epidermide primo tectis, mox erumpentibus et castaneo-brunneis, subinde plus minus confluentibus; uredosporis pallidis subaculeolatis, globosis vel ellipsoideis, $18-22 \approx 15$; teleutosporis ovoideis vel ellipsoideis, obtusis et rotundatis, supra modice incrassatis, distincte constrictis, ovoideis, pedicello subtus attenuatis; pedicello subvalido, hyalino, teleutospore æquilongo vel brevior.

Hab. in foliis Allii mutabilis, Sand Coulee, Mont. Amer.

bor. (ANDERSON). — A *P. Allii*, *P. Porri* et *P. Scillæ* differt uredosporis et teleutosporis brevioribus et obtusis.

44. **Puccinia Smilacis** Schw. Huc verisimiliter spectat *Cæoma smilacinum* Barcl. in Scient. Mem. by Med. Off. of India, Calcutta 1889 cum 2 tab. (Formæ metageneticæ variæ illustrantur).
45. **Puccinia Digraphidis** H. T. Soppitt in Journ. of Bot. 1890, p. 213. 1274
— Soris uredosporiferis maculis flavidis insidentibus, parvis, rubido-brunneis subrotundis vel linearibus, interdum confluentibus, sparsis vel gregariis, erumpentibus; uredosporis subglobosis v. ellipsoideis, episporio minute punctulatis, aurantio-rubris, 20–30 μ . diam.; soris teleutosporiferis numerosis, atris, tectis, primo parvis, dein linearibus, confluentibus, lineas 1–3 mm. longas efficientibus; teleutosporis brunneis, levibus, valde irregularibus, oblongis, cuneatis, curvatis vel elongatis, leniter subconstrictis, apice loculi superioris incrassato, rotundato, truncato vel obtuso, loculo inferiore plerumque attenuato, 42–52 \simeq 19–22, pedicello brevissimo v. nullo.
Hab. æcidia ad folia Convallariæ majalis, uredosp. et teleutosp. ad folia Phalaridis arundinacæ in Britannia. — Cfr. *Æcidium Convallariæ* Schum., Syll. VII, p. 828. *P. sessili* affinis.
46. **Puccinia apocrypta** Ell. et Tracy Journ. Myc. 1890, pag. 76. — 1275
Hypophylla; soris ovoideis vel oblongis, superficiem foliorum inferiorem omnino obtegentibus, epidermide semper tectis; uredosporis ovoideis episporio tenui, minute rugosis, 23–26 \simeq 20–22; teleutosporis clavatis vel oblongis, non constrictis, supra incrassatis, plerumque apice lato et plano truncatis, sed sæpe acuminatis vel irregularibus, subtus angustatis, levibus, 42–55 \simeq 14–18, pedicello brevissimo.
Hab. ad folia Asprellæ Hystricis, Canon City, Colorado Amer. bor. — *P. coronatæ* affinis.
47. **Puccinia Windsoræ** Schw. — Syll. VII, 2, p. 664, *P. Dochmia* 1276
B. et C. — Var. **australis** Anders. Journ. Myc. 1890, p. 123. — A typo differt soris pulvinatis, teleutosporis subglobosis, 16–30 \simeq 23–36, pedicellis longissimis tenuibus, 75–125 \simeq 3–6.
Hab. in foliis graminum, prob. Mühlenbergiæ, Nicaragua et Mexico (WRIGHT et PALMER), — Teleutosporæ in typo æque ac in varietate sæpe oblique septatæ.
48. **Puccinia vexans** Farl. — Syll. VII, 2, p. 733. — Var. **Buchloës** 1277
Webb. in Bess. et Webb. Nep. Nebr. 1889, p. 68. — Amphigena

vel plerumque hypophylla; soris ellipsoideo-oblongis, parvis, irregulariter sparsis, mox nudis, reliquiis epidermidis ruptæ vix conspicuis; uredosporis subglobosis, levibus, 21-23 \approx 14-21; teleutosporis oblongo-ellipsoideis vel subobovatis, pallide brunneis, levibus, membrana vulgo tenui, 29-40 \approx 15-23, apice obtuse rotundato, subincrassato vel nullo; pedicello hyalino, subrobusto, teleutosporâ 1-2,5-plo longiore.

Hab. ad folia et culmos Buchloës dactyloidis pr. Lincoln Amer. bor. (J. C. SMITH).

49. **Puccinia Schedonnardi** Kell. et Sw. Journ. Myc. 1888, p. 43. — 1278

Soris amphigenis sed plerumque hypophyllis, circularibus ovalibus v. oblongis, solitariis, erumpentibus; uredosporis globulosis, 20-25 μ . diam., sparse tuberculosis, aurantiis, pedicellis subpersistentibus, subhyalinis, sursum crassioribus; teleutosporis subglobosis ovoideis vel ovali-oblongis, 28-30 \approx 21-24, læte brunneis, medio leniter constrictis, tunica apice incrassata; pedicellis variis, subcoloratis sporam æquantibus vel triplo longioribus.

Hab. in foliis et vaginis Schedonnardi texani, Manhattan Kansas Amer. bor

50. **Puccinia nepalensis** Barcl. et Diet. Hedw. 1891, p. 265, *P. Acetosæ* 1279

Barcl., nec Schum. — A *P. Acetosæ* differt teleutosporis pallidioribus, omnino levibus, medio non v. vix constrictis, apice pallidius papillatis.

Hab. in foliis Rumicis nepalensis, Simla Indiæ. — Adsunt quoque uredosporæ.

3. *Æcidiosporæ* adsunt.

51. **Puccinia Saccardoï** Ludw. Hedw. 1889, p. 362, Sacc. in Bull. Soc. 1280

Mycol. V, p. 118, t. XIV, f. 5. — *Æcidiis* sparsis vel in soris junctis, in maculis fuscellis vel flavidis sitis; pseudoperidiis cupulatis albis, margine incis, cellulis verruculosis, 18-25 \approx 15-18; *æcidiosporis* polygoniis dilute aurantiis, 13-15 μ . diam.; soris teleutosporicis subrotundo-inæqualibus, sæpius circa *Æcidia* sitis, atris; teleutosporis oblongo-clavatis, constrictis, fuligineis, 50-60 \approx 20-25, cellula inf. longiore, angustiore, supera cuboideo-globosa; pedicello 45 μ . long.

Hab. in foliis Goodeniæ geniculatæ, Jamma Scrub Australiæ merid. — Rarius occurrunt teleutosporæ 1- v. 3-loculares.

52. **Puccinia Fragariæ** Barcl. Descript. List Ured. Simla pag. 359, 1281

t. XIII, f. 6-9. — *Æcidiosporis* pallide flavis subovoideis, 22 \approx 15,

levibus sed minutissime punctulatis; uredosporis ovoideis vel piriformibus, pallide flavis, tuberculatis, $21 \approx 7$, pustulas minutas flavas formantibus; teleutosporis amphigenis pustulas atras sæpius æcidiis approximatas sistentibus, ellipsoideo-oblongis, vix constrictis utrinque rotundatis $30 \approx 20$, brunneis breve stipitatis.

Hab. in foliis *Fragariæ vescæ*, Simla Indiæ.

53. **Puccinia Vincæ** (DC.) Plowright British Uredineæ p. 161. Pass. 1282
F. N. IV, p. 3, *Forma æcidiosporea* Plow. ibid. t. II, fig. 11-14. — Pustulis crebre sparsis, totam folii paginam inferam occupantibus, rotundatis, rubiginosis, epidermide tectis, dein nudatis, epidochium pezizæforme varium, albido-cinereum simulantibus; sporis globosis hyalinis, $8-10 \mu$. diam. (Pass. l. c.).

Hab. in foliis *Vincæ majoris* in Britannia et Italia. — Ulterius inquirendum, an ad *Pucciniam Vincæ* Cast. et *P. Berkeleyi* Passer. pariter pertineat (Pass. l. c.).

54. **Puccinia consimilis** E. et E. Journ. Myc. 1890, p. 120. — Pseudoperidiis hypophyllis copiosis, cavis mox apertis, margine lacero dentato reflexo; æcidiosporis pallide flavis, subglobosis vel subovatis, levibus, $20-23 \mu$. diam.; teleutosporis in soros minutos $0,5$ mm. diam., confertos, hypophyllos, castaneos, initio tectos congestis, oblongo-obovatis, septo constrictis, $25-42 \approx 18-22$, apice incrassatis, muticis papillatisve, articulo sup. crassiore, obscuriore, pedicello sporam subsuperante.

Hab. in foliis *Sisymbrii linifolii*, Helena Mont. Am. bor. (KELSEY).

55. **Puccinia arabicola** E. et E. Journ. Myc. 1890, p. 119. — Æcidiosporis amphigenis (jam elapsis); pseudoperidiis in soros $2-4$ mm. diam., digestis hemisphæricis, initio clausis, dein apertis, minutis, cavis, margine minute denticulato; teleutosporis amphigenis in soros sparsos, minutos, atro-brunneos, initio tectos congestis, ellipsoideis oblongis vel obovatis, vertice incrassatis rotundatis, levibus, septo constrictis, $27-40 \approx 20-23$, pedicello crasso sporam subæquante.

Hab. in foliis *Arabidis* sp., Ottawa, Canada (Doct. J. MACCOUN).

56. **Puccinia? Dorsteniæ** Lagerh. in Bol. Soc. Brot. 1889, p. 131. — Æcidiosporis hypophyllis, in maculis pallidis, suborbicularibus gregatim dispositis; pseudoperidiis cupulatis, sat brevibus, margine parum lacinulato; æcidiosporis polygonis, $20-24 \mu$. diam., episporio hyalino ruguloso; soris uredosporiferis in pagina folii dispersis, parvis, sic-

cis ochraceis, epidermide primo tectis demum epidermide fissa circumdatis; uredosporis rotundatis, ovoideis vel ovato-oblongis, 18-26 \approx 17-20, episporio hyalino aculeato; paraphysibus nullis; teleutosporis?

Hab. ad folia viva *Dorsteniæ Psiluri* in silvis primævis de Mata de Pungo Andongo et ad Luxillo in Angola Africae. — An *Uromyces*?

57. **Puccinia paludosa** Plowr. Brit. Ured. p. 174. — Pseudoperidiis 1286 gregariis, subimmersis, margine albo, lacerato; æcidiosporis subglobosis, echinulatis, hyalinis, contenu aurantiaco, 15-28 \approx 10-16; soris uredosporiferis parvis, ovoideis v. elongatis, maculis flavidis insidentibus, dilute brunneis, mox nudis et pulvereis; uredosporis rotundatis, raro ovoideis, brunneis, minute parceque aculeato-verrucosis, 20-25 μ . diam.; soris teleutosporiferis parvis, ovoideis v. elongatis, raro subrotundis, sæpe lineato-seriatis, nigris, nudis; teleutosporis loculo supero rotundato, apice incrassato, loculo inferiore subcylindræo vel cuneato, medio constrictis, levibus, atrobunneis, 50-60 \approx 18-20; pedicello longiusculo, brunneolo persistente.

Hab. æcidiosp. in foliis *Pedicularis palustris*, uredosp. et teleutosp. in foliis *Caricis vulgaris*, strictæ, fulvæ et panicæ (?) in Britannia.

58. **Puccinia arenariicola** Plowr. Brit. Ured. p. 170. — Maculis in fo- 1287 liis circularibus, in caulibus elongatis, flavis, purpureo-marginatis; pseudoperidiis plerumque hypophyllis, raro epiphyllis, albido-marginatis, prominentibus, laceratis; æcidiosporis subglobosis v. polygoneis, sublevibus, flavis, 15-20 μ . diam.; soris uredosporiferis brunneis, erumpentibus, linearibus v. oblongis, circ. 5 mm. long., epidermide lacerata cinctis, maculis flavidis insidentibus; uredosporis globosis vel ovoideis, brunneis, minute echinatis, 18-20 μ . diam.; soris teleutosporiferis parvis, nigris, nudis, persistentibus, linearibus v. elongatis, plerumque hypophyllis; teleutosporis levibus, atrobunneis, oblongis vel cuneatis, 40-50 \approx 20; loculo superiore vulgo saturatius colorato, rotundato, apice incrassato; loculo inferiore subattenuato, subconstricto, pedicello longo, persistente.

Hab. æcidiosp. in foliis *Centaureæ nigræ*, uredosp. et teleutosp. in foliis *Caricis arenariæ* in littoribus arenosis Hemby, Norfolk Britanniae.

59. **Puccinia extensicola** Plowr. Brit. Ured. p. 181. — Pseudoperi- 1288 diis maculis pallidioribus insidentibus, erectis, circinantibus v. spar-

sis, sæpe amphigenis, margine lacero, albo, lacero; æcidiosporis globosis, minutissime echinulatis, aurantiacis, 20-25 μ . diam.; soris uredosporiferis parvis, rubido-brunneis, elongatis, ellipsoideis vel linearibus, maculis extensis, pallide discoloribus insertis; uredosporis subglobosis v. ovoideis, subirregularibus, minutissime echinulatis, subflavo-brunneolis, 25-30 \times 15-20; soris teleutosporiferis parvis, 0,5-1 mm. long., elongatis, erumpentibus, nigris epidermide lacera cinctis; teleutosporis ovoideis vel subclavatis, brunneis, levibus, apice incrassatis, rotundatis v. conicis, loculo infero subtus attenuato, subconstrictis, 40-60 \times 18-20; pedicello brevi, persistente.

Hab. æcidiosp. in *Astere Tripolio*, uredosp. et teleutosp. in *Carice extensa* in Norfolk Britannia.

60. **Puccinia persistens** Plowr. Brit. Ured. pag. 180. — Maculis in pagina folii superiore purpureo-brunneis, in inferiore flavis, brunneolo-marginatis; pseudoperidiis cylindræis, brevibus, flavis, margine albo et lacerato; æcidiosporis subglobosis v. ovoideis, minute echinatis, aurantiis, 20-30 \times 17-20; soris uredosporiferis parvis, aurantiis, rotundis v. elongatis, maculis flavidis insidentibus; uredosporis subglobosis, hyalinis, minute echinatis, contentu aurantiaco, 25-30 μ . diam.; soris teleutosporiferis parvis, nigris, ovoideis, oblongis vel linearibus, epidermide diu tectis; teleutosporiferis cylindræis vel clavatis, apice subincrassato, rotundato, truncato v. oblique attenuato, constrictione plus minus distincta v. interdum nulla, loculo infero subtus attenuato, levibus, brunneis, 50-60 \times 15-20; pedicello brevi persistente.

Hab. æcidiosp. in *Thalictro flavo* et *Th. minore* (?), uredosp. et teleutosp. in *Tritico repente* (*Avena elatiore*?) in Britannia.

61. **Puccinia Trailii** Plowr. Brit. Ured. p. 176, *P. Phragmitis* (Schum.) Körn. p. p. — Pseudoperidiis cupulatis, amplis, margine lacerato, albo præditis, maculis purpureis flavo-marginatis insidentibus; æcidiosporis rotundatis, ovoideis v. irregularibus, albis, minute echinulatis, 20-40 μ . diam.; soris uredosporiferis majusculis, ellipsoideis v. elongatis, rubido-brunneis, pulvereis, amphigenis, aparaphysatis; uredosporis ovoideis, subpiriformibus, interdum fere globosis, brunneis, echinulatis, 25-35 \times 20-25; soris teleutosporiferis, 2-4 mm. long., 5 mm. alt., compactis, pulvinatis, elongatis, additis aliis numerosis, minoribus, sparsis; teleutosporis ovoideis, fusoides vel subcylindræis, brunneis, granulatis, distincte constrictis, loculo supero apice subincrassato, utrinque rotundato, loculo infero sub-

tus attenuato, 50-60 \approx 20-23; pedicello brunneo, valido, persistente, 75-100 \approx 6-8.

Hab. æcidiosp. in foliis Rumicis Acetosæ, uredosp. et teleutosp. in Phragmite communi in Britannia. — *Æc. Rumicis* Grev. f. *Acetosæ* huc spectat.

62. **Puccinia Phalaridis** Plowr. Brit. Ured. p. 166. — Pseudoperidiis 1291
plerumque hypophyllis, in maculis flavidis circinatim gregariis, spermogoniis, primo epiphyllis, centralibus, dein pseudoperidiis cinctis; æcidiosporis subrotundis, echinulatis, aurantio-flavis, 20-25 μ . diam.; soris uredosporiferis aurantiis, parvis, elongatis, ovoideis, oblongis v. linearibus, subinde confluentibus, demum nudis; uredosporis subglobosis vel ovoideis, flavis, echinulatis, 20-25 μ . diam.; soris teleutosporiferis minutis, punctatis vel linearibus, nigris, epidermide tectis, persistentibus; teleutosporis levibus, brunneis, sessilibus quadrangularibus v. subtus attenuatis, supra truncatis v. rotundatis, apice incrassatis, subconstrictis, 40-50 \approx 15-18; pedicello brevissimo.

Hab. æcidiosp. in foliis Ari maculati, uredosp. et teleutosp. in foliis Phalaridis arundinaceæ in Britannia.

63. **Puccinia Polliniæ** Barcl. Descript. List Ured. Simla II, p. 243. 1292
Æcidiosporis *Æcid. Strobilanthis* Barcl. — Uredosporis hypophyllis, parvis, in soros ovoideos vel breve elongatos digestis, pallide brunneis, tuberculatis, 20-21 μ . diam.; teleutosporis amphigenis, in soros lineares nigros digestis, firme adhærentibus, 36 \approx 16, utrinque rotundatis, medio constrictis, tenuiter tuberculatis; sporidiolis 10-12 \approx 6-7.

Hab. in foliis Polliniæ nudæ, Simla Indiæ.

COLEOPUCCINIA Pat. Tab. anal. n. 697 [1889] (Etym. *coleos* vagina et *Puccinia*). — Teleutosporæ ovato-oblongæ, 1-septatæ, coloratæ, pedicellatæ. Pedicellus gracilis, hyalinus vagina gelatinosa inclusus.

1. **Coleopuccinia sinensis** Pat. Tab. anal. n. 697 et Rev. Myc. — Soris 1293
lenticularibus, rotundatis, gelatinosis, compactis, 1-2 mm. diam., initio flavidis, dein rubro-aurantiacis, hypophyllis, numerosis, confertis, folio parum adhærentibus; teleutosporis fulvo-brunneolis, utrinque attenuatis, septo constrictis, levibus, 40 \approx 15, pedicello hyalino, gracili, 20 μ . long., vagina hyalina, gelatinosa incluso, suffultis; vaginis periphericis paraphysum ad instar reductis.

Hab. ad folia Amelanchieris, Yun-nan Sinarum (DELAVAY).

DASYSPORA Berk. et Curt. Exot. Fung. p. 281 (Etym. a *dasys* floccosus et *spora*). — Pseudoperidium nullum; teleutosporæ tantum

notæ, lato-oblongæ, medio constrictæ, uniseptatæ, utrinque floccis brevibus exasperatæ v. subpenicillatæ. — Genus teleutosporis utrinque floccosis distinctissimum.

1. **Dasyspora foveolata** Berk. et Curt. l. c., *Æcidium foveolatum* 1294
Schwein. manuscript. — Soris teleutosporiferis irregularibus, in greges parvos, rotundos gregariis, epidermide tectis; teleutosporis læte umbrino-brunneis, late oblongis, medio constrictis, uniseptatis, 25-30 μ . long., minute granulosis, utrinque rugulosis, floccis brevibus præditis.

Hab. in foliis viventibus, Surinam.

DIORCHIDIUM Kalchbr. — Syll. VII, 2, p. 736.

1. **Diorchidium Puiggarii** Speg. F. Puigg. n. 204. — Maculis nullis v. 1295
pallescentibus; soris hypo- rarius epiphyllis, minutissimis rufo-fulvis; teleutosporis turbinatis, fulvescentibus, loculis juxtapositis obovatis, apice late rotundatis atque verrucosis, stipite longiusculo, 50-60 \approx 5, hyalino fultis, 20-30 \approx 20-28.

Hab. ad folia viva Cassiæ speciei cujusdam in dumetis prope Apiahy Brasilæ. — In acervorum margine adsunt sæpe paraphyses, 25-30 \approx 7-8. Cfr. *Uredo Puiggarii*.

2. **Diorchidium pallidum** Winter Grev. XV, p. 86. — Acervulis hy- 1296
pophyllis, sparsis gregariisve, macula indeterminata, irregulari, mox parva, mox late effusa, luteola insidentibus, minutissimis, punctiformibus; acervulis uredosporarum rotundatis seu irregulariter parumque oblongatis, ab epidermide inflata, demum fissa longe velatis, luteo-fuscidulis; uredosporis subglobosis vel ovoideis, dense echinulatis, luteolis, 18-19, 5 μ . diam., vel 27 \approx 18-20; acervulis teleutosporarum punctiformibus, hemisphærico-pulvinatis, ceraceis, compactiusculis; teleutosporis ovato-cuneatis seu subellipticis, apicem versus parum attenuatis rotundatisque, basi plerumque truncatis vel late rotundatis luteolo-hyalinis, stipite prælongo, lato, persistente, hyalino suffultis, 28-29 \approx 12-14.

Hab. in foliis vivis languidisque plantæ cujusdam scandentis in prov. St. Catharina Brasilæ (ULE).

GYMNOSPORANGIUM Hedw. — Syll. VII, 2, p. 737.

1. **Gymnosporangium Conninghamianum** Barcl. in Mem. Med. Off. of 1297
India V, Calcutta 1890, t. I-III. — Æcidiis et spermogoniis in fol. Piri Pashiæ areas sanguineas gignentibus; æcidiosporis minute

tuberculosis, pallide brunneis, subglobosis 28 \approx 24, pseudoperidiis cylindraceis immersis flavidis cinctis; spermatiis ovoideis, 8 \approx 4; teleutosporis, in ramulis Cupressi torulosæ, fusoides, flavis, 1-septatis, non constrictis, 75 \approx 25, longe stipitatis, in acervulos compactos atro-brunneos polymorphos 4-5 mm. diam., collectis.

Hab. in Piro et Cupresso memoratis Simla Indiæ.

PHRAGMIDIUM Link. — Syll. VII, 2, p. 742.

1. **Phragmidium papillatum** Diet. Hedw. 1890, p. 25. — Soris orbicularibus, minutis, paginam inferiorem foliorum fere æqualiter et petiolos occupantibus; uredosporis ovoideis vel sphæroideis, 20 μ . diam. v. usque 26 μ . longis, membrana achroa, echinulata; paraphysibus clavatis intermixtis; teleutosporis 3- vel 4-, rarius 2- v. 5-ocularibus, 45-75 \approx 30-35, obscure brunneis, levibus vertice papilla hyalina instructis; pedicello duplo triplove spora longiore et ultra, æquali a spora bene distincto.

Hab. in campis siccis prope Minussinsk Sibiricæ occident. ad *Potentillæ strigosæ* folia viva (N. MARTIANOFF). — Teleutosporis crassioribus et copiosius septatis a *Phr. Potentillæ* dignoscitur.

2. **Phragmidium quinqueloculare** Barc. Descript. List Ured. Simla III, p. 82. — Pustulis cauliculis forte æcidiosporiferis, aurantiis; sporis obtuse angulosis, dense verrucosis, 20-24 μ . diam.; paraphysibus clavatis cinctis; pustulis teleutosporicis follicolis; teleutosporis 5-ocularibus, oblongis, loculis rotundis, 12-13 μ . diam., terminalibus in rostrum minutum, hyalinum productis; pedicellis intus cavis, 64-80 \approx 20-22; sporidiolis sphæricis, 12 μ . diam.

Hab. in Rubo bifloro, Simla Indiæ.

3. **Phragmidium Barclayi** Diet. Hedw. 1890, p. 264, *Phr. Rubi* Barcl. vix Pers. — A *Phr. Rubi* differt soris majoribus, teleutosporis quoque majoribus, sursum angustioribus, nempe 5-ocularibus 96-102 μ . long., 6-ocularibus 112 μ . long., 7-ocularibus 120-130 μ . longis, apice obtusis vel vix depresso papillatis, stipite quoque multo longiore.

Hab. in foliis Rubi lasiocarpi, Simla Indiæ. — Inter uredosporas adsunt sæpe teleutosporæ solito minores parcius septatæ pallidiores.

4. **Phragmidium sparsum** Rich. Cat. Champ. Marn. n. 709. — Sparse gregarium; teleutosporis cylindraceis, apiculatis, brunneis, 5-6-se-

ptatis, minutissime asperulis; pedicello elongato, hyalino, cylindraceo.

Hab. ad caules *Spirææ Ulmaricæ* et culmos *Agrostidis vulgaris* (!) in silvis inter St. Amand et Aulnay-l' Aître, Marne Gallicæ.

5. **Phragmidium incompletum** Barc. *Descript. List Ured. Simla III*, 1302 p. 83. — Teleutosporis hucusque ignotis; uredosporis v. æcidiosporis nervos foliorum distincte hypertrophicos occupantibus, rarius hypophyllis, in pustulas minutas, læte flavas collectis; sporis globosis vel ovoideis, spinis prominentibus conspersis, 30-34 \approx 23-25; paraphysibus nullis.

Hab. in Rubo paniculato, Simla Indicæ.

ROSTRUPIA Lagerh. in *Journ. de Bot.* 1889, Jun. (Etym. a cl. prof. E. ROSTRUP). — Teleutosporæ tereti-oblongæ, transversæ 2-pluriseptatæ, coloratæ, cetera *Pucciniæ*. Uredosporæ adsunt; æcidiosporæ nondum visæ. — Au gen. *Puccinidia* H. Mayr (*Die Wald. Nordamer. Münch.* 1890) teleutosporis 1-3-septatis, uredosporis nigris (!) et æcidiosporis albis (!) sit affine, non liquet.

1. **Rostrupia Elymi** (West.) Lagerh. l. c. cum icone, *P. Elymi* West. 1303 — *Syll.* VII, 2, p. 656. — *P. triarticulata* B. et C. — *Syll.* VII, 2, pag. 732. — Teleutosporæ 54-90 \approx 12-18, 2-4-septatæ, apice truncatæ, brunneæ. Uredosporæ ovatæ fuscae, echinulatæ, 24-36 \approx 18-27.

Hab. in foliis *Elymi arenarii*, E. mollis in Belgio, Dania et Amer. bor.

2. **Rostrupia tomipara** (Trel.) Lagerh. l. c., *Puccinia tomipara* Trel. — *Syll.* VII, 2, p. 656.

BARCLAYELLA Diet. in *Hedw.* 1891, p. 266, t. XV, f. 1 (Etym. a cl. Doct. A. BARCLAY ex India). — Teleutosporæ series vel catenas pluri- v. multicellulares formantes, v. si mavis teleutosporæ tereti-clavatæ, brevi stipitatæ, 4-5-articulatæ. Promycelium ex articulis oriens cylindraceum, dein in sporidiola quatuor subcuboidea transverse secedens. Uredosporæ et æcidiosporæ ignotæ.

1. **Barclayella deformans** Diet. l. c. Cfr. *Barcl. On a Ured. aff. Himal.* 1304 *Spruce-fir. Calc.* 1886. — Stratis aurantiacis, 0,12 mm. cr.; articulis 16 μ . diam. circ. intus granulosus, terminali truncato, infimo cuneato.

Hab. in ramulis tenellis *Abietis Morindæ*, Simla Indicæ. — Folia ramulorum fatiscunt et incurvantur.

COLEOSPORIUM Lév. — Syll. VII, 2, p. 751.

1. **Coleosporium Deeringiæ** Pat. Bull. Soc. Myc. 1887, pag. 123. — 1305

Greges hypophyllos, numerosissimos, sparsos, rotundatos v. angulatos, 0,5-1 mm. diam., epidermide albida, irregulariter erumpenti tectos, efformans; uredosporis catenulatis, subhyalinis, disciformibus, minute punctulatis, 16 μ . diam., 6-8 μ . alt.

Hab. ad folia Deeringiæ Amherstianæ in India.

2. **Coleosporium Clematidis** Barc. Descript. List Ured. Simla III, p. 89, 1306

t. VI, f. 3. — Soris saturate aurantiis, hypophyllis, circinantibus circa pustulam pallidiorem uredineam; uredosporis crasse tuberculatis, catenulatis, 30 \approx 20; teleutosporis teretiusculis, 50-60 \approx 12-14, triseptatis non constrictis.

Hab. in foliis Clematidis montanæ, Simla Indiæ. -- Adest varietas in Clematide Buchanania.

3. **Coleosporium Plectranthi** Barc. Descript. List Ured. Simla III, p. 89, 1307

tab. VI, f. 4. — Pustulis omnino hypophyllis, circinatis, maculis flavis contrapositis; uredosporis pallide flavis, ovoideis, dense tuberculatis, 24 \approx 17, episporio crasso; teleutosporis hypophyllis, aurantiis, continuis vel 2-3-partitis, 24-28 \approx 12-14.

Hab. in foliis Plectranthi Gerardiani, Simla Indiæ.

4. **Coleosporium Geranii** Pat. in Rev. myc. 1890, p. 135. — Soris 1308

hypophyllis, sparsis, minutis, 1 mm. diam., rufis dein nigricantibus, orbicularibus, applanatis, micantibus, in massam gelatinosam pellucidam confluentibus; teleutosporis flavis, e loculis 4 superpositis, 70 \approx 18-25, apicali convexo, formatis, pedicello hyalino, curtissimo; uredosporis?

Hab. ad folia Geranii sp. in regione sinensi Asiæ (DELAVAY).

5. **Coleosporium? ignobile** Speg. F. Guar. II, n. 33. — Maculis nullis v. 1309

toto folio utrinque indeterminato-pallescente; acervulis hypophyllis, minutis, 250-300 μ . diam., hinc inde densissime aggregatis, rarius subsparsis, erumpentibus, pulverulentis, pallidissime e lutescenti fulvellis; uredosporis globoso-ovoideis, 15-18 μ . long., modice tunicatis, episporio hyalino ubique densiuscule verruculoso, protoplasmate nubiloso-grumoso flavescente donatis, non v. 1-guttulatis, primo catenulatis dein liberis.

Hab. ad folia plantæ cujusdam ignotæ in silvis subvirginis prope Guarapi Brasiliæ.

CHRYSOMYXA Ung. — Syll. VII, 2, p. 759.

1. **Chrysomyxa himalayensis** Barcl. in Scient. Mem. by Med. Off. of 1310
India V, Calcutta 1890, t. I et II. — A *C. Rhododendri* conspicue recedit acervulis subcircularibus, erumpenti-prominulis, rami-
petiolicolis, rarius folii-fructicolis, crebris, aureis, sporidioliferis fla-
vis; teleutosporis constanter 4-cellularibus, $25 \approx 13$; sporidiolis ovoi-
deis vel globosis sterigmati elongato fultis, $9 \approx 9$ vel $12 \approx 10$, au-
rantiacis.

Hab. in ramulis, petiolis, rarius foliis fructibusque vivis *Rho-*
dodendri arborei, Simla Indiæ.

2. **Chrysomyxa Piceæ** Barc. Descript. List Ured. Simla III, pag. 94, 1311
t. VI, f. 1-2. — Pustulis epiphyllis, læte aurantiis, convexis, ro-
tundis vel ovatis v. oblongis, plerumque in quoque folio 3-16 uni-
seriatis, 0,6 mm. diam. vel 2-3 mm. long., 0,6 mm. lat.; sporis
elongato-ovatis, ex hyphis septatis pseudoparenchyma formantibus
oriundis, $100-150 \approx 12-16$.

Hab. in foliis *Abietis Smithianæ* (*Morindæ*) Narcanda
pr. Simla Indiæ.

PUCCINIASTRUM Otth. — Syll. VII, 2, p. 762.

1. **Pucciniastrum Scleriæ** Pat. Journ. Bot. 1887, p. 248. — Pseudo- 1312
peridiis hypophyllis, minutis, 0,5-1 mm. diam., flavis, distinctis,
sparsis, areola violacea cinctis; uredosporis inæqualibus, ellipsoi-
deis vel sphæricis, exigue acuteque aculeatis, flavis, pallidissimis,
intus granulosus, $20-30 \approx 20$; paraphysibus nullis; teleutosporis non
visis.

Hab. ad folia *Scleriæ* in pratis Ogooué, Gabon Afr. occid.

TRIPHAGMIUM Link. — Syll. VII, 2, p. 768.

1. **Triphragmium setulosum** Pat. Journ. Bot. 1890, p. 58, fig. 3. — 1313
Soris amphigenis, orbicularibus, brunneis, compactis, parvis, 1 mm.
diam., sparsis vel 5-10-nis macula flavida insidentibus; paraphysi-
bus rigidis, cylindræis, obtusis, flavo-brunneolis, apice pallidiori-
bus, $35-80 \approx 10$; uredosporis subglobosis, asperulis, brunneolis, 20
 ≈ 15 ; teleutosporis levibus sed prope porum germinantem aspera-
tis, $25-40 \approx 20-32$, loculis singulis $22-35 \approx 12-15$.

Hab. in foliis arbusculæ cujusdam, Fu-Phap Tonkin Asiæ orient.

RAVENELIA Berk. — Syll. VII, 2, p. 770.

1. **Ravenelia fimbriata** Speg. F. Puigg. n. 206. — Hemiravenelia; acer- 1314
vulis hypophyllis punctiformibus rufis, erumpenti-superficialibus

200-400 μ . diam.; teleutosporis hemisphærico-depressis, 100-110 μ . diam., 60-70 μ . cr., 5-6 cellulas, 10-12 μ . diam., in omni directione præbentibus fulvis, margine inferiore hyalino-appendiculatis, appendicibus 8-16 subcylindricis obtusis, hyalinis; stipite hyalino brevissimo 27 \approx 18 fultis.

Hab. ad folia viva *Sesbania* speciei cujusdam in dumetis pr. Apiahy Brasiliæ. — Uredosporæ adsunt. Cfr. *Uredo fimbriata*.

ÆCIDIDIUM Pers. — Syll. VII, 2, p. 774.

1. **Æcidium Schweinfurthii** Henn. Bot. Ver. Brand. XXX, p. 299. — 1315
Pseudoperidiis solitariis vel confertis, conicis, supra vix attenuatis, apice clauso, rotundato præditis, griseo-brunneis, 1,5-3 mm. long., 0,5-0,7 mm. cr., membrana submicante, firma, pergamenea vestitis; æcidiosporis pallide brunneis, rotundato-polygoniis, levibus, forma varia.

Hab. in fructibus *Acacia* *Fistulæ*, qui tunc gallæ ad instar deformantur, Gallabat Afr. inter. (Dr. G. SCHWEINFURTH).

2. **Æcidium esculentum** Barcl. Descr. *Æcid.* escul. cum tab. — Pseudo- 1316
peridiis gregariis, immersis, conoideis, diu clausis, 1 mm. diam.; æcidiosporis copiosissimis, longe seriatis, subcuboideis, 28-40 \approx 16-19; spermogoniis minutis superficialibus, depressis, 100-120 μ . diam., 30-40 μ . altis.

Hab. in ramulis floriferis tenellis *Acacia* *eburneæ*, qui incrassantur, contorquentur et sterilescent, Poone Indiæ. — Ramuli *Æcidio* invasi frequenter comeduntur a pauperibus indicis, æque ac *Æcidium Urticæ* v. *himalayense* Barcl.

3. **Æcidium Eurotiæ** E. et E. Journ. Myc. 1890, p. 119. — Pseudo- 1317
peridiis hypophyllis, nervisequis, breve cylindræis, 0,7 mm. alt., 0,5 mm. lat., margine tenui subrecto, sublacerato; æcidiosporis subglobosis, aurantiis, levibus, 15-20 μ . diam.

Hab. in foliis *Eurotiæ lanatæ*, Helena, Mont. Amer. bor. (F. D. KELSEY).

4. **Æcidium monocystis** Berk. Flor. New. Zeal. vol. II, 196, tab. 105, 1318
f. 15, Hook Handb. New. Zeal. Flor. p. 625. — Peridiis magnis, solitariis, apicem versus in pagina superiori foliorum persistentibus, margine indurato involutis; sporis pallide aurantiaco-luteis.

Hab. ad folia *Helophylli Colensoi* Nova Zelandia in insula septentr (COLENZO).

5. **Æcidium superficiale** Karst. et Roum. Rev. Myc. 1890, p. 78. — 1319
Pseudoperidiis hypophyllis, gregatim sparsis, superficialibus, cupu-

- latis, flavidis, parvis, 0,2-0,3 mm., margine crassiusculo erecto sub-integro; æcidiosporis sphæroideis, sphæroideo-ellipsoideis v. irregulariter sphæroideis, fulvescentibus, 15-25 μ . diam. v. 30-37 \approx 23-25.
Hab. in foliis vivis *Sterculiæ* cujusdam in Ououlu Tonkin.
6. ***Æcidium Eryngii*** Cast. Cat. pl. Mars. II, p. 85. — Pseudoperidiis 1320
 irregulariter glomeratim digestis, primo subbullatis, aurantiacis, demum cupuliformibus, large apertis, albicantibus, sæpe ovoideis, ore reflexo, margine fimbriato; æcidiosporis pallidis subrotundis.
Hab. in foliis caulibusque *Eryngii* campestris prope Marseille Galliæ.
7. ***Æcidium Daleæ*** Kell. et Sw. Journ. Myc. 1889, p. 13. — *Æcidiiis* 1321
 numerosis, confertis; pseudoperidiis albis (v. roseolis?) sæpius gracilibus, $\frac{1}{5}$ - $\frac{1}{3}$ mm. diam., $\frac{1}{6}$ - $\frac{1}{3}$ mm. long., cylindræis vel supra sæpissime constrictis, apertis, numquam hemisphæricis, margine crenato, subintegro vel in lacinias numerosas, breves, erectas v. sub-reflexas laceratis; cellulis peridialibus subtus parvis et polygoniis, supra amplis et applanatis, 18-42 \approx 15-36, membrana 2-5 μ . cr., conspicue tuberculata; æcidiosporis flavis vel demum pallidis, sub-globosis vel ovoideis, regularibus vel subangulatis, 23-32 \approx 18-25, membrana 2-4 μ . cr., eleganter obtuseque tuberculosa, tuberculis 1-2 μ . diam.; spermogoniis amphigenis, sparsis, immersis, globosis vel ampulliformibus, 100 μ . diam.
Hab. ad *Daleam laxifloram*, Kansas Amer. bor.
8. ***Æcidium Mayteni*** Pazschke in Hedw. 1890, p. 159. — Pseudoperi- 1322
 diis globosis, aurantiacis, emergentibus, amphigenis, paginas foliorum sæpe deformantibus, diu clausis, margine non dentato præditis; æcidiosporis irregularibus oblongis v. polyhedricis, læte aurantiacis, circ. 15-20 μ . diam.
Hab. ad folia viva *Mayteni* sp., Brasilia, Sao Francisco, Prov. St. Catharina, Amer. austr. (E. ULE).
9. ***Æcidium elegans*** Diet. Hedw. 1888, p. 180. — Pseudoperidiis hy- 1323
 pophyllis, parce gregariis vel solitariis, elongato-cylindræis, circ. 1 mm. long., margine indivisis vel leniter constrictis, siccis dilute cerinis; æcidiosporis irregulariter polyhedricis, plerumque 25-34 \approx 27, siccis hyalinis, membrana spissa minute verruculosa, apice sæpe incrassata (usque ad 13 μ . cr.).
Hab. ad *Rhamnum prinoidem*, Caput Bonæ Spei Afr. austr. (MAC OWAN).
10. ***Æcidium Yuquillæ*** Pat. Bull. Soc. Myc. 1888, pag. 97. — Hypo- 1324
 phyllum, maculas flavidas efformans; pseudoperidiis flavidis, parum

numerosis, circulariter dispositis, ovoideo-rotundatis v. cylindraceis, apice integro et albo pertusis; æcidiosporis hyalinis, rotundatis v. e mutua compressione angulatis, rugosis, radiato-striatis, intus granulosis, 20-22 μ . diam.

Hab. ad folia *Pouzolsiæ occidentalis* (*Yuquilla*) Puerto-Zamuro Venezuelæ. — Pseudoperidii parietes e cellulis angulatis, hyalinis, striatis, plicatis, 25-33 μ . diam. efformati.

11. ***Æcidium neurophilum*** Pat. Journ. Bot. 1890, p. 59. — Pseudoperidiiis numerosis, seriatim dispositis vel interdum confertissimis, fulvis, cylindraceis vel semi-globulosis, apice apertis margineque integris, pariete e cellulis angulatis, crassis, striolatis, fulvis, 23-30 \approx 13-15; æcidiosporis pallidis, flavidis, subglobosis vel e mutua pressione angulatis, tenuissime asperatis, 20 μ . diam., spermogoniis numerosis, in centro maculæ dispositis, minutis, brunneis, ostiolo fimbriato. 1325

Hab. ad folia *Jodis* sp. Tonkin. — Fungus maculas flavido-fulvas, 3-4 cm. diam. margineque irregulares efformans.

12. ***Æcidium Plectranthi*** Barc. Descript. List Ured. Simla III, p. 104. 1326
— Soris minutis, hypophyllis, raris, cupulatis, stellatis; æcidiosporis læte aurantiis, globoso-ovoideis, tuberculatis, 26 \approx 24 vel 25 μ . diam.

Hab. in foliis *Plectranthi* *Coetsæ*, Simla Indiæ. — Adsunt spermogonia epiphylla.

13. ***Æcidium infrequens*** Barc. Descript. List Ured. Simla p. 105. — 1327
Soris hypophyllis, 2-3 mm.; pseudoperidiiis stellatis; æcidiosporis rotundis vel angulosis, pallide flavidis, crasse tunicatis, seriatis, 14 μ . diam. vel 18 \approx 16.

Hab. in foliis *Geranii* (*nepalensis*?) Simla Indiæ. — Maculæ, æcidiis contrapositæ, flavidæ.

14. ***Æcidium Strobilanthis*** Barcl. Descript. List Ured. Simla p. 369. 1328
— Maculis subcircularibus supra flavidis, subtus roseis v. roseo-flavis, 4-5 mm. diam. incrassatis; æcidiis hypophyllis; cellulis pseudoperidii angulosis, 16 \approx 11-12; æcidiosporis pallide aurantiis, inæqualiter globosis, 18 \approx 16; spermogoniis amphigenis, 100 \approx 94.

Hab. in foliis *Strobilanthis Dalhousianæ*, Simla Indiæ. — Teste Auctore, species hæc spectat ad cyclum *Pucciniæ Poliniæ*.

15. ***Æcidium Palmeri*** Anderson Journ. Myc. 1890, p. 122. — Pseudoperidiiis amphigenis, leviter immersis, gregariis, initio ovatis, albidis, dein cylindraceis apice rotundatis, subcarneis, demum rubro- 1329

aurantiis; apice albo-dehiscentibus laciniatisque; æcidiosporis globoso-rugulosis v. ovoideis, intus granuloso-nucleatis, aurantio-flavis, sublevibus, 16-26 \approx 16-23.

Hab. in foliis *Pentastemonis virgati*, Willow Springs Ariz. Am. bor. (Doct. E. PALMER).

16. ***Æcidium micropunctum*** E. et E. Journ. Myc. 1890, pag. 119. — 1330

Pseudoperidiis gregariis, in soros oblongos, 3-5 mm., 2-3 mm. lat. digestis, minutis 0,3 mm. diam., immersis, limbo angusto erecto, sublacero; æcidiosporis subglobosis vel oblongis, subangulatis, levibus, 18-20 μ . long., aurantio-rubris.

Hab. in foliis, quæ leniter incrassantur, Castillejæ, Pine Ridge Nebr. Amer. bor.

17. ***Æcidium disseminatum*** Berk. in Hook. Handb. of New Zeal. Fl. 1331

p. 756, n. 625. — Maculis nullis vel effusis; pseudo-peridiis sparsis, brevibus, margine lobato; æcidiosporis albidis (?).

Hab. in foliis *Hyperici japonici* in regione media Novæ Zelandiæ. — Ab *Æ. hypericato* distinctum videtur.

18. ***Æcidium Fumariacearum*** Kell. et Swingle Journ. Myc. 1888, p. 43. 1332

— Maculis nullis; pseudoperidiis congestis, cylindræis, brevibus, $\frac{1}{4}$ - $\frac{1}{2}$ mm. diam., limbo sæpius inæquali, lacero subreflexo, cellulis deciduis, 24-30 \approx 15-24; æcidiosporis globoso-ovoides, sordide aurantiis, tenui-tunicatis, minute tuberculatis, 18-24 \approx 16-20.

Hab. in caulibus, foliis petiolisque *Corydalis aureæ* et *Dicentræ cucullariæ*, Manhattan Kansas Amer. bor. — Ab *Æc. Dicentræ* pseudoperidiis minutis, congestis, sporis majoribus differt.

19. ***Æcidium Tylophoræ*** Cooke Grev. XIX, p. 6. — Epiphyllum et 1333

caulicolum; maculis purpureis, orbicularibus vel in caulem effusis; pseudoperidiis semiimmersis margine albo-lacerato; sporis subglobosis aurantiacis.

Hab. in foliis caulibusque *Tylophoræ*, Natal. — Ubi caules fungo afficiuntur, maxime torquentur.

20. ***Æcidium Jasmini*** Barcl. Descript. List Ured. Simla pag. 363, 1334

t. XIV, f. 2-3. — Pseudoperidiis breve cylindræis, apice stellatim dehiscentibus, maculas in folio subcirculares supra pallidas, infra flavidas et brunneo-rufas gignentibus, aurantiis; æcidiosporis subglobosis vel leniter angulosis, 26 \approx 20, intus granulosis aurantiis.

Hab. in foliis petiolisque *Jasmini humilis*, Simla Indiæ.

21. ***Æcidium cissigenum*** Welw. herb. Lagerh. Bol. Brot. 1889, p. 133. 1335

— Pseudoperidiis stipatis, minime profundis, petiolum tegentibus et subinde in folia transeuntibus, margine subcrenulato, laciniis

brevissimis; æcidiosporis vivis aurantiacis, siccitate pallidis, subglobosis v. ovato-oblongis, forma et crassitudine variis, 9–12 μ . long.

Hab. ad folia *Cissi* sp. pr. Caghuy, Pungo Andongo in Angola Africae.

22. *Æcidium benguellense* Lagerh. Bol. Brot. 1889, p. 134. — Sper. 1336

mogoniis in maculis rubris congregatis, æcidiis circumdatis; æcidiis in maculis magnis, ut videtur, aurantiacis, congregatis in pagina inferiore, rarissime in pagina superiore foliorum; pseudoperidiis breviter cylindræis vel cupulatis, margine lacinulato recto vel parum recurvato; sporis polygoniis, membrana incolori subtiliter verrucosa præditis, circ. 24 μ . diam.

Hab. ad folia viva suffruticis Rubiacearum a Welwitsch ad interim nomine *Stephanostigmatis fuchsioidis* designati in silvestribus pr. lacum magnum de Ivantala (Huilla) Africae.

23. *Æcidium Royenæ* C. et M. Grev. XVII, p. 70. — Maculis nullis; 1337

pseudoperidiis hypophyllis gregariis totam superficiem occupantibus, cupularibus, aureis, margine minute serrulato, albo; æcidiosporis concatenatis, quadratis, minute rugulosis, 18 \approx 12 μ . diam.

Hab. in foliis *Royenæ* pallentis, Berea Natal Africae occidentalis (WOOD).

24. *Æcidium Welwitschii* Lagerh. Bol. Brot. 1889, p. 134. — *Æci-* 1338

diis totam superficiem folii occupantibus; pseudoperidiis cupulatis, brevibus, margine lacinulato et recurvato; æcidiosporis polygoniis, membrana hyalina subtiliter verrucosa præditis, 22–25 \approx 16–20.

Hab. ad folia viva fruticuli e familia Ebenacearum in rupibus de Morro de Monino (Huilla) in Benguella Africae.

25. *Æcidium Rehderianum* P. Magn. in Abhandl. Bot. Brand. 1887, 1339

p. 7, — Destruens, maculas flavas, limitatas efformans; pseudoperidiis paucis, irregulariter erumpentibus, luteis, margine vix deflexo; æcidiosporis e sterigmatibus immediate constrictis ordinatim ortis, episporio minute granulato, æqualiter crasso, præditis, irregulariter angulato-ovoideis, 22,4–24,8 \approx 17,4–18,6.

Hab. ad folia *Loasæ aurantiacæ* in Hortis Botanicis in Berlin et Jena (REHDER). — *Æcidio Convallaricæ* affine.

26. *Æcidium Compositarum* Mart. — Syll. VII, 2, p. 798. — Var. 1340

Lygodesmiæ Webb. in Bess. et Webb. Rep. Nebr. 1889, p. 70. — Amphigenum, destruens; pseudoperidiis prominentibus, subhemisphaericis, apice poro minuto hiantibus, foliicolis, subconfertis vel irregulariter sparsis, caulicolis in cæspites sæpius elongatos, distortos, incrassatos congestis; pseudoperidii cellulis angulato-ellipsoi-

deis, plerumque valide tuberculatis; æcidiosporis dilute aurantio-flavis, leniter tuberculatis, subrotundo-ellipsoideis vel ovoideis, 20-23 = 22-27, membrana mediocriter crassa; spermogoniis non visis.

Hab. ad folia et caules *Lygodesmiæ junceæ*, Nebraska Amer. bor.

27. ***Æcidium Linosyridis*** Lagerh. Pilzfl. Freib. p. 46. — Pseudoperidiis epiphyllis et hypophyllis, gregariis, brevibus, ore dilacerato; æcidiosporis angulato-globosis, aurantiacis, episporio subtiliter verruculoso præditis, 16-20 μ . diam. 1341

Hab. in foliis et caulibus *Linosyridis vulgaris* in monte Kaiserstuhl inter Ihringen et Achkarren Germaniæ.

28. ***Æcidium Centaureæ-Scabiosæ*** P. Magn. Verz. Granb. p. 34. — 1342
Maculas latas, rubras, margine rubro-brunneas efformans; spermogoniis in centro maculæ gregariis; æcidiis pluriseriatis, valde confertis ad maculæ peripheriam versus pluriseriatim dispositis, gregariis, rarius solitariis.

Hab. ad folia *Centaureæ Scabiosæ* pr. Vulpera, Canton Graubünden Helvetiæ.

29. ***Æcidium crepidicolum*** Ell. et Gall. Journ. Myc. 1890, p. 31. — 1343
Amphigenum, parvum, laxe gregarium, sæpe circa spatium centrale vacuum subcircinans, primo hemisphæricum et clausum, mox apertum; æcidiis folio profunde immersis; pseudoperidiis tenuibus, albis, margine anguste reflexis, demum fere vel usque ad basim lacerato-fissis; æcidiosporis subglobosis, 20-24 μ . diam., ex ovoideo ellipsoideis, 20-30 = 15-20, levibus?, episporio crassiusculo.

Hab. ad folia *Crepidis acuminatæ*, Helena Mont. Amer. bor. (Rev. F. D. KELSEY).

30. ***Æcidium heliotropidatum*** Schwein. in Berk. et Curt. Exot. Fungi 1344
p. 282. — Amphigenum; maculis utrinque fuscis suborbiculatis; pseudoperidiis brevibus sparsis, margine breviter rotato-denticulato.

Hab. in foliis *Heliotropii* cujusdam, Surinam. — « An satis diversum ab *Æc. Heliotropii* Tracy v. *H. bifirmi* Peck.?

31. ***Æcidium Chrysopsidis*** Ell. et Anders. Bot. Gaz. 1891, p. 48. — 1345
Maculis incrassatis, pallidis, immarginatis, 2,5-5 mm. diam.; pseudoperidiis irregulariter sparsis vel interdum subconcentrice dispositis, omnino immersis, demum ostiolo subprominulo pertusis; cellulis pseudoperidialibus plerumque ovoideis, 30-35 = 15-25; æcidiosporis flavis, plerumque ovoideo-oblongis, 18-23 = 14-16.

Hab. in foliis *Chrysopsidis villosæ*, Sand Coulee, Cascade co., Montana Amer. bor.

32. ***Æcidium Liatridis*** Ell. et Anders. Bot. Gaz. 1891, p. 47. — Sper- 1346
mogoniis minutis, epiphyllis, nigris, maculis subincrassatis, dilute coloratis, interdum purpureo-marginatis, elongatis, 0,5-1 cm. long., 3-4 mm. lat. insidentibus; æcidiis hypophyllis, ad maculas dense sparsis; pseudoperidiis angustato-cylindræis vel supra incrassatis, 2-6-plo longioribus quam latis, albis vel subroseolis, margine plerumque irregulariter laceratis; æcidiosporis subglobosis, oblongis vel ovoideis, 20-26 μ . long.

Hab. in foliis *Liatridis punctatæ*, Great Falls, Montana Amer. bor.

33. ***Æcidium Cleomes*** Ell. et Anders. Bot. Gaz. 1891, p. 48. — Am- 1347
phigenum, maculis brunneolis, subincrassatis insidens, parvum, circ. 330 μ . diam., primitus clausum, dein apertum sed vix incurvum, margine sublacerato; æcidiosporis irregulariter globosis vel subovatis, 15-20 μ . diam.

Hab. in foliis *Cleomes integrifoliæ*, Helena Montana Amer. bor. (ANDERSON).

34. ***Æcidium Heliotropii-europæi*** Schræt. Hedw. 1890, p. 56. — Sper- 1348
mogoniis plerumque epiphyllis, in greges parvos, rotundatos congestis, conicis, rubro-aurantiacis; æcidiis in circulos simplices vel multiplices, concentricos, prope spermogonia dispositis, modice confertis, plerumque hypophyllis, maculis luteolis, 2-3 mm. lat. insidentibus, basi angustis primo semiglobosis, dein erumpentibus; pseudoperidio brevi, plano, margine obtuso vel leniter denticulato, cellulis angulatis, laxis, membrana æqualiter valde incrassata, granulata, hyalina; æcidiosporis rotundis vel subangulatis, 18-24 μ . diam., membrana hyalina, minutissima punctulata vel sublevi, contentu flavo-aurantiaco.

Hab. ad folia *Heliotropii europæi* Kajaburnia, Donaufer prope Belgrad Serbiæ (WOJNOWIC).

35. ***Æcidium tubulosum*** Pat. Bull. Soc. Myc. 1888, p. 97. — Hypo- 1349
phyllum; maculis brunneis, orbicularibus, 1,5-2 cm. diam.; pseudoperidiis confertis, circulariter dispositis, erectis, tubulosis, 3-4 mm. long., primo clausis, dein apice apertis et dentatis, parieti tenui, sicco; æcidiosporis angulatis vel ovoideis, pallide aurantiacis, 26-28 μ .

Hab. ad folia *Solanaceæ spinosæ*, Mapire Venezuelæ.

36. ***Æcidium Cestri*** Mont. (1835). — Syll. VII, 2, pag. 812. — Huc 1350
sine dubio spectat *Symperidium Cestri* Klot. Fung. Meyen. p. 245 (1843) ex Chile (MEYEN).

37. **Æcidium Astragali** Eriks. Fungi paras. Scand. n. 285. — Pseu. 1351
doperidiis hypophyllis superficiem folii inferiorem tegentibus, late
urceolatis, ore lacero denticulato, albo-flavidis; æcidiosporis palli-
dis oblongo-ovatis, 16-24 \approx 11-16.

Hab. in Astragalo alpino, Lille Elvedalen Norvegiæ.

38. **Æcidium Thalictri-fœtidi** P. Magn. Verz. Graub. p. 32. — Æci. 1352
diis maculas vel pulvinulos efformantibus, dense confertis, minutis,
angustis; æcidiosporis levibus; pseudoperidiorum membrana valde
incrassata.

Hab. ad folia et inflorescentiam Thalictri fœtidi pr. Ardez,
Canton Graubünden Helvetiæ.

39. **Æcidium circumscriptum** Schwein. in Berk. et Curt. Exot. fung. 1353
p. 283. — Hypophyllum; maculis pallidis orbicularibus utrinque
fusco-cinctis, 3-5 mm. lat.; pseudoperidiis congestis epidermide
rufa connexis.

Hab. in foliis plantæ ignotæ, Surinam.

40. **Æcidium decoloratum** Schwein. in Berk. et Curt. Exot. Fung. 1354
p. 283. — Hypophyllum; maculis fuscis orbicularibus, margine in-
definito, hypophyllis obscurioribus; pseudoperidiis brevibus, sub-
congestis, margine dentatis; sporis globoso-angulosis, granulatis,
14-15 μ . diam.

Hab. in foliis plantæ ignotæ, Surinam.

PERIDERMIIUM Lév. — Syll. VII, 2, p. 835.

1. **Peridermium Balansæ** M. Cornu in Pat. Champ. N. Caled. p. 6, 1355
t. 17, f. 4 (*Æcidium*). — Pseudoperidiis majusculis, 1 mm. diam.,
intra hypertrophiam contextus foliaris sparsis; sporis angulatis,
echinatis, pallide flavis, 40-46 \approx 25-33; spermogoniis in aversa pa-
gina sitis.

Hab. ad folia Dammariæ ovatæ in Nova Caledonia (BA-
LANSA).

2. **Peridermium Cornui** Rost. et Klebahn, Hedw. 1890, p. 29, *P. Pini* 1356
vel *corticola* Pl. Auct. — Æcidiosporis formæ et structuræ *Peri-
dermii Pini* paullo subtilioribus, 22-26, rarius ad 30 \approx 16-20; epi-
sporio ad partem areolatam 2-2,5 ad partes verrucosas 3-4 μ . cras-
so; pseudoperidiis tenuioribus, in minore lateris interni parte textu
cellulari squamoso vel striatulo minus copioso rarissime in fila ri-
gida producto indutis; pariete structuræ *Peridermii Pini*, cellulis
superioris partis minus compressis, cellularum membranis paullo

tenuioribus, circiter 4-5 μ ., verrucis ad latus externum paullulo subtilioribus.

Hab. in ramis truncisque Pini silvestris in Europa. — Ab affini *P. Pini* differt defectu fere absoluto filorum rigidorum.

3. **Peridermium Piceæ** Barcl. A Sec. Spec. Ured. cum tabula (*Æcidium*). — Pseudoperidiis minutis, seriatis, albidis, 0,2-0,25 mm. diam., sero irregulariter dehiscentibus; æcidiosporis ovoideis per isthmos catenulatis, 30 \approx 24, aurantiis, episporio spinulis crebris deciduis tecto. 1357

Hab. in foliis, quæ lutea fiunt, Abietis Smithianæ (A. Morindæ) Simla Indiæ. — Quoad *Peridermium Thomsonii* Berk. cfr. Barcl. On a Ured. affect. Himal. Spruce-Fir, Calcutta 1886, cum tab.

4. **Peridermium Cedri** Barcl. On new Spec. Ured. cum tab. et Descript. List. III, pag. 104 (*Æcidium*). — Pseudoperidiis hinc inde dense acervatis, pallidis $\frac{1}{5}$ mm. diam., margine exstante laciniato; æcidiosporis globoso-inæqualibus, intus aurantio-granulosis, 17 \approx 14, episporio crasso crebre minuto tuberculato. 1358

Hab. in foliis Cedri Deodaræ, quæ conspicue incurvantur, inter Simla et Wangtu Indiæ.

5. **Peridermium complanatum** Barc. Descript. List Ured. Simla III, p. 101, t. V, f. 1, 3, 8 (*Æcidium*). — Pseudoperidiis majusculis, prominentibus, truncatis, flavido-rufis, area decolorata cinctis, 5 mm. long. vel longioribus, consistentibus, apice dehiscentibus, cellulis pseudoperidialibus pallidis, 40 \approx 38; æcidiosporis longe seriatis, ovoideis, aurantiis, spinulosis, 24 \approx 17; spermogoniis profunde immersis. 1359

Hab. in foliis rarius cortice Pini longifoliæ, Simla Indiæ.

6. **Peridermium brevius** Barc. Descript. List Ured. Simla III, p. 102, t. V, f. 2, 6, 7, 9 (*Æcidium*). — Pseudoperidiis consistentibus, albis, e stratis binis cellularum formatis, cellulis 40 \approx 22; æcidiosporis ovoideis, aurantiis, crasse tunicatis, spinulosis, longe seriatis, lamellis intercalaribus connexis, 27 \approx 19. 1360

Hab. in foliis Pini excelsæ, Simla Indiæ.

UREDO Pers. — Syll. VII, 2, p. 838.

1. **Uredo Gomphrenæ** Barc. Descript. List Ured. Simla III, pag. 99, t. VI, f. 8. — Soris dense gregariis, minutis, brunneis, circularibus, plerumque hypophyllis, rarius cauliculis et tunc ovato-oblongis; uredosporis obovatis, spinulosis, flavido-brunneis, deciduis, crassiuscule tunicatis, 35 \approx 26. 1361

- Hab.* in *Gomphrena globosa*, Simla Indiæ.
2. **Uredo Deutziae** Barc. Descript. List Ured. Simla III, p. 100. — 1362
Maculis circularibus, pallidis; soris flavidis, hypophyllis, numerosis; uredosporis ovoideis, pallide aurantiis, sparse spinulosis, 22-25 \approx 18-21.
Hab. in foliis *Deutziae corymbosæ*, Simla Indiæ.
3. **Uredo Nyssæ** Ell. et Tracy, Journ. Myc. 1890, p. 77. — Hypophylla 1363
la; soris minutis, diffusis, non confluentibus; uredosporis e globoso piriformibus, episporio tenui, minute echinulato, 15-30 \approx 12-15.
Hab. ad folia *Nyssæ capitatae*, Jackson, Missouri Amer. bor. (TRACY).
4. **Uredo Balsamodendri** Cooke Grev. XIX, p. 6. — Hypophylla; ma- 1364
culis indeterminatis, brunneis; soris sparsis, minutis, fuscis, pulverulentis; uredosporis ellipticis, plerumque apicem versus granulato-verrucosis, fuscis, 35 \approx 18.
Hab. in foliis *Balsameæ*, D'Urban Natal Africae (J. M. Wood).
5. **Uredo? subhyalina** Speg. F. Puigg. n. 212. — Acervulis petioli- 1365
colis vel neurophilis, pallide aurantiacis, minutis; uredosporis subglobosis episporio levi hyalino protoplasmate nubiloso flavescente donatis, 18-24 \approx 18-20.
Hab. ad folia viva *Desmodii* speciei cujusdam in pratis Apiahy Brasiliæ. — Maculæ nullæ; acervuli difformes sæpe confluentes 200-250 μ . diam., erumpentes, æcidium pusillum simulates. An *Coleosporium?*
6. **Uredo microtheles** Speg. F. Puigg. n. 209. — Acervulis hypophyllis 1366
lis, minutis, ferrugineis; uredosporis globosis, verruculosis, fulvis, 17-18 μ . diam.
Hab. ad folia viva *Desmodii* speciei cujusdam in herbosis prope Apiahy Brasiliæ. — Maculæ amphigenæ, irregulares, indeterminatæ, pallescentes; acervuli 150-250 μ . diam.
7. **Uredo kansensis** Kell. et Sw. Journ. Mycol. pag. 77. — Maculis 1367
sparsis, amphigenis, virenti-flavis, centro subviridibus, dein dilute brunneis, rotundatis, marginalibus subtriangularibus; soris hypophyllis vel raro epiphyllis, valde prominentibus, $\frac{1}{4}$ -3 mm. diam., secus orbem dispositis centroque spermogonia cingentibus; paraphysibus numerosis, hyalinis, clavatis, incurvis circ. 50-90 \approx 13-20; uredosporis ovoideis vel subovatis, hyalinis, maturis e subgloboso piriformibus vel ellipsoideis, subsordidis, sæpius plus minus papillatis, 17-35 \approx 15-22, valde deciduis; pedicellis in stratum congestis; spermogoniis amphigenis, nigris vel atro-brunneis, 75-100 μ . diam.

Hab. in foliolis *Amorphæ fruticosæ*, Rooks County et Manhattan, Kansas Amer. bor.

8. **Uredo Puiggarii** Speg. F. Puigg. n. 210. — Acervulis minutis fulvo-ferrugineis, 120-150 μ . diam.; uredosporis subglobosis, verruculosus, fulvis, 20-22 \approx 18-20. 1368

Hab. ad folia viva *Cassiæ* speciei cujusdam in dumetis prope Apiahy Brasilæ. — Maculæ amphigenæ pallescentes indeterminatæ. Status uredosporicus *Diorchidii Puiggarii* Speg.

9. **Uredo fimbriata** Speg. F. Puigg. n. 207. — Acervulis epiphyllis, erumpentibus, minutis, 120-180 μ . diam., rufis; uredosporis subellipsoideis, levibus, hyalino-melleis, 12-15 \approx 10-12. 1369

Hab. ad folia viva *Sesbania* speciei cujusdam in dumetis prope Apiahy Brasilæ. — Maculæ nullæ vel epiphyllæ, orbiculares, 2-5 mm. diam., indeterminatæ, vix pallescentes. Status uredosporicus *Raveneliæ fimbriatæ* Speg.

10. **Uredo Acaciæ** Cooke Grev. XIX, p. 3. — Soris bullatis, plerumque cauliculis, fuscis, elongatis, difformibus; uredosporis subglobosis, levibus, circa 18 μ . diam., pedicellis hyalinis diffluentibus suffultis. 1370

Hab. in ramulis tenellis vivis *Acaciæ*, New Zealand (COLENSO).

11. **Uredo Compositarum** var. **Celmisiæ** Cooke Grev. XIX, p. 3. — Uredosporis pallidis, verruculosus, 26-30 \approx 22. 1371

Hab. in foliis *Celmisiæ longifloræ*, New Zealand (COLENSO).

12. **Uredo Campanularum** C. et M. Grev. XVIII, p. 50. — Hypophylla; soris pallidis, sparsis, subbullatis, diu integris, demum fissis pulverulentis; uredosporis oblongis, leniter asperulis, pallide flaventibus, 16 \approx 12. 1372

Hab. in foliis *Lightfootiæ*, Fort Dauphin Madagascar (SCOTT ELLIOT).

13. **Uredo Celastrineæ** Cooke et Mass. Grev. XVII, p. 70. — Soris hypophyllis, magnis, bullatis, epidermide tectis, gilvis; uredosporis elongato-ellipsoideis 40-50 \approx 14-16; episporio crassiusculo, granuloso-verrucoso, hyalino, plasmate aurantiaco. 1373

Hab. in foliis vivis *Salaciæ Kraussii*, D'Urban Africa (WOOD).

14. **Uredo Bignoniacearum** Speg. F. Guar. II, n. 39. — Maculis nullis v. pallescentibus minutis indeterminatis; acervulis hypophyllis e globoso lenticularibus 80-100 μ . diam., sparsis v. gregariis sordide fulvis, uredosporis, teleutosporis sæpe commixtis, globosis 30 μ . diam., modice tunicatis, minute verruculosus, fulvo-ferrugineis. 1374

Hab. ad folia viva *Bignoniæ* scandentis cujusdam in dumetis prope Guarapí Brasilæ. — Status uredosporus *Pucciniæ Bignoniacearum* Speg.

15. **Uredo paraguayensis** Speg. F. Guar. II, n. 38. — Maculis nullis; 1375
acervulis hypophyllis sparsis v. hinc inde gregariis, minutis, pulverulentis; uredosporis, teleutosporis sæpe commixtis, globosis 18-20 μ . diam., tenuiter tunicatis, laxè minuteque verruculosis, pallide fulvo-cinnamomeis.

Hab. ad folia viva *Lippiæ* cujusdam in silvis pr. Paraguari Brasilæ. — Status uredosporus *Pucciniæ paraguayensis* Speg.

16. **Uredo africana** Lagerh. Bol. Brot. 1889, p. 135. — Soris hypo- 1376
phyllis, aureis, numerosis, angulosis, confluentibus, superficiem inferiorem folii infecti sæpe obducentibus; uredosporis plus minus reniformibus, 27-33 \simeq 18, membrana achroa aculeata præditis; paraphysibus nullis.

Hab. ad folia *Rubiacearum* in pratis humidis inter rivum Ema et lacum Ivantala in Angola Africæ.

17. **Uredo Asclepiadis** Schwein. in Berk. et Curt. Exot. fung. p. 282 1377
(1854). — Hypophylla; maculis subobliteratis, epiphyllis, pallidis; soris paucis sparsis, depressis, epidermide diu tectis; sporis ellipticis fuscis, 25 μ . long.

Hab. in foliis *Asclepiadis* cujusdam, Surinam. — Ab *Uromycele Asclepiadis* Cooke videtur diversa soris parcis, epidermide diu tectis, maculis etc.

18. **Uredo Cryptolepidis** Cooke Grev. XIX, p. 6. — Hypophylla; ma- 1378
culis obsoletis; soris minimis, pallide fuscis, 5-10-aggregatis mox epidermide fissa cinctis; uredosporis globosis, asperulis, pallidis, 18 μ . diam.

Hab. ad folia *Cryptolepidis*, Inanda Natal Africæ (WOOD).

19. **Uredo Amsoniæ** Cooke Grev. XIX, p. 6. — Hypophylla; maculis 1379
obsoletis; soris minutis, orbicularibus, pallidis, gregariis, primo tectis, dein lacero-erumpentibus; uredosporis globosis, verruculosis, pallide flavidis, 20-22.

Hab. in foliis *Amsoniæ*, S. Carolina Amer. bor. (RAVENEL).

20. **Uredo microspora** Vize Grev. V, p. 14 (*Trichobasis*). — Epi- 1380
phylla; maculis suborbicularibus purpureis; soris 3-8 minutis, erumpentibus pallidis (?); uredosporis subglobosis parvis, levibus, 12-15 \simeq 10.

Hab. in pag. sup. foliorum *Compositæ* cujusdam in India.

21. **Uredo Janiphæ** Winter in Grev. XV, p. 86. — Acervulis solita- 1381

riis gregariisve, plerumque hypo-rarius etiam epiphyllis, sæpe ad petiolos et ramulos juniores, ad folia maculis irregularibus rotundatisve, sæpe confluentibus, indeterminatis, fuligineis insidentibus, rotundatis vel angulatis, minutis $\frac{1}{2}$ -1 mm. latis, ad nervos foliorum, petiolos ramulosque juniores plus minusve elongatis, sæpe confluentibus, 5 mm. long., primo ab epidermide pustulatim inflata, luteola velatis, mox autem nudis, applanatis, epidermidis fissæ laciniis cinctis, pallide luteolis; sporis globosis vel ellipticis interdum ovatis, dense minutissimeque aculeolatis, fuligineis 19,5-25 μ . diam. vel usque 28,5 μ . longis.

Hab. in foliis vivis Janiphæ Manihot in Brasilia (ULE).

22. **Uredo interstitialis** Schlecht. in Ehrenb. Fung. Chamisso p. 96, 1382 t. XX, f. 13 (1820). — Soris hypophyllis oblongo-linearibus exacte internerviis, hinc pinnatim dispositis, tectis, dein erumpentibus, luteis (in sicco); uredosporis globoso-angulosis, pellucidis, laxis.

Hab. in foliis Rubi arctici, Kamtschatka (53° lat. sept.). — An eadem ac *U. nitens* Schw. (1822)?

23. **Uredo arctica** Lagerh. in Hedw. 1889, p. 109. — Soris uredosporiferis hypophyllis, totam superficiem folii obtegentibus, minutis, flavis, pseudoperidio mammiformi-prominulo, apice pertuso tectis; cellulis pseudoperidialibus aculeatis; uredosporis oblongo-ellipsoideis vel piriformibus, membrana hyalina aculeolata et contentu pallide aureo præditis 21-27 \approx 12-15; paraphysibus nullis.

Hab. in foliis vivis Rubi arctici prope Lulea Sueciæ bor. — Ad *Æcidium* vergit.

24. **Uredo Myrtacearum** Pазschke in Hedw. 1890, p. 159. — Soris 1384 hypophyllis, primo tectis, dein liberis, confluentibus, irregulariter dispersis, maculas amphigenas, usque ad 3 mm. longas irregulares, flavo-brunneas, margine obscuriore præditas, formantibus; uredosporis ellipsoideis v. ovoideis, episporio incolorato (an semper?) aculeis dispersis, crassis brevibusque ornato, præditis, 18-20 \approx 15-17.

Hab. in foliis Myrtacearum sp., Brasilia, Sao Francisco, Prov. St. Catharina Amer. austr. (E. ULE).

25. **Uredo Oleariæ** Cooke Grev. XIV, p. 48. — Hypophylla; maculis 1385 nullis; soris subrotundatis, subgregariis, mox apertis, pulverulentis, aureo-fuscis, 1 mm. diam.; uredosporis globoso-ovatis, levibus, pallide flavidis 22 \approx 15, breviter pedicellatis.

Hab. in foliis vivis Oleariæ Lyallii, Port Ross Novæ Zealandiæ (KIRK).

26. **Uredo inflata** Cooke Grev. XIX, p. 48. — Amphigena; soris ir. 1386

regularibus, bullatis, diu tectis, 2 mm. long., pallidis; uredosporis subglobosis, levibus $18 \approx 14$, hyalinis, vix tinctis (siccis) episporio crasso, pedicello brevi.

Hab. in foliis vivis Ligustici latifolii, Campbell Island Novæ Zelandiæ (KIRK).

27. **Uredo Bupleuri** Barc. Descript. List Ured. Simla III, p. 98. — 1387

Soris minutis, circularibus, brunneis, hypophyllis; uredosporis globosis, brunneis, 20μ . diam., verrucosis.

Hab. in foliis Bupleuri falcati, Simla Indiæ.

28. **Uredo Vialæ** Lagerh. Compt. rendus Acad. Scienc. Paris 1890. — 1388

Soris hypophyllis, solitariis majoribus vel dense gregariis minimis, solitariis in pagina superiore foliorum maculas parvas formantibus; uredosporis piriformibus vel ovoideis, $20-27 \approx 15-18$, membrana hyalina tenui aculeata et contentu aureo præditis, paraphysibus cylindricis, curvatis, hyalinis circumdatis.

Hab. in foliis vivis Vitis sp. insula Jamaica inter Kingston et Rockfort Amer. centr.

29. **Uredo cronartiiformis** Barc. Descript. List Ured. Simla III, p. 98, 1389

t. VI, f. 9. — Soris minutissimis, hypophyllis flavidis, dein brunneis, columnaribus (*Cronartii* ad instar); uredosporis obovato-clavatis, spinulosis, pallide aurantiis, $27-30 \approx 18$.

Hab. in foliis Vitis himalayanae, Simla Indiæ.

30. **Uredo maculans** Pat. Bull. Soc. Myc. 1888, p. 98. — Hypophyl- 1390

la; soris sparsis, rufis; uredosporis ovoideis, subglobosis, fulvis v. brunneo-rufis, $29-30 \approx 25-30$, membrana minutissime granulosa, 1-2 poros gerente; pedicello brevissimo.

Hab. ad folia Marantaceæ cujusdam, Caracas Venezuelæ.

31. **Uredo incognita** Speg. F. Guar. II, n. 35. — Maculis nullis vel 1391

vix manifestis pallescentibus indeterminatis; acervulis amphigenis sparsis, mediocribus, $400-700 \mu$. diam., diu tectis dein erumpentibus, epidermide laciniatim fissa cinctis, pallide fulvis; uredosporis obovatis $22-25 \approx 18-20$, episporio crassiusculo, sublaxe verrucosohirto vestitis, pallide melleis.

Hab. ad folia viva Orchideæ terrestris (an Liliaceæ?) cujusdam in herbosis prope Guarapí Brasiliæ. — Species *U. Gynandracearum* affinis sed, ut videtur, satis distincta.

32. **Uredo antarctica** Berk. Flor. Antarct. p. 170, t. 68, f. 2 (*U. an-* 1392

tartica), Hook. Handb. New Zeal. Flor. p. 624. — Maculis parvis, in paginis foliorum oppositis, rotundis, purpurascentibus, in-

U. antarctica Berk. non mutanda, prioritatis causa!

ferne pallidis; soris bullatis; sporis magnis, levibus, late obovatis, brunneis, globulo centrali oleoso instructis brevissime stipitatis.

Hab. ad folia Luzulæ crinitæ in Campbell's Island. — Nomen «*antarctica*», leviter mutavi in «*antarctina*» ob homonymam et diversam speciem cl. Spegazzini.

33. **Uredo peridermiospora** Ell. et Tracy Journ. Myc. 1890, p. 77. 1393

— Epiphylla; soris linearibus, prope folii basim, epidermide rupta diu tectis; uredosporis læte rubris, piriformibus, echinulatis, apice valde incrassatis, 36-45 \approx 19-22, pedicello brevi sed distincto.

Hab. ad folia Spartinae glabræ, Ocean Springs, Missouri Amer. bor. (TRACY).

34. **Uredo Hilariae** Ell. et Tracy Journ. Myc. 1890, p. 77. — Inflo- 1394

rescentiam omnino involvens, massam compactam cylindræam v. ovoideam, membrana tenui grisea inclusam, 5-10 mm. long., 2,5 mm. lat., efformans; sporis ovoideis vel globosis, brunneis, acute echinulatis, 12-15 \approx 10-14 vel 10-12 μ . diam.

Hab. ad inflorescentiam Hilariae Jamesii, Albuquerque Novi Mexici Amer. bor. (TRACY). — *U. cylindricæ* affinis sed sporis majoribus.

35. **Uredo Apludæ** Barc. Descript. List Ured. Simla III, pag. 99. — 1395

Soris minutis, ovatis v. linearibus, hypophyllis, brunneis; uredosporis globosis vel ovoideis, pallide brunneis, 22 \approx 20, crasse tunicatis, minute tuberculatis.

Hab. in foliis Apludæ aristatæ, Simla Indiæ.

36. **Uredo Sorghi** Fuck. in Thüm. Myk. Notiz. Griechenl. p. 27. — 1396

Soris linearibus, erumpentibus, ferrugineis; uredosporis obovatis, olivaceo-fuscis, 40 \approx 24.

Hab. ad folia Sorghi halepensis prope Athenas Græciæ.

37. **Uredo paraphysata** Karst. Rev. Myc. 1890, pag. 127. — Soris 1397

hypophyllis, laxe gregariis, rarissime confluentibus, primitus tectis, dein erumpentibus, ovalibus v. ellipsoideo-rotundatis, concavis, pallescentibus vel initio flavescentibus, minutissimis; uredosporis subsphæroideis, levibus, hyalino-flavescentibus, 19-30 \approx 19-22; paraphysibus arcuatis, inæqualibus, crassis, hyalinis, 30-45 \approx 6-15.

Hab. in foliis languidis Paspali sp. in M. Bavi Tonkin (BALANSA).

38. **Uredo spinulosa** Cooke Grev. V, p. 15 (*Trichobasis*). — Hypo- 1398

phylla; maculis purpureis, orbicularibus, magnis; soris congestis, atro-brunneis; uredosporis ovatis, brunneis, supra echinulatis, infra levibus, 45 \approx 32, initio pedicello longo valido fultis.

Hab. in foliis vivis plantæ ignotæ in India (HOBSON).

39. **Uredo Hobsoni** Vize in Grev. V, p. 14 (*Trichobasis*). — Hypo- 1399
phylla; soris minutis, sparsis vel gregariis, fulvidis; uredosporis
subovatis rhomboideisque, leniter asperulis, $20 \approx 20$.
Hab. in p. inf. foliorum arboris ignotæ (*Ficus?*) in India (HOBSON).
40. **Uredo circinata** Schwein. in Berk. et Curt. Exot. Fungi p. 282. 1400
— Maculis orbicularibus, amphigenis umbrinis, soro centrali ma-
gno, aliis minoribus circinantibus, epidermide cinctis; sporis glo-
bosis, conspicue spinulosis, $30-32 \mu$. diam., aurantiis.
Hab. in foliis plantæ cujusdam ignotæ, Surinam.
41. **Uredo ignota** Speg. F. Guar. II, n. 36. — Maculis amphigenis 1401
orbicularibus 2 mm. diam. indeterminatis, pallescentibus; acervu-
lis hypophyllis linearibus minutis, circinatim in margine macula-
rum erumpentibus, epidermide diu tectis dein subnudis, pallide ful-
vis; uredosporis globosis v. ovoideis, $20-22 \approx 18$, subtenuiter tuni-
catis, densiuscule verruculosis, non v. grosse 1-guttulatis, ex hyalino
pallidissime melleis.
Hab. ad folia adhuc ignota in silvis subvirgineis prope Para-
guarí Brasiliæ.
42. **Uredo Mori** Barc. Descript. List Ured. Simla III, p. 97, t. VI, f. 6. 1402
(*Cæoma*). — Sporis pseudoperidiis spuriis hypophyllis, hyalinis,
relaxato-cellulosis cinctis, globosis vel ovoideis, $17 \approx 14$ vel 14μ .
diam., aurantiis, episporio 2μ . cr.; cellulis pseudoperidialibus $19-22 \approx 11-12$.
Hab. in foliis Mori albæ var. serratæ, Simla Indiæ.
43. **Uredo Betonicæ** Voss Myc. Carn. I, p. 63, Bot. Centr. 1890, I, 1403
p. 208. — Acervulis hypophyllis, gregariis, rotundatis, ellipticis
vel irregularibus, sæpe confluentibus, applanatis, aurantiacis, in fo-
liorum pagina superiore maculam fuscam formantibus; sporis valde
irregularibus, polygonis, oblongis, ellipticis v. piriformibus, sed sem-
per plus minusve compressis, aurantiacis, $17-30 \approx 11-20$, episporio
subcrasso, granuloso, hyalino.
Hab. in foliis Betonicæ Jacquini in Carniolia super.
44. **Uredo minuta** Pat. Journ. Bot. 1890, p. 59 (*Cæoma*). — Soris 1404
sparsis v. in greges $\frac{1}{4}-\frac{1}{2}$ mm. lat. approximatis, semi-globosis,
brunneo-rufis, epidermide dein in centro erumpente tectis; macu-
lis nullis; uredosporarum massa compacta, alba; strato mycelico
crasso, hyalino; uredosporis conferte catenulatis, angulosis, hyali-
nis, intus granulosis et brunneo-pallidis, $22 \approx 12-15$; exosporio levi.
Hab. in leguminibus Leguminosæ sp., Ououli Tonkin Asiæ or.

PHYCOMYCETÆ de Bary*). — Syll. VII, p. 182.

Fam. 1. **Mucoraceæ** DE BARY.

MUCOR Mich. — Syll. VII, 1, p. 190.

1. **Mucor pusillus** Lindt Path. Schimm. pag. 272, f. 1-6. — Hyphis 1405
 sporangiferis usque ad 1 mm. long., 10-20 μ . cr., dilute brunneo-
 lis, initio erectis et simplicibus, dein subincurvis et ramosis; spo-
 rangiis globosis, dein atris, 60-80 μ . diam., minute tuberculato-
 echinulatis, plerumque ovoideo-rotundatis v. clavatis, dilute griseo-
 luteolis, dein pallide brunneis, 50 μ . lat., 60 μ . alt.; sporis globosis,
 hyalinis, membrana tenui, 3-3,5 μ . diam.

Hab. in ægrotantibus nosocomii, Bern Helvetiæ.

2. **Mucor ramosus** Lindt Path. Schimm. p. 275, fig. 7-10, nec Bull. 1406
 — Hyphis sporangiferis 1-2 cm. long., 5-15 μ . lat., ramosis, in-
 curvis; sporangiis magnitudine varia, majoribus 70 μ . diam., piri-
 formibus, levibus, hyalinis; columella apice rotundata, rarissime
 truncato-conica; sporis ovoideis, membrana tenui, levi, 5-6 \approx 3-4.

Hab. in ægrotantibus nosocomii, Bern Helvetiæ.

3. **Mucor neglectus** Vuill. Etud. biol. s. 1. Cham. — Mycelio ramoso 1407
 continuo, ramis non anastomosantibus, sporangio sphærico magni-
 tudine vario, sporis sphæricis, 3 μ . diam.; azygosporis dilute flavo-
 brunneis, 54 μ . diam., hinc inde subincrassatis saturatioribus, su-
 perficie subundulata sed edentata; azygosporæ ramulo suffultorio
 unico, apice excentrice inflato.

Hab. in medulla panis udi, Nancy Galliæ.

4. **Mucor ambiguus** Vuill. Etud. biol. s. 1. Champ. — Mycelio ra- 1408
 moso, continuo, non anastomotico, radiculis delicatis aucto, sporan-
 gio medio humido rapide diffluente, tunica oxalati calcici aciculis
 hirta, sporis ovatis, 7 \approx 4-5; hypha sporangiorum inferiorum suf-
 fultoria circinata vel spirali, superiorum recta, dein sensim incur-
 vata; zygosporis ignotis.

Hab. in medulla panis udi, Nancy Galliæ.

*) Fateri cogor plures species hujus cohortis hic vix obiter describi, ex eo quod multi mycologi bio-morphologi, diagnoses normales, damno scientiæ manifesto, addere negligunt. Cfr. vol. VII, p. 181, nota, et supra p. 169, nota.

5. **Mucor heterogamus** Vuill. Étud. biol. s. 1. Champ. — Mycelio ra- 1409
moso continuo non anastomotico; chlamydosporis terminalibus vel
intercalaribus, singulis vel geminatis, sphaericis vel ellipsoideis, 25
≈ 20; sporangio sphaerico, 50-60 μ . diam., hypha suffultoria sim-
plici vel varie ramosa; columella levi, apophysi nulla; tunica dif-
fluente, collarium relinquente; sporis sphaericis, 2,3-2,7 μ . diam.;
zygosporis aereis, atris, 45-150 μ . diam., denticulis simplicibus vel
compositis ornatis; gametis heteromorphis.

Hab. in medulla panis udi, Nancy Galliae.

6. **Mucor Tæniæ** Fairm. Contr. Myc. West. N. Y. p. 52, t. IV, f. 4-6. — 1410
Hyphis sporangiferis erectis, rarius septatis, flavis, 7 μ . diam., spo-
rangiis globosis, flavo-brunneis, levibus, 40 μ . diam.; columella el-
liptica vel subsphaeroidea, brunnea, demum basi contracta; sporis
globosis vel ellipsoideis, læte flavis, 3-5 μ . diam., levibus; zygo-
sporis ignotis.

Hab. in segmentis Tæniæ Solii pr. New York in America boreali.

7. **Mucor lateritius** Cooke et Masee Grev. XVII, p. 3. — Mycelio 1411
tomentum continuum, densum, siccum, brunneo-lateritium formante;
hyphis fertilibus, erectis, simplicibus v. furcatis; capitulo globoso;
sporibus subsphaericis, 12 ≈ 9-10, pallide lateritiis, levibus.

Hab. in tuberibus Solani putridis, quæ obducit, Kew London Britanniae.

8. **Mucor cervino-leucus** Berk. Fl. Tasm. II, p. 282. — Floccis sim- 1412
plicibus, deorsum candidis, sursum ochraceis; sporibus subcymbifor-
mibus, 11-12 ≈ 7-8; sporangiis globosis, fuscis.

Hab. in stercore in Tasmania.

9. **Mucor rubens** Vuill. Soc. Myc. Fr. 1887, p. 111. — Hyphis spo- 1413
rangiferis simplicibus; sporangio apophysi brevi et membrana dif-
fluente, aciculis oxalati calcici hirta prædito; sporibus multiguttatis,
elongatis, 8-18 ≈ 3-7; columella inflata, multiguttulata, lateritia,
acidi sulphurici ope intense cyanea.

Hab. in fimo equino, Nancy Galliae, sociâ *Piptocephali corymbifera*.

SPINELLUS v. Tiegh. — Syll. VII, 1, p. 205.

1. **Spinellus gigasporus** Cooke et Mass. Grev. XVIII, p. 26. — Hy- 1414
phis sporangiferis simplicibus, decumbentibus, olivaceo-nitentibus,
continuis, 40-45 μ . crass.; sporangiis subglobosis, polysporis 220-
250 μ . diam., columella cylindrica, apice rotundata, 140-150 ≈ 90-

100; sporis elongato-ellipsoideis, olivaceis, 50-60 \approx 13-15; hyphis zygosporiferis flexuosis tenuioribus, obscurioribus, septatis, zygospora compresso-globosa, rugulosa, atro-fusca, 70-80 \approx 55-60; ramis zygosporæ arcuatis, levibus, nec spinulosis.

Hab. in Agaricinis putrescentibus, Mordiallac Victoriæ Australiæ (C. FRENCH).

CHÆTOSTYLUM v. Tiegh. — Syll. VII, 1, p. 208.

1. **Chætostylum echinatum** Sorok. Rev. Myc. 1889, p. 141, f. 160-161. 1415

— Mycelio ramoso, hypha verticali nunc sporangium mucoriforme, nunc appendicem sterilem acutam gerente, ramis lateralibus inæqualiter inflatis et sporangia minora, pediculis brevibus suffulta gerentibus; sporangiis minoribus spinulosis, sporas minutas, rotundatas, 2-4,5 μ . diam. includentibus; columella nulla.

Hab. in baccis putridis Vitis viniferæ, Tachkend Asiæ centralis.

THAMNIDIUM Link. — Syll. VII, 1, p. 211.

1. **Thamnidium mucoroides** Zukal Verhandl. zool. bot. Gesell. Wien 1416

1890, p. 589, t. IX. — Gregarium, 0,5-1 cm. alt., racemoso-ramosum, hypha primaria subspirali, sporangio primario majori sphærico 70-80 μ . diam., spinuloso terminata, rarius apice abortiva subcirrosa; ramulis lateralibus tenuibus, curvulis sporangiola globosa 25-30 μ . diam., apice gerentibus; sporis ellipsoideis, hyalinis, levibus 4-6 \approx 3-5; zygosporis biscociformibus, 70-130 μ . long., episporio brunneo verrucoso.

Hab. ad Dictyostelium in fimo crocodilino cultum, Wien Austriæ.

ABSIDIA v. Tiegh. — Syll. VII, 1, p. 214.

1. **Absidia cærulea** Bainier Bull. Soc. Bot. I, 1889, p. 184. — Ab 1417

Absidia septata differt colore amœne cœruleo dein brunnescente, septo hyphæ sub sporangio huic multo proximior; columella hemisphærica nec conica, vertice acumine minuto hyalino prædita; hyphis suffultoriis inæqualibus subinde 1-2 mm. longis; sporis globosis; zygosporis præsentibus.

Hab. in pane udo, Paris Galliæ.

MORTIERELLA Coem. — Syll. VII, 1, p. 220.

1. **Mortierella Bainieri** Cost. Bull. Soc. Myc. Fr. 1888, p. 151, t. XXII, 1418

f. 7-10, 16. — Mycelio hyalino, hyphis fertilibus ramosis, ramis hypha primaria longioribus æqualibusve; sporangiis globosis; sporis ovoideo-inæqualibus, $9,8 \approx 4,8$ vel $6,6 \approx 4$.

Hab. in pileo Tremellodontis gelatinosi ubi cæspitulos minutos 2-3 mm. altos albos efficit, in Gallia.

PIPTOCEPHALIS de Bary et Wor. — Syll. VII, 1, p. 225.

1. **Piptocephalis corymbifera** Vuill. Bull. Soc. Myc. Fr. 1887, p. 111. 1419

— Hyphis fertilibus ad 2 mm. altis, apice bis patenter dichotomis, septatis, ad 15μ . diam., ramis 4μ . latis; sporangiis cylindræis, $20 \approx 3,5$, trisporis tunica demum diffluente; sporis teretibus, $5-7,5 \approx 3$.

Hab. in fimo equino, ad Mucorem rubentem, Nancy Galliæ.

PHYSOMYCES Harz Bot. Centr. 1890, I, p. 410, t. I (Etym. *physis* vesica et *myces*). — Hyphæ decumbentes, tomentum lanuginosum formantes, ramosissimæ, septatæ; oogonia polyspora, pedicellata, apicibus ramulorum innata, hyphis numerosis rugoso-corticata.

1. **Physomyces heterosporus** Harz l. c. — Coccineus vel carneus; 1420 oogoniis (sporocarpis) globosis, hyphis obducentibus aspero, $40-53 \mu$. diam.; sporis numerosis globoso-ovoideis, hyalinis, $4,5-5 \mu$. longis, crassiuscule tunicatis.

Hab. in substantiis sebaceis in vase plumbeo asservatis in cella obscura fabricæ candelarum in Bavaria (Th. NIEDERLAENDER).

HELICOSPORANGIUM H. Karst. Deutsch. Flora p. 123, f. 50 (Etym. *helix* cochlea et *sporangium*). — Sporangia globosa, oligospora, cellulis (hyphis) brevibus circinatis involuta; hyphæ ramosæ, parce septatæ, apicibus fertilibus sensim circinantibus.

1. **Helicosporangium parasiticum** H. Karst. l. c., nec Eidam. — Hy- 1421 phis hyalinis, basi ramoso-radiciformibus; sporangiis globulosis brunneis; sporis sphæroideis, 10-15 in quoque sporangio.

Hab. in radicibus Dauci Carotæ parasiticum, in Borussia.

PAPULOSPORA Preuss. — Syll. IV, p. 59. — Genus adhuc anceps, organa reproductiva ab aliis conidia (veteribus), ab aliis sporobulbilli (Mattiolo Svil. Hypocr. p. 142), ab aliis sporangia (Harz). — Sporangia mono-di-rarius polyspora; sporæ fuscae vel nigro-fuscae, adnatæ; tunica sporangii sporis pallidiore.

1. **Papulospora parasitica** (Eid.) Harz in Bot. Cent. 1890, I, p. 410, 1422

Helicosporangium parasiticum Eid. in Cohn Beitr. Biol. Pfl. III, p. 411, t. 23, f. 1-6, nec H. Karsten, *Baryeidamia parasitica* H. Karst. in Hedw. 1888, p. 133, f. 1. — Mycelio valido, pluries septato, ramulos breves fertiles erectos emittente, apice acutatos mox in circinum convolutos et in sporangia subglobosa colliculosa abeuntes (spiræ anfractibus 1-1½); cellula centrali (spora) ceteris majore, plasmate rufo-brunnea farcta, cellulis corticalibus vacuis flavidis.

Hab. in pane, tuberibus Solani et seminibus udis in Germania.

2. **Papulospora Dahliæ** Cost. Journ. de Bot. 1888, p. 93, t. IV. — Hy- 1423
phis hyalinis, septatis, articulis 28 ÷ 5; sporangiis sphæricis, brunneo-rubris, a mycelio discretis, murali-plurilocularibus; cellulis centralibus (sporis?) 2-6, intensius coloratis, sphæricis, colliculosis, 30-40 µ. diam.

Hab. in radicibus putrescentibus tuberosis Dahliæ, Paris Galliæ.

3. **Papulospora? acremonioides** Harz Bot. Centr. 1890, I, pag. 410, *Monosporium acremonioides* Harz — Syll. IV, p. 115, *Papulospora aspergilliformis* Eidam in Cohn Beitr. III, p. 415, t. 23, fig. 7-17.

CHOANOPHORA Cunn. Conid. fructif. Mucorin. p. 409 [1878] (Etym. *choane* cavitas et *phoreo* fero), *Cunninghamia* Curr. New gen. Muced. p. 333 [1872], nec R. Br. — Mycelium repens, sparse septatum; hyphæ conidiophoræ, simplices, erectæ, apice clavato-incrassatæ, sporophoris ornatæ. Sporophora primum piriformia, dein col-labascendo infundibuliformia; conidia hyalina matura rubro-fusca, capitata, dein in infundibulis acervata. Hyphæ sporangiferæ simplices, sporangia globosa solitaria, polyspora; sporæ ovoideæ. Ad-sunt etiam chlamydosporæ oblongo-ellipsoideæ.

Obs. Status conidicus videretur *Ædocephalum* compositum. Cfr. *Ædoc. echinulatum* Thaxt., quod ex eodem typo est.

1. **Choanophora infundibulifera** (Curr.) Cunn. loc. cit. t. 47, *Cunnin-* 1424
ghamia infundibulifera Curr. loc. cit. t. 7. — Sporangiiis 27 µ. diam., pallide flavis; sporis 13-20 ÷ 9-13, exosporio brunneo, minute spinulosis; conidiis ovoideis levibus.

Hab. ad petala Hibisci Rosæ-sinensis, Calcutta Indiæ.

ACROCYSTIS E. et Halst. Bull. N. Jers. Agric. St. 1890, pag. 20 cum iconibus (Etym. *acros* summitas et *cystis*).

1. **Acrocystis Batatæ** E. et Halst. loc. cit. 1425

Hab. in radice tuberosa *Batatae* edulis cui valde noxia in America boreali. — E descriptione et icon. loco citato diagnosis certa erui nequit. — Genus homonymon *Acrocystis* quoque inter *Florideas* adest.

XENOMYCES Ces. Born. p. 26, t. II. — Capitula (sporangia?) aggregata, sessilia, granuliformia, dura. Flocci pallidi, intertexti, rigidi, curti, subsigmoidei, compressi, irregulariter ramosi, ramis abbreviatis, recurvis, plus minus obtusis. Cystides (sporæ?) ampullaceæ stipitatae. — Genus affine dicitur *Sclerocystidi* (Berk. Br.) nec minus enigmaticum.

1. **Xenomyces ochraceus** Ces. loc. cit. — Capitulis ex ochraceo fuliginis, 1 mm. diam. 1426

Hab. ad Sarawak Bornei.

FRANKIA Brunch. in Unters. bot. Inst. Tüb. 1886 (Etym. ab eximio bot. A. B. FRANK). — Mycelium unicellulare, intra gallarum cellulas evolutum, simplex aut valde ramosum. Sporangia ex apice filamentorum absque dissepimento orientia. Sporæ ob protoplasmatis divisionem efformatae, germinando mycelium rursus gignentis.

1. **Frankia Brunchorstii** Möller in Bot. Centralbl. 1891, pag. 61. — Mycelio bene evoluto; sporangiis clavatis, falcato-incurvatis. 1427

Hab. in cellulis gallarum radicalium *Myricæ* Gales in Norvegia.

2. **Frankia subtilis** Brunch. l. c. Leunis-Frank Synops. III, p. 610 cum icon., Möller in Bot. Centralbl. 1891, p. 60. — Mycelii filamentis tenuissimis, hyalinis; sporangiis globosis, 6-8 μ . diam.; sporis numerosis, primo angulosis, dein rotundis. 1428

Hab. in cellulis gallarum radicalium *Alni* et *Elæagnacearum* in Norvegia. — Cfr. *Plasmodiophora Alni* (Wor.) Möll. — Syll. VII, 1, p. 464.

Fam. 2. **Peronosporæ** DE BARY.

CYSTOPUS Lév. — Syll. VII, 1, p. 233.

1. **Cystopus Convolvulacearum** Speg. Fung. Guar. I, p. 65. — Maculis amphigenis, parvulis, vix determinatis, fusciscentibus; acervulis amphigenis sæpius confluentibus, ambitu macularum insidentibus ac eas anulatim cingentibus, albo-pallescentibus vel subflavescentibus, primo epidermide tectis, dein erumpenti-liberis, com- 1429

pactiuscule pulverulentis; conidiis catenulatis, apicalibus vix aliis longioribus, omnibus e globoso-ellipticis vel globoso-cubicis, 15-20 \approx 12-13, anulo transverso latissimo ac crassissimo cinctis, hyalinis; oogoniis non visis.

Hab. ad folia viva Ipomææ gossypoidis in pratis uliginosis prope Paraguari. — Verisimiliter status conidicus sequentis.

2. **Cystopus Ipomææ-panduratæ** (Schw.) Stev. et Sw. Kansas Peron. 1430 p. 67. — *Æcidium* Schw. Syn. Carol. n. 454. — A *Cystopo Trogopogonis* differt oosporis subglobosis vel breve ovoideis, flavis v. flavo-brunneis, 40-60 μ . diam.; tunica 5-8 μ . crassa, sparse tuberculata, oogoniis arctis, 50-65 μ . diam., hyalinis sinuoso-tuberculatis.

Hab. in caulibus Ipomææ hederaceæ, lacunosæ, leptophyllæ et panduratæ in Amer. bor. — Conidia in foliis, petiolis et caule reperiuntur.

3. **Cystopus brasiliensis** Speg. F. Puigg. n. 200. — Acervulis hy- 1431 pophyllis, minutis, albis; conidiis catenulatis, omnibus, æqualibus, lenticularibus, hyalinis, e fronte 20 μ . diam., e latere 10-14 μ . cr.

Hab. ad folia viva Eupatorii cujusdam in dumetis prope Apiahy Brasiliæ. — Maculæ amphigenæ minutæ 1-2 mm. diam., superne obscure fusco-purpurascens, inferne sordide subferrugineæ; conidia margine crasse truncata, episporio hyalino crasso levi vestita; oosporæ non visæ. Species *C. Trogopogonis* peraffinis, conidiis tamen lenticularibus atque omnibus æqualibus recedens.

PHYTOPHTHORA de Bary. — Syll. VII, 1, p. 237.

1. **Phytophthora Phaseoli** Thaxt. Bot. Gaz. 1889, n. 11, Rep. Connect. 1432 p. 167, t. 3, f. 29-37. — Hyphis mycelicis ramosis, haustoriis inæqualibus intra cellulas rarius penetrantibus, conidiophoris prope stomata folii subinflatis, solitariis vel fasciculatis, simplicibus vel semel dichotomis, hinc inde tumidis; conidiis ovoideis vel ellipsoideis, basi truncatis, apice acutis, 35-50 \approx 20-24, germinando tunc zoosporas plerumque 15 emittentibus, tunc promycelium; oosporis ignotis.

Hab. in foliis caulibusque Phaseoli lunati, New Haven Connect. Amer. bor

SCLEROSPORA Schröt. — Syll. VII, 1, p. 238.

1. **Sclerospora Magnusiana** Sorok. in Rev. myc. 1889, pag. 143. — 1433 Mycelio filiformi, ramoso, rarius septato, hinc inde subinflato et

oosporas et antheridia gignente; oogoniis subplicatis, oosporis tunica 4-15 μ . crassa donatis, globosis, 35-50 μ . diam., brunneis; conidiis ignotis.

Hab. in caule Equiseti prope Orsk in regione Uralensi.

2. **Sclerospora macrospora** Sacc. in Hedw. 1890, p. 155. — Status 1434
conidiophorus ignotus; oogoniis crebre parallele seriatis, tectis epidermidemque foliorum læte rugoso-punctulatam et infuscatam red-
dentibus; oosporis sphaericis, magnis, 60-65 μ . diam., episporio levi,
bistratoso, valido, hyalino-fuscello, intus crasse pluri-nucleatis, hya-
linis, ex hyphis angustis, ramulosis, guttulatis, hyalinis orientibus.

Hab. in foliis inferioribus adhuc vivis Alopecuri, sociâ *Pucciniâ Rubigine-vera*, Caromby Australiæ (TEPPER). — Ab affini *Scl. graminicola* differt oosporis multo majoribus. Quamquam conidia adhuc ignota, species ad gen. *Sclerosporam* spectare videtur. Antheridia subinde oosporis adhuc hærentia observavi.

PLASMOPARA Schröt. — Syll. VII, 1, p. 239.

1. **Plasmopara Kellermani** (Ell. et Halst.) Swing. Kans. Peron. p. 74, 1435
Peronospora Kellermani E. et H. in Ell. et Ev. N. A. F. n. 2201
ad interim. — Hyphis conidiophoris fascicularibus, breviusculis;
conidiis sessilibus; oosporis abundantibus.

Hab. ad folia Ivæ xanthifoliæ, Manhattan Amer. bor. —
Pl. entosporæ affinis.

2. **Plasmopara Viburni** Peck 43 Rep. p. 28. — Maculis irregularibus 1436
indeterminatis, plus minus secus nervos primarios confluentibus,
brunneis vel rufo-brunneis; hyphis hypophyllis sparsis, ramulos
2-4 sæpius alternos, subhorizontales emittentibus, ramulis ultimis
in 2-3 sterigmata subulata desinentibus; conidiis subglobosis vel
late ellipsoideis, subhyalinis, 15-20 \approx 12-15, rarius 30-40 μ . longis.

Hab. in foliis Viburni dentati, Baiting Hollow Station, Long
Island Amer. bor. — *Pl. viticolæ* affinis.

3. **Plasmopara australis** (Speg.) Swingle. Kans. Peron. p. 72. — Ad 1437
hoc genus, teste cl. Swingle loc. cit. spectat *Peronospora australis*
Speg., Syll. VII, p. 260.

PERONOSPORA Corda. — Syll. VII, 1, p. 244.

1. **Peronospora Certiliana** Kühn in Hedw. 1884, p. 173. — Hyphis 1438
conidiophoris gracilibus, apice valde ramosis, ramis plerumque 5-6,

raro initio 3-chotonis, ramulis arcuatis ultimis partim brevibus rectisque, partim longiusculis subulatis incurvisque; conidiis ellipsoideis vel ovatis, hyalinis, lateraliter germinantibus; oosporis pellucidis, flavo-brunneis.

Hab. in foliis *Primulæ veris* in pratis montanis prope Lauterberg Germaniæ (OERTEL). — Ad sectionem IV *Pleuroblastæ*, *C. effusæ* de Bary pertinet.

2. **Peronospora Muscorum** Sorok. Mycol. (rossice, Kazan 1872), p. 22, 1439
t. 5, f. 26-27. — Hyphis repentibus, septatis, conidiophoris erectis, exilibus, apice pluries furcatis; conidiis piriformibus; oogoniis sphaericis, intra cellulas muscorum evolutis.

Hab. in Muscis in Rossia.

3. **Peronospora Cynoglossi** Burr. in Swingle Kans. Peronosp. p. 77. 1440
— Hyphis conidiophoris hypophyllis, gracilibus, circ. 6-8-dichotomice ramosis, late expansis, vulgo subflexuosis; conidiis e subgloboso ellipsoideis, papilla apicali instructis, pallide violaceis, 13-19 = 15-24; oogoniis pachypleuris, brunneis, 40-50 μ . diam.; oosporiis parietibus crassis, levibus, pallide brunneis, 25-30 μ . diam.

Hab. ad folia *Cynoglossi officinalis*, Illinois Amer. bor. — Fungus cæspites latos, prominentes, indefinitos efformans; pagina foliorum superior flavida, dein fusco-brunnea. — Var. **Echinospirmi** Swingle loc. cit. A typo recedit conidiophoris parcius ramosis et magis rigidis, conidiis multo majoribus et non papillatis, 23-33 = 17-28. In foliis *Echinospirmi Redowskii* var. cupulati, Kansas Amer. bor.

4. **Peronospora alpina** Johans. in Bot. Centr. XXVIII, 1886, p. 394. 1441
— Cæspitulis albis, perexiguis, conidiophoris apice plerumque trifidis, ramulis longioribus 15-25 μ . long., conidiis ellipsoideis vel ovoideis, 18-23 = 13-16, apice minute papillatis; oosporis globosis, 30-40 μ . diam.

Hab. in foliis *Thalictri alpini* prope Are in Jemtlandia. — Ab affini *P. pygmæa* differt minutie.

5. **Peronospora Hedeomatis** Kell. et Swingl. Kans. Peronosp. p. 81. — 1442
Maculis obsolete; conidiophoris erectis (4-9), 5-8-ies dichotomoramosis, 160-460 μ . long., 8-12 μ . cr., ramis longis, obtusiusculis, ultimis brevibus, subacutis; conidiis globosis, hyalinis, maturis subovatis, fuscis, non papillatis, 24-30 = 14-17; oosporis globosis vel subovatis, ex hyalino flavidis, 22-30 μ . diam., episporio 2-3 μ . cr., levi, subinde colliculoso, intus granulosis vel 1-guttatis; oogoniis subovatis, 30-50 = 27-36.

- Hab.* in foliis et caulibus *Hedeomatis hispidi* *), Manhattan Kansas Amer. bor.
6. **Peronospora Lini** E. et K. Journ. Myc. 1887, p. 126. — Sparsa; 1443
conidiophoris subfastigiato-dichotomis, sursum ramosis, 500 μ . alt.,
apicibus tenuibus, subcurvulis; conidiis ellipsoideis, flavido-brun-
neis, 20-22 \simeq 11-13; oosporis non visis.
Hab. in foliis caulibusque *Lini sulcati*, Manhattan Am. bor.
7. **Peronospora Swinglei** E. et K. Journ. Myc. 1887, p. 104. — Ma- 1444
culis cinereis, varie extensis, hypophyllis in pagina aversa rubi-
ginosis et pustulosis; hyphis fertilibus sursum dichotome ramosis,
ramulis ultimis brevibus spinuliformibus; conidiis ellipsoideis, sor-
dide violaceis, 20-22 \simeq 16-18.
Hab. in foliis *Salviæ lanceolatæ*, Manhattan Kans. Ame-
ricæ borealis.
8. **Peronospora Valerianæ** Trail Trans. Crypt. Scot. 1889, p. 42. — 1445
Maculis indefinitis, violaceo-griseis, hypophyllis; conidiophoris 5-6-
dichotomis, ramulis ultimis 7 μ . long., patentibus, curvulis, vix
attenuatis; conidiis obovatis vel obovato-ellipsoideis, 27-30 \simeq 22-24,
sordide violaceo-brunneis; oosporis non visis.
Hab. in foliis *Valerianæ officinalis* prope Cladich Loch,
Awe Scotiæ. Affinis videtur *P. violaceæ*.
9. **Peronospora lapponica** Lagerh. in Bot. Not. 1888, p. 49 cum ic. 1446
— Conidiophoris arborum modo repetite dichotomis, ramulis rectis
vel subrectis, membrana achroa, singulis erumpentibus, stratum
rarum, griseum formantibus; ramulis terminalibus, erectis; con-
idiis citriformibus, membrana pallide violacea præditis; oosporis glo-
bosis membrana pallide fusca præditis; conidioph. 658-700 μ . long.,
12 μ . lat.; conid. 30-36 \simeq 19-24; diam. oosp. 27 μ .
Hab. in Suecia ad Qvikkjokk Lapponiæ Lulensis in foliis vivis
Euphrasiæ officinalis parasitica.
10. **Peronospora trichotoma** Masee Dis. of Coloc. p. 47, t. I, f. 1. 1447
— Mycelii tubis crassis, haustoriis vesiculiformibus, clavatis; sti-
pitibus conidiferis, fasciculatis 2-3-trichotomis; conidiis parvis, ob-
ovoideis, subglobosis 12 \simeq 10; oosporarum episporio fusco, cristis
connexis subregulariter reticulato, 35 \simeq 10.
Hab. ad radices *Colocasiæ esculentæ* in Jamaica. — Plan-
tæ nutrici valde noxia.
11. **Peronospora Thesii** Lagerh. Pilzfl. Freib. p. 35. — Conidiophoris 1448

*) Auctor generis, Persoon, facit *Hedeoma* e gen. neutro.

arborum modo repetite dichotomis, ramulis plus minus curvatis, membrana achroa præditis, stratum rarum griseo-album formantibus; ramulis terminalibus rectis vel curvatis, obtusis; conidiis piriformibus vel late ovalibus, membrana achroa præditis; oosporis?; conidiophoris ad $600 \approx 9-12$; conid. $15-20 \approx 12-15$.

Hab. in Bärenthal et ad Hinterzarten in silva Schwarzwald Germaniæ in partibus omnibus viridibus Thesii pratensis parasitica.

Fam. 3. Saprolegniaceæ DE BARY *).

LEPTOMITUS Ag. — Syll. VII, 1, p. 265.

1. **Leptomitius urophilus** Mont. Cent. VI, n. 71 et Compt. rend. Soc. 1449 Biol., févr. 1849, p. 23, Syll. crypt. n. 1663. — Filis cæspitosis, hyalinis, ramosissimis ramisque patentibus, alterne subternis, articulatis; articulis diametro æqualibus vel sesqui-2-plo longioribus.

Hab. in urina morbosa cum pilis emissa (RAYER). — Cfr. Ch. Robin Végét. paras. (1853), p. 361.

SAPROLEGNIA Nees. — Syll. VII, 1, p. 268.

1. **Saprolegnia anisospora** de Bary Bot. Zeit. 1888, p. 619, t. IX, 1450 f. 4. — Hyphis primariis tenuibus, valde laxis; zoosporangiis primariis tereti-clavatis, aliis majoribus, aliis minoribus zoosporas includentibus; zoosporis majoribus, oosporas fere æquantibus, plasmate obscure granulato; oogoniis in ramulis lateralibus racemosis acrogenis, clavato-piriformibus, levibus, oosporas plerumque 5-8 includentibus; antheridiis numerosis, arcuato-clavatis, oogonia arcte amplectentibus.

Hab. in paludosis prope Strasburg Germaniæ.

2. **Saprolegnia monilifera** de Bary in Bot. Zeit. 1888, p. 629, t. IX, 1451 f. 6. — Hyphis primariis 2 mm. longis, cæspitulosis densis formantibus, zoosporangiis primariis ventricoso-clavatis; oogoniis globosis appendicula cylindrica auctis, in hypha primaria rarius ramulis brevioribus acrogenis, usque ad 15 superimpositis, oosporas 1-16 (plerumque 6-12) globosas foventibus; antheridiis non visis.

*) Cfr. de Bary. «Species der Saprolegnieen» opus postume impressum in Bot. Zeit. 1888, p. 597 cum tab. Hic vix notas primarias exhibeo. Cfr. quoque Sorokine «Mater. crypt. As. centr.» in Rev. Myc. 1889-90.

Hab. in lacustribus muscosis Hercyniæ. — Affinis *Sapr. torulosæ* sed zoosporangiis et oogoniis sat diversa.

LEPTOLEGNIA de Bary in Bot. Zeit. 1888, pag. 609 (Etym. *leptos* tenuis et *legne* fimbria). — A *Saprolegnia* Nees differt oosporâ unicâ oogonium perfecte implente.

1. **Leptolegnia caudata** de Bary loc. cit. t. IX, f. 5. — Cæspitulis 1452 densis, laxe tamen tenuiterque filamentosis; zoosporangiis elongato-cylindræis; oogoniis ad basin hyphæ primariæ racemose digestis; oosporis singulis, hyalinis; antheridiis primitus diclinis, oblique clavatis, singulis vel binis prope oogonium sitis.

Hab. in lacustribus Hercyniæ.

PYTHIOPSIS de Bary in Bot. Zeit. 1888, p. 609 (Etym. *Pythium* et *opsis* aspectus). — Zoosporæ biciliatæ, dein immotæ et sine cuticula demumque directe germinantes; zoosporangia terminalia cymose digesta vel seriata; cetera *Saprolegniæ*.

1. **Pythiopsis cymosa** de Bary loc. cit. t. IX, f. 1. — Thallo tenui 1453 filamentoso, hyphis primariis radiantibus; oogoniis terminalibus, papillatis, ramis 2-3-sporis; antheridiis 1-4, in ramulis brevibus sub oogonio insertis; oosporis majusculis, excentrice guttatis.

Hab. in paludosis supra lac Noir Vogesorum.

ACHLYA Nees. — Syll. VII, 1, p. 274.

1. **Achlya gracilipes** de Bary Bot. Zeit. 1888, p. 635, t. X, f. 2. — 1454 Thallo crasso, longe filamentoso; zoosporangiis primariis ut in *Achlya polyandra*, secundariis lateralibus, pedicellatis; oogoniis globosis, non punctatis, in ramis gracilibus elongatis acrogenis, 8-18 oosporas foventibus; antheridiis minutis lateraliter appressis.

Hab. in paludosis pr. Strassburg Germaniæ.

2. **Achlya apiculata** de Bary in Bot. Zeit. 1888, p. 635, t. X, f. 3-5. — 1455 Thallo modice crasso; zoosporangiis modo solitariis, modo cymosis; oogoniis sæpius lateralibus ad hypham primariam racemose digestis, ramulis brevibus uncinatis suffultis ovato-oblongis, mucronulatis, oosporis in quoque oogonio 3-4.

Hab. in aquosis pr. Strassburg Germaniæ.

3. **Achlya oblongata** de Bary in Bot. Zeit. 1888, p. 645, t. X, f. 7-9. 1456 — Thallo crasso, cæspites 1 cm. alt. formante; zoosporangiis typice sæpe repetito sympodialiter evolutis; oogoniis majusculis, aliis racemosis atris terminalibus, globosis v. piriformibus; oosporis glo-

bosis, 6-10 in centro oogonii inclusis, minutis; antheridiis in ramulis tortuosis supra oogonium repentibus, acrogenis, subpiriformibus.

Hab. in fossis circa Strassburg et pr. Kork Germaniæ. — Species diclina.

4. **Achlya oligacantha** de Bary in Bot. Zeit. 1888, p. 647, t. X, f. 1. 1457

— Hyphis primariis tenuibus; oogoniis globosis, pauci-spinulosis, nunc lateralibus, nunc terminalibus, sæpe ramosis; oosporis 4-8 in quoque oogonio, subminutis; antheridiis sæpius pluribus ad quodque oogonium insertis, partim androgynis, partim diclinis, curvato-clavatis.

Hab. in lacustribus pr. Kork Baden (ZACHARIAS).

5. **Achlya stellata** de Bary in Bot. Zeit. 1888, p. 648, t. X, f. 10-11. 1458

— Hyphis primariis tenuibus; oogoniis aliis solitarie, in ramulis lateralibus acrogenis, aliis (pluribus) terminalibus in hypha primaria vel in ejus ramis, globosis et ob compressionem conspicue stellatis; antheridiis deficientibus; oosporis singulis in quoque oogonio, plasmate peripherice obscuriore.

Hab. in lacustribus prope Göttingen Germaniæ, sociâ *Achlyâ polyandrâ*.

DICTYUCHUS Leitg. — Syll. VII, 1, p. 273.

1. **Dictyuchus clavatus** de Bary Bot. Zeit. 1888, p. 649, t. IX, f. 3. 1459

— Thallo cæspitose, hyphis primariis distantibus, zoosporangiis breve et late clavatis, primaria terminali, secundariis lateralibus subspiraliter digestis; oogoniis sphæricis, breve stipitatis, racemosis, punctulatis, oosporas circ. 12 excentricas foventibus.

Hab. inter Algas pr. Strassburg (STAHL).

APLANES de Bary in Bot. Zeit. 1888, p. 613 (Etym. *a* non et *planes* vagans). — Ab *Achlya* differt tantum zoosporis non mobilibus.

1. **Aplanes Braunii** de Bary in Bot. Zeit. 1888, p. 650, t. IV, f. 1. 1460

— Hyphis thalli distantibus, inæqualiter ramosis; sporangiis sparsis, paucis; oogoniis frequentioribus terminalibus vel intercalaribus vel 3-5 superpositis, mediis doliiformibus; antheridiis androgynis, minimis, oblique ovalibus; oosporis in quoque oogonio sæpius 12.

Hab. in lacubus Hercyniæ. — Forte huc spectat *Achlya Braunii* Reinsch. — Syll. VII, 1, p. 276.

PYTHIUM Pringsh. — Syll. VII, 1, p. 270.

1. **Pythium polysporum** Sorok. Mycol. (Kazan 1872) p. 23, t. 7, f. 3. 1461
— Hyphis tortuosis, continuis, sub apice ramulum antheridiphorum gerentibus, oogoniis sphæricis, 40-50 μ . diam., oosporas sphæricas plures 7-8 μ . diam. foventibus.
Hab. ad in Rossia (?).
2. **Pythium? dichotomum** Dang. in Ann. Sc. Nat. 1886, p. 313, t. 14, 1462
fig. 17-18. — Filamentis repetito dichotomis, continuis, hinc inde ellipsoideo-inflatis et protoplasma dense granulosum et vacuola 2 majuscula centro præbentibus; rhizoidibus nullis.
Hab. intra cellulas Nitellarum, sociâ *Catenariâ* in Gallia.
3. **Pythium Anguillulæ-aceti** Sadeb. Bot. Centr. 1887, I, p. 318. — Co- 1463
nidiis (zoosporis?) et oogoniis synchronis et coadunatis; conidiis (?), seriatis glomeratisque, quam in ceteris speciebus multo minoribus nempe circ. 6 μ . diam.
Hab. in Anguillulæ Aceti, Hamburg Germaniæ.
4. **Pythium fecundum** Wahrl. Not. Centr. 1887, IV, p. 164. — Thallo 1464
tenui, hyphis 2-5 μ . crassis, ramis brevibus, 4-5 μ . crassis; zoosporangiis terminalibus, teretibus, 120-160 \simeq 2, zoosporas 6-16, biciliatas, reniformes, 6 \simeq 4 gignentibus; oogoniis plerumque intercalaribus, antheridio singulo vel binis fœcundatis; oosporis flavidis 12-14 μ . diam.
Hab. in rivulis inter Confervas et Bacillarieas in Alsatia (DE BARY). — Cæspituli pulchelli, 1,5-2 cm. diam.
5. **Pythium subtile** Wahrl., teste Gobi Arbeit. S. Petersb. Nat. Ges. 1888, p. 25, est idem ac *P. gracile* Schenk.

ACHLYOGETON Schenk. — Syll. VII, I, p. 277,

1. **Achlyogeton rostratum** Sorok. Chytrid. p. 36, f. 49, Syll. VII, 1, 1465
p. 278. — Zoosporangiis sacciformibus, catenulatis, collo ad superficiem cellulæ matricis inflato ibique angustato-acuto.
Hab. in Anguillula, Kazan Rossia.

LAGENIDIUM Schenk. — Syll. VII, 1, p. 278.

1. **Lagenidium pygmæum** Zopf in Akad. Halle 1887 et in Just Jah- 1466
resb. 1887, p. 535. — Mycelio obsolete vel in tumentias obtusas hinc inde inflato.
Hab. in polline Pinorum in Germania.

RESTICULARIA Dang. in Botaniste 1890, p. 96, t. 4, f. 24-31 (Etym. *resticula* funiculus). — Mycelium simplex, raro ramosum, angustum,

filiforme, hinc inde inflatum constrictumque; filamenta zoosporigena, ut in *Pythio* evacuantur. Plasma hyalinum, achroum, parce granulatum, hinc inde guttulis oleosis lucem valde refringentibus donatum, propagationis tempore in apice fli globuloso-coadunatum et zoosporas magnas, paucas, longe uniciliatas gignens. Zoosporæ post motum dein affixæ et rapide germinantes; generatio sexualis per zygosporas fere conformes intra tubum mycelium plasmatis condensatione efformatas. — Genus inter *Lagenidium* et *Myzocyttium* locandum.

1. **Resticularia nodosa** Dang. l. c. — Zygosporis sphaericis, 6-10 μ . 1467 diam., nonnullis elongato-ellipticis, membrana crassa instructis, grosse uni- rarius minute pauci-guttatis.

Hab. intra trichomata Lyngbyæ Æstuarii quæ plerumque deformat, pr. Caen Galliæ.

OSTRACOBLABE Born. et Flah. in Bull. Soc. Bot. Fr. 1890, p. CLII (Etym. *ostracon* concha et *blabe* damnum). — Thallus hyalinus; hyphæ subtilissimæ, rectæ, reniformes, continuæ.

1. **Ostracoblabe implexa** B. et F. l. c. t. 12, fig. 1-4. — Filamentis 1468 hinc inde fusiformi-inflatis, 3-5 μ . crassis, sphaeroideo-inflatis et tunc 8-12 μ . crassis.

Hab. ad conchas emortuas, Croisic, Brest, Luc Galliæ.

LITHOPYTHIUM Born. et Flah. in Bull. Soc. Bot. Fr. 1890, p. CLII (Etym. *lithos* lapis et *Pythium*). — Hyphæ incolores, inæquales, hinc inde globoso-inflatæ.

1. **Lithopythium gangliiforme** B. et F. l. c. t. 12, f. 5-6. — Hyphis 1469 horizontaliter intertextis, 1,7-3,5 μ . cr., rectis flexuosisve, remote ramulosis; tumentis globulosis v. ovoideis nunc singulis, nunc 3-6-catenatis.

Hab. ad conchas inter Algas perforantes, Croisic Galliæ.

Fam. 4. **Entomophthoraceæ** NOWAK. *).

EMPUSA Cohn. — Syll. VII, 1, p. 281.

1. **Empusa? conglomerata** (Sorok.) Thaxt. Entom. pag. 162, t. 15, 1470

*) Cfr. eximium opus *Thaxter*, The Entomophth. of Un. Stat., Boston 1888, cum 21 tab.

f. 56-62. — Hyphis conidiophoris simplicibus; conidiis primariis late ovoideis, plerumque late uniguttatis, 25-40 \approx 22-25; conidiis secundariis primariis similibus; sporis perdurantibus ex hypharum massa sphaerica productis, processu colliformi longitudine variabili suffultis.

Hab. in larvis et nymphis natantibus Tipulæ in Mt. Washington et Cullowhee Amer. bor. et in Culice in Europa.

2. **Empusa lageniformis** Thaxt. Entom. p. 169, t. 16, f. 141-160. — 1471

Hyphis conidiophoris simplicibus v. junioribus fasciculatis v. pseudodigitatis, in basidium debile, attenuatum desinentibus; conidiis primariis subfumosis, ampulliformibus, basi truncata, vix papillosa præditis, apice rotundatis, intus granulosis, 35-38 \approx 20-30; conidiis secundariis primariis similibus vel amygdaliformibus conidiophoris capillaribus oblique suffultis; sporis perdurantibus et cystidiis ignotis.

Hab. in Aphidibus ad Betulam populifoliam viventibus, Maine, Massachussets, North Carolina Amer. bor.

3. **Empusa Planchoniana** (Cornu) Thaxt. Entom. p. 165, t. 15, f. 76-78, 1472

Entomophthora Cornu in Bull. Soc. Bot. Fr. 1873, pag. 189. — Hyphis conidiophoris simplicibus, partim coalescentibus; conidiis primariis subsphaericis vel late ovoideis, papilla basali interdum acuminata præditis, plerumque 33-40 \approx 28-30; conidiis secundariis primariis similibus; sporis perdurantibus, hypharum latere v. apice v. interstitiis evolutis, sphaericis v. in interstitiis valde irregularibus, 35-50 μ . diam.

Hab. in corporibus variorum generum Aphidum, Kittery, Maine pr. Boston Amer. bor. et in Europa.

4. **Empusa caroliniana** Thaxt. Entom. p. 167, t. 16, fig. 91-105. — 1473

Hyphis conidiophoris simplicibus; conidiis ovoideis, oblongis vel longe ellipsoideis, utrinque rotundatis, apice a basi indistincta, intus guttulis præditis, 26-45 \approx 10-15; conidiis secundariis primariis similibus; sporis perdurantibus sphaericis, hyalinis 37-55 μ . diam.

Hab. in nymphis Tipulæ sp., North Carolina Amer. bor.

5. **Empusa papillata** Thaxt. Entom. p. 166, t. 15, f. 82-90. — Hy- 1474

phis conidiophoris validis, simplicibus; conidiis primariis æqualiter rotundatis, papilla conspicua, liguliformi, subtruncata præditis, plerumque 50-70 \approx 35-50; conidiis secundariis primariis similibus; sporis perdurantibus 45-55 μ . diam., sphaericis, dilute brunneolis.

Hab. in Dipteris in Mt. Washington et Cullowhee Amer. bor.

6. **Empusa apiculata** Thaxt. Entom. p. 163, t. 15, f. 63-70, 74-75. — 1475

Hyphis conidiophoris simplicibus, interdum subdigitatis, e massa subsphærica directe v. indirecte ortis; conidiis primariis subsphæricis, basi papillatis, supra abrupte breviter et acute acuminatis, 30-37 \simeq 28-30; conidiis secundariis primariis similibus; sporis perdurantibus hypharum latere vel apice insertis, hyalinis, sphæricis, 30-45 μ , diam.

Hab. in larvis Hyphantriæ textoris, nymphis Tortricis sp., Petrophoræ sp., in Dipteris, in nymphis Typhlocybæ, Maine et North Carolina Amer. bor. — Var. **major** Thaxt. l. c. f. 71-73: conidiis subsphæricis, 45-60 \simeq 38-55, papilla basilaris minore quam in typo. In nymphis Ptilodactylæ serricollis, Cullowhee, North Carolina Amer. bor.

ENTOMOPHTHORA Fries. — Syll. VII, 1, p. 282.

1. **Entomophthora Plusiæ** Giard Quelq. typ. Champ. Entom. p. 202, 1476 t. 4, f. 5-6. — Hyphis conidiophoris ramosis, cæspitulos inæquales, larvam complete investientes formantibus; conidiis inæqualiter ovoideis, chlorinis, granulosis, 15 \simeq 30; sporis perdurantibus ignotis; rhizoidibus nullis.

Hab. in larvis Plusiæ Gammæ, quas strato velutino obtegit, ad Cher Galliæ.

2. **Entomophthora glæospora** Vuill. Étud. biol. sur l. Champ. — Mycelio filamentis elongatis multinucleatis intertextis hinc inde inflato-germinantibus formato; conidiis ovoideis, 18 \simeq 12, basi papillatis, basidio acuminato insertis; strato gelatinoso inter episporium et endosporium cito generato (excepto loco papillæ); zygosporis ignotis.

Hab. in Dipteris (Simulium?) Épinal Galliæ. — Conidia crasse uninucleata.

3. **Entomophthora saccharina** Giard Typ. remarq. champ. Entomoph. 1478 p. 198, t. III, f. 1-9. — Hyphis conidiophoris simplicibus, coalescentibus, 7-10 μ . cr.; conidiis primariis ovoideis v. piriformibus, basi papillatis, apice rotundatis, 17-18 \simeq 12-24, hyalinis, plerumque uniguttatis; conidiis secundariis e primariis ortis et iis similibus sed minus regularibus; sporis perdurantibus irregulariter sphæricis hyalinis, 21 μ . diam., ex hypharum filamentis conjugatis ortis, pachypleuris, contenu opaco, magne uniguttatis.

Hab. parasitica ad bruchos Eucheliæ Jacobæ in arenosis inter Wimereux et Ambleteuse Galliæ.

4. **Entomophthora Forficulæ** Giard Quelq. Typ. Champ. Entom. p. 211. 1479

— Conidiophoris brevibus, parce ramosis; conidiis oblongis vel longe ellipsoideis, utrinque rotundatis, eguttulatis, $20-25 \approx 6-8$; sporis perdurantibus ignotis.

Hab. in Forficula auricularia prope Boulogne-sur-mer Galliæ.

5. **Entomophthora Lampyridarum** Thaxt. Entom. p. 169, t. 17, f. 161- 1480
172. — Hyphis conidiophoris digitatis (?); conidiis primariis regularibus, ovoideis, apice subattenuatis, in basin subpapillatam, latam, abrupte productis, intus granulatis, nec guttulis magnis præditis, $30-37 \approx 30-37$; conidiis secundariis primariis similibus vel sæpius elongato-cylindræis, utrinque rotundatis, hyphis capillaribus verticaliter insertis; sporis perdurantibus ignotis.

Hab. in nymphis Chauliognathi pensylvanici, Cullowhee Amer. bor.

6. **Entomophthora geometralis** Thaxt. Entom. p. 170, t. 17, f. 173- 1481
178. — Hyphis conidiophoris digitatis, coalescentibus; conidiis primariis e breviter ellipsoideo ovoideis, $15-22 \approx 10-12$, intus minute granulatis, hyalino-uniguttatis; conidiis secundariis primariis similibus v. elongato-amygdaliformibus, hyphis capillaribus oblique suffultis; cystidiis non visis; sporis perdurantibus, hypharum brevium latere vel apice insertis, sphericis, hyalinis, $25-30 \mu$. diam.

Hab. in nymphis Petrophoræ, Eupitheciæ, Theræ etc., Kittery, Maine Amer. bor. — *E. sphærospermæ* affinis.

7. **Entomophthora occidentalis** Thaxt. Entom. p. 171, t. 17, f. 179- 1482
199. — Hyphis conidiophoris irregulariter digitatis, in massam albam v. subflavidam coalescentibus; conidiis primariis ellipsoideo-cylindræis v. interdum subfusoides, sæpe apice valde attenuatis, basi late rotundato-papillatis, $35-45 \approx 10-12$, intus minute granulatis, interdum guttulatis; conidiis secundariis primariis similibus vel longe amygdaliformibus, hyphis capillaribus, oblique dispositis; sporis perdurantibus ex hypharum latere vel apice evolutis, hyalinis, sphericis, $20-35 \mu$. diam.; cystidiis gracilibus, subattenuatis.

Hab. in Aphidibus Betulæ populifolæ, Maine, Massachussetts Amer. bor. — *E. sphærospermæ* affinis.

8. **Entomophthora dipterigena** Thaxt. Entom. p. 177, t. 18, f. 241- 1483
250. — Hyphis digitatis, supra matricem in massam albam v. raro læte viridem coalescentibus; conidiis primariis ex ovoideo oblongis v. subfusoides basi papillatis, sæpe curvulis, guttulis numerosis præditis, $22-30 \approx 11-15$; conidiis secundariis primariis similibus vel late ovoideis; sporis perdurantibus racemoso-gregariis, sphæ-

ricis, hyalinis, 20-40 μ . diam.; cystidiis gracilibus, apice attenuatis.

Hab. in Dipteris præcipue Tipulæ sp. minutæ et Mycetophilidis, Maine, New Hampshire, Massachussetts, North Carolina Amer. bor.

9. **Entomophthora virescens** Thaxt. Entom. 178, t. 18, f. 251-261. — 1484

Hyphis conidiophoris digitatis, e massis sphaericis peculiaribus indirecte productis; conidiis primariis ex ovoideo oblongis, irregularibus, utrinque obtusis, basi sæpe vix papillatis, siccis flavo-viridulis, granulis numerosis, minutis, irregularibus, sæpe bacilliformibus repletis, 20-36 \approx 10-16; conidiis secundariis primariis similibus; sporis perdurantibus et cystidiis ignotis.

Hab. in larvis Agrotidis fennicæ, Ottawa, Ontario Amer. bor. (TLETCHER).

10. **Entomophthora americana** Thaxt. Entom. p. 179, t. 18, f. 262-273. 1485

— Hyphis conidiophoris regulariter digitatis, e massis magnis, irregulariter rotundatis evolutis, supra matricem in stratum dein subrubiginosum coalescentibus; conidiis primariis elongato-ovoideis, apice late rotundatis, basi papillato-attenuatis, sæpe lateraliter curvulis, guttulis numerosis, regularibus repletis, 25-35 \approx 13-15; conidiis secundariis primariis similibus; sporis perdurantibus, hyalinis, sphaericis, 30-50 μ . diam.; cystidiis nullis.

Hab. in Musca domestica, M. vomitoria, Lucilia Cæsare et aliis Muscis, New England et North Carolina Amer. bor.

11. **Entomophthora montana** Thaxt. Entom. p. 180, t. 18, f. 274-285. 1486

— Hyphis conidiophoris digitatis, e massis rotundatis directe evolutis, in massam livido-albam supra matricem coalescentibus; conidiis primariis ex ovoideo turbinatis, ex apice late rotundato basim subacuminatam versus plerumque attenuatis, guttulis magnis repletis, 18-25 \approx 11-15; conidiis secundariis primariis similibus v. breviter ovoideis; sporis perdurantibus ignotis; cystidiis magnitudine hypharum conidiophorarum, rotundatis v. attenuatis.

Hab. in Diptero probabiliter Chironemo in vertice Montis Washington Amer. bor.

12. **Entomophthora echinospora** Thaxt. Entom. p. 180, t. 19, f. 286-305. 1487

— Hyphis conidiophoris digitatis, in massam dein rubiginosam coalitis; conidiis primariis ovoideis, basi papillata attenuatis, plerumque subsymmetricis 20-25 \approx 10-14, guttulis magnis 1 vel pluribus præditis; conidiis secundariis similibus vel parum diversis; sporis perdurantibus sphaericis, 30-40 μ . diam., exosporio spinoso, intus

productis vel extus et tunc maturitate plexu hypharum delicato suffultis; cystidiis non visis.

Hab. in nymphis *Sapromyzæ longipennis* v. raro in aliis Dipteris minoribus, Maine, New Hampshire, North Carolina Americæ borealis.

13. **Entomophthora sepulchralis** Thaxt. Entom. p. 181, t. 19, f. 306-326. 1488

— Hyphis conidiophoris digitatis, e massis sphæricis, 60 μ . diam. evolutis, supra matricem in stratum album coalescentibus; conidiis primariis ex elongato-ovoideo elongato-ellipsoideis v. subfusoideis, apice rotundatis, basi papillata, lateraliter curvula præditis, hyalinis, guttulis numerosis, magnis repletis, 35-55 \times 10-15; conidiis secundariis primariis similibus vel breviter ovoideis; sporis perdurantibus sphæricis, hyalinis, 35-40 μ . diam., e duarum hypharum conjugatione productis.

Hab. in nymphis *Tipulidarum*, North Carolina, Tennessee Amer. bor.

14. **Entomophthora variabilis** Thaxt. Entom. p. 183, t. 20, f. 327-343. 1489

— Hyphis conidiophoris digitatis, olivaceis; conidiis primariis secundum periodum formationis variabilibus, primis nempe breviter ovoideis, basi papillatis, apice late rotundatis, circ. 15 \times 11, ultimis longioribus, recte clavatis vel valde curvatis, 18-30 \times 7-9; conidiis secundariis primariis similibus; sporis perdurantibus ignotis; cystidiis parum numerosis, subattenuatis, hyphis conidiophoris majoribus.

Hab. in Dipteris minutis, North Carolina Amer. bor.

15. **Entomophthora rhizospora** Thaxt. Entom. p. 183, f. 20, t. 347-348. 1490

— Hyphis conidiophoris digitatis, supra matricem in massam livido-albam coalitis; conidiis primariis recte et breviter clavatis, utrinque plus minus attenuatis, inferne colliformibus et papilla basilari rotundata obsitis, intus magne guttulatis, 30-42 \times 8-10; conidiis secundariis primariis conformibus vel sphæricis, basi papillata, delicata, abrupte productis; sporis perdurantibus, sphæricis, 40-60 μ . diam., episporio brunneolo, dein excrescentiis rhizoidibus cinctis, ex hyphis semper exterioribus, incrassatis, corneis, demum theobrominis evolutis; cystidiis parum numerosis, magnis, subattenuatis.

Hab. in nymphis plurimorum generum *Phryganeidarum* Kittery, Maine et North Carolina Amer. bor.

16. **Entomophthora gracilis** Thaxt. Entom. p. 185, t. 21, f. 379-391. — 1491

Hyphis conidiophoris digitatis, supra matricem in massam albam coalitis; conidiis primariis gracilibus, subfusoideis, basi colliformi-

papillatis, apice attenuatis, valde curvatis, raro rectis, late gutturalis; conidiis secundariis primariis similibus vel subsphæricis, papillatis; sporis perdurantibus ignotis; cystidiis raris, apice rotundatis.

Hab. in Culicibus minutissimis, Cullowhee, North Carolina Amer. bor.

17. **Entomophthora conica** Nowak. Ueb. Entom. in Bot. Zeit. 1877 1492

(nomen), Thaxt. Entom. p. 186, t. 21, f. 392-410. — Hyphis conidiophoris digitatis, e massis subsphæricis vulgo directe productis, supra matricem in stratum album coalescentibus; conidiis primariis longis, tenuibus, gracilibus, conicis, sæpe valde curvatis e basi rotundato-papillata versus apicem plerumque obtusum attenuatis, $25-80 \approx 10-14$; conidiis secundariis primariis conformibus v. læte ovoideis, apice raro acuminatis; sporis perdurantibus sphæricis, hyalinis, $30-50 \mu$. diam., cystidiis hyphis conidiophoris majoribus, apice rotundatis.

Hab. in nymphis Chironomi et aliorum Culicum parvorum, Mount. Washington, North Carolina Amer. bor.

18. **Entomophthora pelliculosa** Sorok. Cfr. Thaxt. Entom. p. 189. — 1493

Conidiis subglobosis, stratis pluribus concentricis cinctis.

Hab. in *Anthomya pagana* in Rossia. — Fungus habitus *E. Muscæ* sed conidiorum structura mox distinctus.

19. **Entomophthora Phryganæ** Sorok. Cfr. Thaxt. Entom. p. 189. — 1494

Hyphis conidiophoris uniseptatis, 5μ . lat., expansione basilari rhizoidea insertis; conidiis rotundatis, $8 \approx 6-7$.

Hab. in *Phryganea grandi* in Rossia.

20. **Entomophthora colorata** Sorok. Cfr. Thaxt. Entom. p. 187. — 1495

Conidiis rubenti-brunneis, rotundatis; sporis perdurantibus e latere vel apice corporum amœboideorum evolutis.

Hab. in *Gryllo* in Rossia. — *E. Grylli* affinis sed conidiis globosis et coloratis distincta.

21. **Entomophthora Phytonomi** Arthur, Rep. Bot. N. Y. Agricult.

1887, p. 274, teste Thaxter. Entom. p. 172, eadem ac *E. sphærosperma* Fres.

22. **Entomophthora Anisopliæ** Metschn. Zeitschr. landw. Ges. Neu-

Russl. 1879, pag. 21-50 est verisimiliter, teste Thaxter Entom. p. 190, *Isariæ* species conidiis $4,8 \approx 1,6$.

Massospora cicadina Peck. — Syll. IV, p. 10 — observante cl. Thaxter, est certe *Entomophthoracea*.

TARICHIUM Cohn. — Syll. VII, 1, p. 284.

1. **Tarichium Uvella** Kross. in Mém. Soc. Natur. Odessa 1886, Thaxt. 1496
Entom. p. 190. — Sporis perdurantibus racemoso-gregariis, rotundatis, papillatis, 8-10 μ . diam., membrana parum incrassata præditis, germinatione hyphas septatas dein apice sporam hyalinam cylindræam, 9 \simeq 3 gerentes, emittentibus.

Hab. in larvis Coleopterorum in Rossia. — Secundum Thaxter loc. cit. *Massosporæ* affine.

EPICHLÆA Giard Typ. remarq. champ. Entomoph. pag. 215 [1889] (Etym. *epi* supra et *Chlæon*). — Mycelium nullum vel rarius vix evolutum; hyphæ conidiophoræ ad articulos breves, cylindræos utrinque 1-2-sporiferos, reductæ; conidia elongato-ellipsoidea. — Genus cum Entomophthoraceis vix comparandum.

1. **Epichlæa divisa** Giard loc. cit. — Hyphis conidiophoris 10 μ . vel 1497 paullo ultra diam.; conidiis elongato-ellipsoideis, utrinque uniguttatis.

Hab. in corpore Chlæonis dipteræ in paludosis Lœuilly Galliæ (L. CARPENTIER).

POLYRRHIZIUM Giard Typ. remarq. champ. Entomoph. p. 217, t. V, f. 1-6. — Mycelium distincte pluricellulare, e filamentis ramosissimis efformatum; conidia ovoidea ad apicem hypharum bina vel terna; sporæ perdurantes (?) ovoideæ, uniseptatæ.

1. **Polyrrhizium Leptophyæ** Giard loc. cit., *Metarrhizium Lepto-* 1498
phyæi Giard. 1888. — Mycelii filamentis valde ramosis, vulgo regulariter cylindræis, sed basi e cellulis brevioribus crassioribusque efformatis; conidiis ovoideis, 5-7 μ . long., ad apicem hypharum binis v. ternis; sporis perdurantibus (?) obscurioribus, majoribus, 6-10 μ . long., ovoideis, uniseptatis et vix constrictis.

Hab. ad corpus Leptophyæ punctatissimæ in silva Meudon prope stagnum Trivaux Galliæ. — Occurrunt hinc inde hypharum ramuli cum cellula apicali subturgescente per paria approximati.

CHROMOSTYLIUM Giard Typ. remarq. Entomoph. pag. 214 (1889) [Etym. *chroma* color et *stylos*]. — Hyphæ gregariæ, erectæ, continuæ, coloratæ (rufo-brunneæ) apice conidia, ovoidea, hyalina, dein 2-guttata gerentes. — Videtur Hyphomycetem sistere.

1. **Chromostylium Chrysorrhæ** Giard Typ. remarq. champ. Entomoph. pag. 214, t. IV, f. 7-8, *Metarrhizium Chrysorrhæ* Giard, 1888. — Hyphis conidiophoris filiformibus unicellularibus adscendentibus, brunneolis; conidiis acrogenis, irregulariter ovoideis, 5 \approx 3, plerumque biguttatis.

Hab. ad bruchos vivos *Liparis chrysorrhæ* parasitica, in silva Boulogne Galliæ.

HALISARIA Giard Typ. remarq. champ. Entomoph. pag. 216 [1889] (Etym. *halisis* salsura). — Mycelium e filamentis longis, gracilibus, æqualiter crassis, vulgo parum ramosis; conidia apice filamentorum inserta, ovoideo-cylindracea, biguttata.

1. **Halisaria gracilis** Giard loc. cit. — Characteres generis. 1500

Hab. ad larvas Dipteri culiciformis (probab. *Clunionis maritimi*) in scopulosis, Wimereux Galliæ.

Fam. 5. **Chytridiaceæ** DE BARY et WOR.

SYNCHYTRIUM de Bary. — Syll. VII, 1, p. 288.

1. **Synchytrium alpinum** Thom. Ber. Deut. Bot. Gesell. 1889, p. 255. 1501
— Sporangiiis levibus, e globoso ellipsoideis, 90-140 \approx 67-83; gallis depresso tuberculatis.

Hab. in caulibus foliisque *Violæ bifloræ* in alpibus Italiæ et Helvetiæ. — Affine *S. anomalo*.

2. **Synchytrium cupulatum** Thom. in Bot. Centr. XXIX (1887), p. 19, 1502
Synch. Myosotidis var. *Dryadis* Thom. 1880. — Sporis perdurantibus globosis vel subellipsoideis, 50-150 μ . diam. intra cellulas epidermidis singulis raro pluribus; tuberculis prominentibus, globosis vel elongato-saccatis, confluendo subcupulatis.

Hab. in foliis *Potentillæ argentæ* et *Dryadis octopetalæ* in alpibus Tyrolæ et Austriæ. — E sectione *Chrysochytrii*.

3. **Synchytrium Asari** Arth. et Holw. Rep. Bot. Minnes. 1886, p. 40. — 1503
Maculis indistinctis; soris depresso hemisphæricis, sparsis; sporis perdurantibus solitariis, sphæricis, 100-120 μ . diam., episporio atrobrunneo, levi.

Hab. ad folia et petiolos *Asari canadensis*, Vermilon lake Amer. bor.

4. **Synchytrium Vaccinii** Thom. (ubi?) Cfr. Halst. Cranberry 1889, p. 4 et seq. cum icon. ubi quoque illustratur, sine nomine, affinis

species in *Vacciniis*, *Rhododendris*, *Clethris* etc. in Amer. bor. vigenis.

RHIZIDIUM A. Braun. — Syll. VII, 1, p. 269.

1. **Rhizidium tetrasporum** Sorok. Chytrid. p. 33, f. 42 et Rev. Myc. 1504
1889, p. 137. — Zoosporangiis sphæroideis vel piriformibus, collo parvo, zoosporas quaternas, per ostiolum exeuntes fiventibus.

Hab. in *Rhynchonemate*, Kazan Rossiaë (?).

2. **Rhizidium Confervæ-glomeratæ** Sorok. Chytrid. p. 32, f. 41 et Rev. 1505
Myc. 1889, p. 137. — Zoosporangiis rostro acute terminato, parietem *Cladophoræ* perforante donatis, inferne filamentis mycelicis radiantibus dichotome ramosis tenuissimis cinctis; zoosporis per ostiolum rostri exeuntibus.

Hab. in filamentis *Cladophoræ glomeratæ*, Kazan Rossiaë et Tachkend Asiaë centralis.

CHYTRIDIUM A. Braun. — Syll. VII, 1, p. 304.

1. **Chytridium spinulosum** Blytt in Christ. Vidensk. Sallsk. Förhandl. 1506
1882, n. 5. — Zoosporangiis globosis, aculeolis minutis hinc illinc præditis, 16-27 μ . diam., haustoriis rotundatis, appendicibus radiciformibus donatis; sporis perdurantibus globosis, levibus, 11-13 μ . diam., contentu oleoso.

Hab. ad et intra zygosporas *Spirogyræ*, Christiania Norvegiæ.

2. **Chytridium pusillum** Sorok. Chytrid. pag. 22, f. 23. — Minimum; 1507
zoosporangiis perfecte sphæroideis, 4-5 μ . diam., ostiolo præditis, collo atque mycelio destitutis, gregariis.

Hab. in algis variis, Kazan Rossiaë, Tachkend in Asia centrali. — Affine *Ch. glomerato*. — Species zoosporangiis operculatis sphæroideis vel ovoideis, mycelio præditis, clarus Sorokin ad genus *Euchytridium* refert, species vero endoparasiticas collo, operculo atque mycelio destitutas generi *Chytridio* adscribit.

3. **Chytridium dentatum** Rosen Bot. Centr. 1888, III, p. 74. — Spo- 1508
rangiis elongatis, dentibus robustis, mox convergentibus instructis.

Hab. in *Spirogyra orthospira* in aquariis in horto bot. Strassburg Alsatiaë. — Formæ pluri-vesiculosæ cognitæ.

4. **Chytridium Zygnetatis** Rosen Bot. Centr. 1887, III, pag. 74. — 1509
Sporangiis globosis vel ovoideis, dentibus brevibus et tenuibus, valde convergentibus.

Hab. in *Zygnemate cruciato* et stellino in aquariis

Strassburg Alsatiae. — Formæ uni-vesiculosæ cum pluri-vesiculosæ alternantes.

5. **Chytridium quadricorne** Rosen Bot. Central. 1887, III, p. 74. — 1510
Sporangiis e basi rotundata breve cylindræis, dentibus robustis elongatisque sed vix convergentibus.
Hab. in *Ædogonio rivulari*, Strassburg Alsatiae. — Formæ pluri-vesiculosæ ignotæ.
6. **Chytridium zoophthorum** Dang. Bull. Soc. Myc. 1888, pag. XXII. 1511
— A *Chytridio Braunii* differt rhizoidibus valde evolutis ramosisque, zoosporis ovatis, 3 μ . diam. subgranulatis, cilio longissimo donatis; zoosporangiis 20-25 = 15-17.
Hab. in Rotiferis in Gallia.
7. **Chytridium Brebissonii** Dang. loc. cit. — Sporangiiis dentium corona cinctis; zoosporis sphericis 2-7 μ . diam.; rhizoidibus non incrassatis. 1512
Hab. in cellulis marginalibus *Coleochæte scutulæ* adfixum in Gallia.
8. **Chytridium Braunii** Dang. Bull. Soc. Myc. 1888, p. XXII. — Cellulis tegumento communi crasso obvolutis; sporangiis ovalibus, 6-10 = 4-6, 15-25, zoosporas sphericas longe uniciliatas 2 μ . diam. foventibus. 1513
Hab. in *Apiocysti Brauniana* in Gallia.
9. **Chytridium rostellatum** De Wild. Chytr. Belg. pag. 19, c. ic. — 1514
Zoosporangiis ovatis, in collum breve vel longiusculum subinde bifidum attenuatis, basi in rhizoides complexas ramosas intra matricem penetrantes abeuntibus.
Hab. in filamentis *Spirogyræ crassæ* in horto botanico Bruxelles Belgii.
10. **Chytridium Pandorinæ** Wille in Just Bot. Jahresb. 1884, p. 445. 1515
— Zoosporangiis globosis, apice verrucâ præditis, rhizoide in parte inferiori inflata, orificio zoosporangiorum laterali, operculo nullo.
Hab. in *Pandorina Moro* parasitica, in America australi.
— *Chytridio laterali* affine.
11. **Chytridium simplex** Dang. in Bot. Centr. 1889, II, pag. 531. — 1516
Rhizoidibus simplicibus; zoosporangiis apice lacerato-dehiscentibus; zoosporis oblongis, 10-15 = 7-8.
Hab. in cystis *Cryptomonadis* in Gallia.
12. **Chytridium Elodeæ** Daug. l. c. — Sporangiiis sæpe coadnato-sesilibus, mycelio obsoleto. 1517
Hab. in *Elodea* in Gallia.

BICRICIUM Sorok. Chytrid. p. 35 et Rev. Myc. 1889, p. 138 (Etym. *bis* et *cricos* annulus). — Zoosporangia oblonga, binata, isthmoque angusto inter se cohærentia; zoosporæ sphæroideæ, membrana crassa cinctæ.

1. **Bicricium Naso** Sorok. Chytrid. p. 35, f. 47. — Zoosporis oblongis, uno apice inflatis atque collum longissimum externum parietem perforans et extra matricem elongatum emittentibus. 1518

Hab. in *Arthrodesmo*, Tachkend Asiæ centralis.

2. **Bicricium transversum** Sorok. Chytrid. p. 35, fig. 46. — Zoosporangiis in cellula matrice transverse dispositis, collo alterius parietem superiorem, collo alterius inferiorem perforante; sporis perdurantibus in eodem zoosporangio conformibus; zoosporis non visis. 1519

Hab. in *Cladophora*, Tachkend Asiæ centralis.

3. **Bicricium lethale** Sorok. Chytrid. p. 35, f. 45. — Zoosporangiis piriformibus, collo elongato, extra matricem exeunte; zoosporis uniciliatis, sursum aculeato-attenuatis. 1520

Hab. in *Anguillula*, Tachkend Asiæ centralis et Kazan Rossiaë.

PHLYCTIDIUM A. Braun. — Syll. VII, 1, p. 308.

1. **Phlyctidium Haynaldii** Istv. in *Hedwigia* 1883, p. 125. — A *P. mamillato* differt zoosporangiis utroque latere processibus instructis, dorso sinuoso-concavo; a *P. subanguloso* zoosporangiis non globosis, processibus tantum binis instructis. 1521

Hab. in scaturigine fontis horti claudiopolitani, filis *Hormisciæ zonatæ* insidens. — Zoosporangia matura 14 \approx 12, zoosporæ ellipticæ 2 μ . longæ. — Cfr. Sorok. (Chytrid. p. 17-18, f. 12-16) qui ad hoc genus plures *Chytridii* species refert.

2. **Phlyctidium irregulare** De Wild. Chytrid. Belg. p. 21. — Zoosporangiis sphæricis, 9 μ . diam., processibus binis oppositis instructis; zoosporis (hujus?) minutissimis grosse uninucleatis. 1522

Hab. in *Diatomea* quadam, Bruxelles et Laechen Belgii. — Zoosporangia subinde processum unicum vel nullum gerentia.

CATENARIA Sorok. Chytrid. p. 37, Rev. myc. 1889, p. 139, fig. 95 (Etym. *catena*). — Zoosporangia sacciformia, per isthmos catenulatum conjuncta; zoosporæ sphæroideæ, uniciliatæ.

1. **Catenaria Anguillulæ** Sorok. Chytrid. p. 37, f. 50. — Zoosporangiis sacciformibus, per isthmos catenulatum conjunctis; isthmis e

cellulis 2 parvis formatis; collis longitudine variis; zoosporis uniciliatis, sphæroideis.

Hab. in Anguillulis, Tachkend Asiæ centr. et Kazan Rossiaë.

OLPIDIUM A. Braun. — Syll. VII, 1, p. 310.

1. **Olpidium Algarum** Sorok. Chytr. p. 28 et Rev. Myc. 1889, p. 84, 1524
t. 96 et 101. — Var. **longirostrum** Sorok. Chytrid. p. 28, fig. 32.
— Zoosporangiis oblongis, collo longo a cellula matricis exeunte
sursum infundibuliformi præditis; zoosporis non visis.

Hab. in filamentis *Confervacearum*, Tachkend. — Var. **brevirostrum** Sorok. l. c. f. 32^{bis}: zoosporangiis sphæroideis, collo brevi præditis; zoosporis reniformibus, uniciliatis. In *Sphærozomate vertebrato*, Tachkend Asiæ centralis et Kazan Rossiaë.

2. **Olpidium Arcellæ** Sorok. Chytrid. p. 32, f. 40. — Zoosporangiis 1525
globulosis, sphæroideis, collo longo ex matrice exeunte.

Hab. in Arcella, Kaban et Kazan Rossiaë et Tachkend Asiæ centralis.

3. **Olpidium Tuba** Sorok. Chytrid. p. 31, f. 39. — Zoosporangiis ob- 1526
longis, collo parietem cellulæ matricis perforante et ibi contracto,
extra eam bulboso-incrassato, lageniformi; zoosporis non visis.

Hab. in filamentis *Confervacearum*, Kazan Rossiaë et Tachkend Asiæ centr. — Mycelium nullum.

4. **Olpidium immersum** Sorok. Chytrid. p. 29, f. 34. — Zoosporan- 1527
giis lageniformibus, collo basi sphæroideo-incrassato; zoosporis
non visis.

Hab. in *Staurastris*, Tachkend et Bourdaligk Buckara Asiæ centralis.

5. **Olpidium saccatum** Sorok. Chytrid. p. 28, f. 33. — Zoosporangiis 1528
ovoideis, medio constrictis, biscociformibus, collo brevi donatis;
zoosporis non visis.

Hab. in *Desmidiaceis* variis, Tachkend Asiæ centralis.

6. **Olpidium Sphæritæ** Dang. Bot. Centr. 1889, II, p. 530. 1529

Hab. parasitica in alia Chytridiacea h. e. in *Sphærita endogena* in Gallia. — Notæ specificæ desiderantur.

OLPIDIELLA Lagerh. Nouv. Chytr. p. 7 in Journ. de Bot. 1888, t. X
(Etym. ab *Olpidium*). — Zoosporæ cilio singulo, recto, posteriore
donatæ; zoosporangium orificio singulo.

1. **Olpidiella Uredinis** Lagerh. l. c. — Zoosporangiis rotundatis vel 1530
plus minusve rotundato-angulatis, usque ad 26 μ . cr., membrana

tenui hyalina vel subhyalina levi, contentu achroo, sine collo vel collo brevi præditi, singulis pluribusve in cellula nutricis consociatis; zoosporangiis perdurantibus, globosis, membrana crassa achroa levi instructis, 16 μ . diam.; zoosporis 3-4 μ . diam.

Hab. in uredosporis Uredinis Ariæ, Pucciniæ Violæ et P. Rhamni, Freiburg et München Germaniæ.

APHANISTIS Sorok. Chytrid. p. 33, Rev. Myc. 1889, p. 137 (Ab a non et *phaneros* manifestus). — Zoosporangia sphæroidea, collo destituta v. collo vix papilliformi, raro duplici instructa; zoosporæ uniciliatæ, sphæroideæ. Mycelium e filamentis simplici vel ramoso, crasso, septato, cellulas omnes *Ædogoniorum* percurrente et tantum in oogoniis in zoosporangia inflato, efformatum.

1. **Aphanistis *Ædogoniorum*** Sorok. l. c. pag. 33, fig. 43. — Mycelio 1531 simplici, septato; zoosporangiis prima ætate ovoideis, una extremitate attenuatis, dein sphæroideis, demum ad ostiolum oogonii acutatis; zoosporis sphæroideis, uniciliatis.

Hab. in *Ædogoniis*, Tachkend Asiæ centr. et Kazan Rossia. 1532

2. **Aphanistis? *pellucida*** Sorok. l. c. p. 34, f. 44. — Zoosporangiis pellucidis, collo acuminato parietem matricis perforante; mycelio brevi, septato; zoosporis non visis.

Hab. in *Ædogoniis* juvenilibus, Tachkend Asiæ centralis.

RHIZOPHIDIUM Schenk. — Syll. VII, 1, p. 298.

1. **Rhizophidium *Dicksonii*** Wright in Trans. R. Irish Acad., 1877, 1533 p. 20, t. III, Bot. Jahr. 1877, p. 157. — Unicellulare, primo exacte globosum, dein irregulare, sæpe oblongum; zoosporis per poros singulum vel binos exsurgentibus, numerosis.

Hab. in cellulis *Ectocarpi granulosi* in Britannia.

2. **Rhizophidium *Sciadii*** Zopf in Akad. Halle 1887 et Just Jahresb. 1534 1887, p. 535. — *Hab.* in *Sciadio Arbuscula* in Germania.
3. **Rhizophidium *Cyclotellæ*** Zopf l. c. — *Hab.* in *Cyclotella*, Germ. 1535
4. **Rhizophidium *sphærotheca*** Zopf l. c. — *Hab.* in microsporibus *Isoëtes* 1536 in Germania.

OLPIDIOPSIS Cornu. — Syll. VII, 1, p. 299.

1. **Oipidiopsis *Sorokinei*** De Wild. Chytr. Belg. p. 22, c. ic. *Olpidiopsis fusiformis* var. *Ædogoniorum* Sorok. Aperç. Chytr. Russ. 1537 p. 27. — Zoosporangiis elongatis inæqualibus, cellulam matricis subimplentibus et denticulo adhærentibus; zoosporis minutissimis.

Hab. in *Conferva*, Bruxel. Belgii et in *Ædogonio* in Rossia.

MICROMYCES Dang. Bot. Centr. 1889, II, p. 530 (Etym. *micro* parvus et *myces*). — Sphærulæ plasmaticæ intra cellulas Algarum parasiticæ, membrana aculeata v. verrucosa. Cellulæ maturitate evacuantur et plasma, membranam tangens, sporangium compositum efficit; sporangium 4-cellulare, cellulæ 100 zoosporas uniciliatas gignentis.

1. **Micromyces Zygonii** Dang. l. c. Zoosporis 1 μ . diam.

Hab. in *Zygonio* parasitice, in Gallia.

1538

PLEOCYSTIDIUM Fisch Beitr. Chytrid. 1884, p. 42 (Etym. *pleon* plus et *cysta*). — Zoosporangia subglobosa, dein in collum cylindræconicum contracta, zoosporæ ellipsoideæ, longe uniciliatæ, demum affixæ et tunc membranam induentes. Sporæ perdurantes 3-4 circa centram per canalicula affixæ.

1. **Pleocystidium parasiticum** Fisch l. c. fig. 24-39. — Charact. gen. 1539

Hab. in *Spirogyra* quadam parasiticum, Erlangen Baviaræ.

Fam. 6. **Protomycetaceæ** DE BARY.

PROTOMYCES Ung. — Syll. VII, 1, p. 319.

1. **Protomyces corticola** Karst. Fung. Sibir. p. 146 (*Exomyces*). — 1540
Acervulis superficialibus, punctiformibus, aterrimis; sporangiis e globoso ovoideis, levibus, fuscis, impellucidis, 15-30 μ . diam.; sporis sphæroideis vel ellipsoideo-sphæroideis, flavidis, 6-10 μ . diam.

Hab. ad corticem levem *Betulæ* albæ in Sibiria occid.

2. **Protomyces concomitans** Berk. in Gard. Chron. 1882, p. 397 cum 1541
icon. Centralbl. 1882, IV, p. 27. — Sporis globosis, pallide umbrinis, serius marginatis, mycelio hinc inde moniliformi.

Hab. in *Orchidaceis* cultis in Anglia.

3. **Protomyces conglomeratus** Peck 32 Rep. pag. 39. — Sporis con- 1542
textu matricis inclusis, magnis, globosis, 4-5 μ . diam., conglomeratis, ad caules siccos tubercula efformantibus.

Hab. ad caulem *Salicorniæ* herbacæ, Syracuse Am. bor.

PHYSODERMA Wallr. — Syll. VII, 1, p. 317.

1. **Physoderma Butomi** Karst. Symb. 28, pag. 45. — Sporangiiis 1-3 1543
in quavis cellula matricali, sphæroideis vel subsphæroideis, flavescente-hyalinis, membrana crassiuscula, flavo-fuligineis, 30-40 μ . diam., maculas gregatim sparsas, orbiculares vel ovaes, fuligineas vel demum nigrescentes 1-2 mm. lat. formantibus.

Hab. in foliis languidis *Butomi* umbellati, Mustiala Fenn.

PYRENOMYCETEÆ Fr. em. De Not. *)

Fam. 1. **Perisporiaceæ** FR.

Subfam. 1. **Erysipheæ** LÉV.

PODOSPHÆRA Kunze. — Syll. I, p. 2.

1. **Podosphæra Aucupariæ** Eriksson Fungi par. scand. exsicc. n. 233. 1544
— Hypophylla; mycelio evanido; peritheciis sparsis, sphæroideis, minutis, appendicibus paucis, (4-6), diametrum perithecii ter superantibus, e parte superiore perithecii radiatim divergentibus.

Hab. in foliis Sorbi Aucupariæ ad Lilljans Ostra pr. Stockholm Scandinaviæ.

2. **Podosphæra minor** Howe in Bessey The Erys. p. 4. — Peritheciis 1545
sparsis vel confertis; appendiculis 10-20 perithecium subæquantibus vel paullo superantibus.

Hab. in foliis Spirææ in America boreali (HOWE). — Huc, testibus Dudley et Ellis, spectat *Microsphæra fulvofulcra* — Syll. I, p. 14 — quæ revera ascum solitarium gerit.

SPHÆROTHECA Lév. — Sacc. Syll. I, pag. 3.

1. **Sphærotheca lanestris** Harkn. New Calif. fungi p. 20. — My- 1546
celio denso, persistente, arachnoideo, brunneo-flaveolo; cæspitulis $\frac{1}{2}$ mm. diam., demum confluentibus, strato lanoso eformatis, quandoque totam paginam inferiorem occupantibus; peritheciis obscure brunneis, 90-108 μ . diam., tunica intus e cellulis magnis, refringentibus, hyalinis eformata; appendiculis a mycelio indistinctis; ascis ovatis, crasse tunicatis, sursum angustioribus, breviter pedicellatis, 75-102 μ . longis, octosporis; sporidiis ellipticis vel globosis granulosisque, 21 \approx 18. — *Status conidicus*: **Oidium ventricosum** Harkn. New Cal. Fung. p. 20. Conidiis medio inflatis demum dolioliformibus, 34-38 \approx 20-22, nucleis numerosis, rotundis vel ellipsoideis, 5-6 \approx 2-4 (ex utraque extremitate conidiorum exeuntibus), repletis.

*) Emendationes plures vel complementa in specierum diagnosis jam in Sylloge editis, habentur in beati Winteri *Die Pilze Deutschlands* II et in Cooke *Synops. Pyren.* (in Grevillea 1882 et seq.). Mutationes majoris momenti hinc tantum afferuntur, ceteras lector benevolus loc. cit. conferat.

Hab. in ramulis vivis *Quercus agrifoliæ*, socio statu conidico, S. Francisco in California.

2. **Sphærotheca fugax** Penz. et Sacc. App. Fl. Mic. Monte Gen. 1547
pag. 10. — Hypogena; mycelio tenui, pruinoso, persistente; peritheciis minutissimis, 100 μ . diam., nigris, sphæroideis, vix depressis, contextu parenchymatico; appendicibus hyalinis vel basi dilute fuligineis, simplicibus, continuis longissimis, flexuosis; asco ovato, 80-90 \simeq 75-80; sporidiis in asco octonis, ovoideis v. ellipticis, continuis, hyalinis, 20 \simeq 12-14.

Hab. in pagina inferiore foliorum languidorum *Geranii silvatici* in Italia bor. (O. PENZIG). — Affinis *Sph. pruinosa*.

3. **Sphærotheca phytoptophila** Kell. et Sw. in Rep. Kans. Exp. Stat. 1548
1888, p. 303, t. IV, f. 7-13, Journ. Myc. 1888, pag. 93 et 1889, p. 85. — Mycelio sparso; peritheciis globulosis, atro-brunneis v. nigris, obscure reticulatis, 60-80 μ . diam., appendicibus paucis plus minus evanescentibus, atro-brunneis, irregularibus, sed vulgo 6 μ . cr., et perithecio longioribus, sæpe septatis; ascis majusculis, late ovatis, hyalinis, 8-sporis; sporidiis ovoideis, æqualibus, 18-24 \simeq 15; mycelio conidiophoro copioso, hyphis fertilibus, erectis, cum conidiis 150-220 \simeq 9-13; conidiis ovoideis, hyalinis, intus granulosis, 21-28 \simeq 15.

Hab. in ramulis *Celtidis occidentalis*, quos deformat, sociâ *Phytopti* specie, Manhattan Wakefield, Brown county etc. Amer. bor. — Status conidicus subinde et in pagina inferiore foliorum extenditur.

4. **Sphærotheca leucotricha** Ell. et Ev. Journ. Myc. 1888, p. 58. — 1549
Mycelio albo, tenui, submembranaceo, persistente, ex hyphis imperfecte ramosis, hyalinis, et materie granulosa formato; conidiis numerosis pallide brunneis, ellipsoideis, 1-septatis, 5-8 \simeq 4-5; peritheciis minutis, 75-80 μ . diam., mycelio immersis, appendicibus plerumque rudimentariis vel obsoletis, subinde vero bene evolutis, 50-100 μ . long., brunneis, apicem versus dilutioribus; ascis obovatis, 75-80 \simeq 50-60, octosporis; sporidiis ellipsoideis, subinæquilateralibus, granulosis, 25-30 \simeq 12-15.

Hab. in ramis vivis (cujus plantæ?), Concordia Mo. Amer. bor. (DEMETRIO). — Mycelio submembranaceo, granuloso distinguenda species.

5. **Sphærotheca Drabæ** Juel in Bot. Centr. 1891, I, p. 274. — Pe- 1550
ritheciis globosis, obscure brunneis, 80 μ . diam., hyphis paucis septatis, basi fuscis extus hyalinis affixis, appendicibus nullis; asco

subgloboso, 60 μ , diam., octosporo; sporidiis oblongo-ellipsoideis, 27 \approx 16; conidiis non visis.

Hab. in foliis *Drabæ hirtæ*, rarius in caule et siliculis, ad Kongsvold in alpibus Dovrensibus Norvegiæ.

6. **Sphærotheca Calendulæ** Malbr. et Roum. Bull. Soc. Myc. 1888, 1551 p. XXXII, *Meliola Calendulæ* Malbr. et Roum. in Rev. Myc. 1886, p. 90. — Peritheciis globulosis, brunneis; ascis in quoque perithecio solitariis ovoideis, 85 \approx 60, 6-sporis; sporidiis ovalibus hyalinis, 27-30 \approx 18-20; hyphis subhyalinis.

Hab. in caulibus siccis *Calendulæ arvensis*, Rouen Galliæ (A MALBRANCHE).

PHYLLACTINIA Lév. — Syll. I, p. 5.

1. **Phyllactinia antarctica** Speg. f. Pat. n. 111. — Peritheciis hypophyllis, sparsis, mycelio oidiaceo albo parcissimo mox evanido insidentibus, globosis, 130-140 μ . diam., atris, verruculoso-asperulis, opacis, glabris, siccis non v. vix cupulatis, superne 6-8 appendicibus subcoronatis, appendicibus simplicibus, cylindratis, 150-200 \approx 9, rectis divaricatis, apice obtuse acutatis, basi vesiculoso-inflatis 40 \approx 30, hyalinis, continuis, levissimis; ascis 8 v. 10 in quoque perithecio, cylindratis v. subovatis, apice late subtruncatis, basi crasse brevissimeque noduloso-stipitatis, 80-95 \approx 22-24, paraphysatis, bisporis (an quandoque tetrasporis?); sporidiis ellipticis v. ovoideis 32-33 \approx 15-20, utrinque obtuse rotundatis, continuis, levibus non v. grosse 1-guttulatis, hyalinis.

Hab. ad folia viva *Ribis magellanici* in collinis Lion rang prope Gregory bay Patagoniæ.

UNCINULA Lév. — Sacc. Syll. I, pag. 6.

1. **Uncinula australis** Speg. Fung. Guar. Pug. I, n. 167. — Epiphylla; 1553 mycelio arachnoideo, grisescenti-albo, late folia ambiente eisque arcte adnato, tenui, compactiusculo, non pulverulento; peritheciis densiuscule hinc inde sparsis, globoso-depressis, minutis 100-120 μ . diam. atris, glabris, membranaceo-coriacellis, contextu parenchymatico, parum perspicuo, fuligineo, basi 20-40 appendiculis radiantibus ornatis; appendicibus divaricatis, 100-130 \approx 4-7, utrinque gradatim attenuatis et levibus, medio sæpius incrassatulis ac minutissime densiusculeque granuloso-papillatis, apice sæpius semel plus minusve circinatis (rarius rectis atque obtusatis) hyalinis; ascis et sporidiis non visis.

Hab. ad folia viva Myrtaceæ cujusdam prope Paraguay Brasil.

2. **Uncinula Delavayi** Pat. Journ. Bot. 1888, p. 217 cum icon. — Peritheciis globosis, atris vel rufescentibus, 100-130 μ . diam., appendiculis paucis, 10-12, filiformibus, hyalinis, simplicibus, apice subcircinatis longitudine fere diametrum perithecii æquantibus; ascis ovoideis obtusis, 60 \approx 32, in stipitem brevissimum attenuatis; sporidiis senis, ovoideis, hyalinis, 20-22 \approx 8-10, 1-2-guttulatis. 1554

Hab. gregatim in pagina inferiori foliorum Ailanti ad Junnan (DELAVAY). — Perithecia mycelio haud cincta.

3. **Uncinula parvula** C. et P. in Bessey The Erysiph. pag. 7. — Hypophylla; mycelio effuso, delicato, evanescente; peritheciis sparsis, globosis, minutis, appendiculis simplicibus, numerosis, perithecii diametrum vix æquantibus; ascis ellipsoideis, rostratis; sporidiis senis. 1555

Hab. in foliis Celtitis occidentalis in America boreali.

4. **Uncinula heliciformis** Howe in Bessey The Erysiph. pag. 6. — Mycelio obsoleto; peritheciis sparsis minutis, globosis, appendiculis 15-30, diametrum peritheciis unum vel duplum æquantibus, sursum spiraliter convolutis, deorsum coloratis; ascis 4-6; sporidiis 3-6. 1556

Hab. in foliis Populi balsamiferæ in Amer. bor. — « An eadem ac *U. luculenta* Howe, mihi ignota? »

5. **Uncinula polychæta** (B. et C.) Trac. et Gall. Bot. Gaz. 1888, p. 29 cum icone, Masee Grev. XVII, p. 78, *Erysiphe polychæta* B. et C. Grev. IV, p. 159, *Pleochæta Curtisii* S. et Sp. Syll. I, pag. 9 p. p., *Uncinula polychæta* Rav. F. Car. n. 68 nec B. et C., *Unc. Lynchii* Speg. Pug. Arg. II, p. 17. — Hypophylla; maculis densis, albidis; peritheciis numerosis, brunneis, dein atris, subdepressis, 250-300 μ . diam., appendicibus copiosis, 200 vel ultra, hyalinis, simplicibus, primo rectis, dein apice convolutis attenuatisque; ascis circ. 50, tereti-clavulatis, pedicello brevi noduloso, bisporis; sporidiis tereti-ellipsoideis obtusis, 26-30 \approx 11-14, levibus, hyalinis, continuis. 1557

Hab. in foliis Celtidis occidentalis et C. Talæ, Alabama, Carolina, Mississippi Amer. bor. et Argentina Amer. austr.

6. **Uncinula confusa** Masee Grev. XVII, p. 78, *Unc. polychæta* B. et C. Grev. IV, p. 159, *Pleochæta Curtisii* S. et Sp. Syll. p. 9 p. p. — Hypophylla; mycelio parco non maculoso; peritheciis sparsis, plerumque 2-3 tantum in folio, 150-200 μ . diam., appendici- 1558

bus 25-28 tantum, simplicibus, tenuibus, hyalinis, 300 \approx 2-3, apice fortiter convolutis, non incrassatis; ascis circ. 25, tereti-clavatis, tetrasporis; sporidiis continuis ellipsoideo-oblongis, 20 \approx 10, hyalinis.

Hab. in foliis *Celtidis occidentalis* in Carolina Amer. bor. — Post tot disputationes de hac et præcedente specie, expositio cl. Masee, ex specim. authenticis Berkeleyanis, tute accipienda videtur.

MICROSPHÆRA Lév. — Sacc. Syll. I, pag. 10.

1. **Microsphæra erineophila** Peck in Torr. Bot. Club. 1883, p. 75. — 1559

Mycelio arachnoideo, subpersistente; peritheciis 75-100 μ . diam., sæpe collapsis vel pezizæformibus; appendiculis 6-12 cir. diam., perithecii longitudinem æquantibus vel minoribus, coloratis, apice pallidioribus bis, ter dichotome ramosis; ascis 4, sæpe 3 vel 5, octosporis; sporidiis 20-23 \approx 10-12, sæpe 1-2-nucleatis.

Hab. in foliis *Fagi*, *Erineo* invasis, Illinois, Amer. bor. (A. B. SEYMOUR).

2. **Microsphæra Nemopanthis** Peck in 38 Rep. St. Mus. pag. 102. — 1560

Mycelio arachnoideo, parco, amphigeno; appendiculis raris, 5-12, longitudine diametrum perithecorum non vel vix æquantibus, in cymam 4-5-ies dichotomam desinentibus, coloratis, sæpe basi furcatis, ramulis extimis recurvis; ascis sæpe quatuor, 6-8-sporis.

Hab. in foliis vivis *Nemopanthis canadensis*, Karner Amer. bor. — Habitu *M. Berberidis* similis, sed ascis minus numerosis et appendiculis coloratis mox distinguenda.

3. **Microsphæra densissima** (Schw.) Peck 28 Rep. St. Mus. Sacc. 1561

Syll. I, p. 15, Ell. et Mart. in Journ. of Myc. 1885, p. 101. — Peritheciis nigris, globosis, demum depressis, 120 μ . diam., appendicibus continuis subhyalinis, bis dichotome ramosis, ramulis extimis curvatis, 96-120 \approx 7; ascis sex, 6-8-sporis; sporidiis ovatis, granuloso-nucleatis, 21-25 \approx 12.

Hab. in foliis vivis *Quercus laurifoliæ*, Cove Springs Americæ borealis.

4. **Microsphæra Bresadolæ** (Quél.) Bres. in litt. *Podosphæra Bresadolæ* 1562

Quél. in Bresad. Fungi Trid. fasc. II, p. 25, t. XXX, f. 2. — Peritheciis globosis, membranaceis, superficialibus, sparsis, minutissimis, laxè reticulatis e luteolo rufescentibus, demum nigricantibus, 90 μ . diam., appendiculis hyalinis perithecio duplo longioribus, apicibus turgidis dichotomo-ramosis; ascis subglobosis,

e planta quadam circumstante decidua!!!

octosporis, mox evanidis, in quoque perithecio pluribus, 50 μ . diam.; sporidiis ovatis, luteolis, echinulatis, 15-20 \approx 12.

Hab. in pileo Arrheniæ Auriscalpii in silvis umbrosis, Val di sole Tirolis italicæ. — Etsi matrix tam absona, species generis optima videtur.

5. **Microsphæra Viburni** Howe in Bessey The Erysiph., *M. sparsa* 1563
Howe — Mycelio arachnoideo; peritheciis sparsis, globosis; appendiculis subviginti vel paucioribus, perithecii diametro longioribus, dichotome ramosis, apicibus plus minus curvis; ascis 6-10; sporidiis ut plurimum 6.

Hab. in foliis Viburni Lentaginis in Amer. bor. (HOWE).

6. **Microsphæra Platani** Howe in Bessey The Erysiph. p. 9. — Mycelio evanescente; peritheciis minutis, globosis, sparsis; appendiculis 10-18, perithecii diametro longioribus, apicibus vehementer curvatis; ascis 4-5; sporidiis 4-5. 1564

Hab. in foliis Platani in America boreali (HOWE).

7. **Microsphæra Symphoricarpi** Howe in Bessey The Erysiph. p. 9. — Mycelio effuso, subpersistente; peritheciis sparsis v. confertis; appendiculis 8-16, perithecii diametro bis-quater longioribus, terquines dichotomis, ramulis divaricatis, sæpe truncatis, rectis; ascis 4-6; sporidiis 3-5. 1565

Hab. in foliis Symphoricarpi racemosæ in America bor. (HOWE).

8. **Microsphæra Menispermii** Howe in Bessey The Erysiph. p. 9. — Mycelio arachnoideo, effuso, subinde evanido; peritheciis sparsis v. gregariis minutis, globosis; appendiculis, 10-20, perithecii diametrum subæquantibus; ascis 5-6; sporidiis 3-6. 1566

Hab. in foliis Menispermii canadensis in America bor. (HOWE).

9. **Microsphæra densissima** (Schw.) Peck. — Adde: peritheciis sparsis; appendiculis 6-10; ascis 4-8; sporidiis 8 (Conf. Bessey The Erysiph. p. 11).

10. **Microsphæra elevata** Burrill in Bessey The Erysiph. p. 11. — Epiphylla; mycelio arachnoideo, subevanido; peritheciis conspicue reticulatis, 1 mm. diam., prominentibus; appendiculis circ. 12, basi coloratis, simplicibus, subinde prope basim ramosis, solito bis-quater dichotome furcatis, longissimis; ascis, 4, ovoideis, conspicue rostratis. 1567

Hab. in foliis Catalpæ in America bor. — Ascis 6-8-spori.

ERYSIPHE Hedw. — Sacc. Syll. I, p. 15.

1. **Erysiphe trina** Harkn. New Calif. Fungi pag. 21. — Epiphylla; 1568
mycelio maculas orbiculares tegente, pruinoso, fugaci; peritheciis aggregatis, minutis flavo-brunneis, 56-70 μ . diam., appendicibus nullis; ascis 3, subglobulosis, 32-38 μ . diam.; sporidiis 2, oblongo-ellipsoideis vel sæpe navicularibus, latis.

Hab. in folii vivis *Quercus agrifoliæ* in California

2. **Erysiphe Populi** Pat. Journ. Bot. 1888, p. 217 cum icon. — My- 1569
celio tenaci, maculas albas efformante; peritheciis globosis, primo luteis, dein nigris, 130 μ . diam.; appendicibus numerosis, hyalinis, radiantibus, simplicibus, rectis, longitudine diametrum perithecii æquantibus; ascis subglobosis, 60 \approx 50, stipitatis, 8-12 in quoque perithecio, 6-8-sporis; sporidiis ovoideis, hyalinis, 25 \approx 8-10, apicibus obtusis.

Hab. in pagina superiori foliorum *Populi Tremulæ*, Yunnan Sinarum (DELAVAY).

3. **Erysiphe Saxaouli** Sorok. Rev. Myc. 1889, p. 146, f. 231-236. — 1570
Mycelio ramoso, subverrucoso, haustoriis instructo; peritheciis rotundis, brunneis, subnigris; ascis maturis non visis, immaturis 50-52 \approx 22-24, in quoque perithecio circ. 10; sporidiis oblongis, brunneolis v. griseis, binis v. quaternis; conidiis elongatis, ex apice basim versus attenuatis, in hypharum apice solitariis, 11-13 μ . long., 11-13 μ . lat.

Hab. ad ramulos virides *Haloxylis Ammodendri* (*Saxaoul*), Kisyl-Koum Asiæ centr.

4. **Erysiphe vitigera** Cooke et Mass. Grevill. vol. XV, p. 98. — Hy- 1571
pophylla; mycelio floccoso, persistente, peritheciis gregariis, minutissimis 400 μ . diam., sphæroideis; appendicibus obsoletis vel cum mycelio intertextis; ascis piriformibus, 4 in singulo perithecio, 50 \approx 30, bisporis; sporidiis ellipticis, hyalinis, 18 \approx 9.

Hab. in foliis *Vitis viniferæ*, cui valde noxia, prope Melbourne Australiæ. — *Er. lamprocarpæ* affinis. St. conidicus ab *Oidio Tuckeri* differre videtur.

5. **Erysiphe sepulta** Ell. et Everh. Bot. Gaz. 1889, n. 11, p. 286. 1572

Hab. ad folia et caules *Bigeloviæ graveolentis* var, albicantis, Helena Amer bor. — *E. Cichoriacearum* admodum affinis, ab ea tatum differt peritheciis in matricis pilis nidulantibus.

6. **Erysiphe armata** Sorok. Rev. Myc. 1889, p. 146, f. 195-203. — 1573
Mycelio ramoso; peritheciis brunneis, basi appendicibus simplicibus

vel vix ramosis, coloratis vel hyalinis præditis, junioribus aculeis cavis, sursum rectis, dein caducis, tectis; ascis 42-50 \approx 20-22, in quoque perithecio 18-25; sporidiis oblongis, binis, 10 \approx 4; conidiis, episporio minute verrucoso, 10 \approx 4-5.

Hab. in foliis Malvæ sp. in Britz-Moulla Asiæ centr.

7. **Erysiphe Pegani** Sorok. Rev. Myc. 1889, p. 148, f. 248-251. — 1574

Mycelio ramoso; peritheciis magnis, brunneis; appendicibus simplicibus, subcoloratis præditis; ascis 44-45 \approx 10-20, in quoque perithecio 20 vel ultra, 4-sporis; sporidiis 10-11 \approx 4-5; conidiis catenulatis, oblongis hyalinis.

Hab. in foliis Pegani Harmalæ, Kisyl-Koum prope Kasalinsk Asiæ Centr.

8. **Erysiphe Alhagi** Sorok. Rev. Myc. 1889, p. 147, f. 237-239. — 1575

Mycelio ramoso; peritheciis basi appendicibus rectis, hyalinis præditis; ascis 30 \approx 7-9, in quoque perithecio 10 vel ultra, 2-4-sporis; sporidiis 8 \approx 3.

Hab. in caule Alhagi Camelorum, Kisyl-Koum Asia centr.

SACCARDIA Cooke. — Syll. I, p. 24.

1. **Saccardia ferruginea** Winter Grev. XV, p. 87. — Peritheciis 1576

gregariis forma magnitudineque variis plerumque subglobosis, sæpe parum angulatis, tenuissime membranaceis, parenchymaticis, ferrugineis, mycelio late effuso, densissimo, sæpe parenchymatice contexto ferrugineo, in mycelio Asterinæ cujusdam parasitico insidentibus, 44-80 μ . diam., hyphis mycelii valde ramosis, repentibus, dense septatis, plus minus torulosis flexuosisque tenuibus; ascis in quoque perithecio paucis, 3-10 (rarius pluribus), subglobosis, fere sessilibus 8-sporis, 32 \approx 25-29; sporidiis conglobatis, oblongis, inæqualiter didymis, triseptatis, plerumque cellula secunda tantum septo unico longitudinali prædita, utrinque rotundatis, subhyalinis, 13-14 \approx 6.

Hab. ad folia viva Myrtaceæ cujusdam Sao-Francisco Brasilæ (ULE). — Species valde memorabilis et fortasse melius genus novum constituens.

Subfam. 2. **Perisporiæ** Sacc.

Sect. 1. **Hyalosporæ.**

EUROTIIUM Link. — Sacc. Syll. I, p. 25.

1. **Eurotium latericium** Mont., Sacc. Syll. I, p. 26, Bacc. et Avetta 1577

Contr. Stud. Mic. roman. p. 5, Karst. Symb. Fenn. XXVI, p. 28. —

Peritheciis celluloso-membranaceis, luteis, dein ochraceis, floccis dense contextis, lanæformibus, luteo-aurantiacis immersis v. interdum fere denudatis, 100-120 μ . lat.; ascis globosis v. ellipticis, 16 \approx 12, evanescentibus, 8-sporis; sporidiis sphæroideo-polygonis vel biconvexis, luteis, 7 \approx 5, episporio crasso.

Hab. in foliis siccis Eucalypti in herbario Horti botanici Romani; in fructibus Amygdali communis, Mustiala Fenniae (JENNY KARSTEN). — *Sec.* Karst. loc. cit., asci 20 μ . diam.; sporidia 8-12 μ . diam. et ejusdem stat. conid. est *Aspergillus atrovirens* Karst.

2. **Eurotium creatinum** Nyl. Anal. Myc. in Bidrag. till Finlands Nat. Etn. Stat. 4 h. 1858-59, Sacc. Syll. I, pag. 28, Karst. Rev., Mon. p. 90. — Peritheciis primo albis, dein nigricantibus et nigris, parvis, 200-300 μ . lat.; sporidiis sphæroideis, 10-15 μ . diam., hyalinis; hyphis albis, tenuiter effusis, parum articulatis vel sæpe spatio longo inarticulatis, 22 μ . crassis. 1578

Hab. supra carnem, Helsingfors Fenniae.

3. **Eurotium? Pseudonectria** Speg. F. Pugg. n. 213. — Peritheciis superficialibus, globosis, minutis 80-120 μ . diam., ostiolato-papillulatis, pallide flavis, floccis hyalinis, radiantibus, 100-150 \approx 3-4 cinctis; ascis globosis, mox diffluentibus, 15-18, μ . diam.; sporidiis globosis, verruculosis, hyalinis. 1579

Hab. ad folia viva coriacea plantæ ignotæ cujusdam in silvis prope Apiahy Brasiliæ. — Species pulchella natura et facie *Nectriaceis* adscribenda! An huc *Pisomyxa rhacodioides* Corda, quæ tamen floccis radiantibus atris (an Perisporiaceæ cujusdam hospitantis?) sporidiisque fuscis (vetustis?) recedit?

4. **Eurotium margaritaceum** Lév. in Zoll. Verzeichniss p. 17. — Subiculo floccoso, albo, repente, parco; peritheciis sphæricis, glabris, subnitidis, albis; sporidiis minutis, globosis, levibus, hyalinis. 1580

Hab. ad lignum putridum M. Prabatkfi in Archipelago Indico.

KICKXELLA Coëm. Spic. Myc. III, cum tab. (Etym. a cl. prof. J. Kickx, botanico belgico). — Perithecia globulosa, membranacea, candida, astoma dein apice irregulariter dehiscentia, sub terra vegetantia, e mycelio filamentoso, vage ramoso oriunda. Asci obovati, aparaphysati, octospori; sporidia ovoidea, continua. — Status conidioph. sistit *Coëmansiellam*. Genus hoc, nec non *Eurotium*, *Myriococcum*, *Monascus* et *Pisomyxa* ob perithecia molliuscula et læticoloria repræsentant fere Hypocreaceas inter Perisporia-

ceas et si nova hujusmodi addantur genera, merito in familiolam propriam (*Eurotiaceæ*) erigenda videntur.

1. **Kickxella alabastrina** Coëm. l. c. Kickx Fl. I, 372. — Perithe- 1581
ciis subhypogæis, candidis, in mycelio filamentoso vage ramoso, hyalino non septato sparsis, globosis, denique apice irregulariter dehiscentibus, 75-80 μ . diam.; ascis subpiriformibus, brevissime stipitatis, 33-36 \approx 18, octosporis; sporidiis ovoideis, continuis, hyalinis, 4 \approx 2; status conid. est *Coëmansiella* Sacc. Syll. IV, p. 56.

Hab. in limo stillicidiorum, in patella reposito et ad studium diu servato, Gand Belgii (OUDEMANS).

MONASCUS Van Tiegh. in Bull. Soc. Bot. 1884, pag. 226 (Etym. *monos* unus et *ascus*). — Mycelium effusum, septatum, album, ramosum. Hyphæ conidiferæ erectæ. Conidia solitaria vel catenulata. Perithecia globosa, pedicellata, membranacea, ramulis, sursum incurvulis obvallata, monoasca. Asci polyspori vel 4-8-10-spori, globosi. Sporidia ovoidea vel globosa, minuta, hyalina,

1. **Monascus ruber** Van Tiegh. in Bull. Soc. Bot. Franc. 1884, p. 227. — 1582
Mycelio repente, effuso, septato, pseudo-dichotome ramoso; hyphis fertilibus conidia catenulata sustinentibus; peritheciis breve pedicellatis, rufo-brunneis, minutis, 40-50 μ . diam., sphæroideis; pedicellis hyphâ crassioribus, bi-tri-septatis, verticillum ramulorum, apice incurvatorum, ad septum secundum insertum gerentibus, ramulis perithecium circum circa amplectentibus; asco globoso, tunica crassa prædita, breviter pedicellato, polysporo (vel quandoque 4-8-10-sporo et tum 11-16 μ . diam.); sporidiis ovoideis, continuis, 7-8 \approx 4-5, hyalinis.

Hab. in residuis Solani tuberosi, Paris Galliaë.

2. **Monascus mucoroides** Van Tiegh. in Bull. Soc. Bot. Fr. 1884. p. 229. 1583
— A præcedente differt præcipue hyphis conidiferis brevioribus crassioribusque, peritheciis longius pedicellatis, majoribus, 60-70 μ . diam., pedunculo pluriseptato et sporidiis sphæroideis, 8 μ . diam.

Hab. in Paris Galliaë.

MYRIOCOCCUM Fr. — Sacc. Syll. I, 29.

1. **Myriococcum sparsum** Harkn. Californ. Fungi pag. 22. — Peri- 1584
theciis sparsis, luteo-brunneis, 170-180 μ . diam., subiculo albo, parco cinctis; sporidiis numerosis, inæqualiter ellipsoideis, hyalinis, utrinque apiculatis, nucleo crasso præditis, 7-9 \approx 4-6.

Hab. in truncis emortuis *Aceris macrophylli* inter corticem et lignum, Sunol Californiæ.

2. **Myriococcum consimile** Ell. et Ever. Proc. Phil. 1890, p. 220. — 1585
Peritheciis gregariis, globosis, 80-100 μ . diam., carbonaceo-membranaceis, nigris, collabentibus, poro minuto rotundo pertusis; sporulis, oblongis, 4-4,5 \times 1,5, olivaceis; basidiis obsoletis.

Hab. in asseribus doliorum in cellis vinariis, Newfield N. J. Amer. bor. — Perithecia mycelio laxo glauco-cinereo involuta ut in *M. Everhartii*, a quo differt sporulis minoribus et peritheciis perforatis, striatis etc.

3. **Myriococcum Everhartii** Sacc. et Ellis N. Am. Fung. n, 766. — 1586
Peritheciis dense gregariis globulosis, obtusis, astomis, $\frac{1}{6}$ - $\frac{1}{5}$ mm. diam., indumento bombycino tenuissimo pallide cinereo (in aqua mox disparente) dense vestitis; contextu peritheciis areolato, tenui-membranaceo, rufo; ascis.....?; sporis (spermatiis?) initio conglutinatis, e globoso-angulosis, subinde fere apiculatis, 8-12 μ . diam.; granuloso-guttulatis, hyalinis.

Hab. in lignis putrescentibus, Newfield, New Jersey Amer. bor. (ELLIS). — A *M. præcoci* indumento byssino copioso potissimum dignoscitur hæc species, quam clariss. B. M. EVERHART ex West Chester Pensylvaniæ dicamus.

PISOMYXA Corda. — Syll. I, p. 29.

1. **Pisomyxa? Amomi** B. et Br. Fungi of Ceylon n. 1187. — Peri- 1587
thechiis globosis, celluloso-contextis, ex apice hypharum curvarum, intricatarum, nigricantium oriundis, pelliculas atras oblongas, formantibus, initio opacis, dein hyalinis; ascis..... sporidiis globosis hyalinis. — Pycnidia adsunt; stylosporibus oblongis 1-septatis.

Hab. in foliis *Amomi*, Ceylon.

2. **Pisomyxa maculans** Kunze in Flora 1830, p. 270 (*Bryocladium*). 1588
— Subiculo ramosissimo denso radiatim orbiculato, confluyente; peritheciis solitariis, hemisphæricis.

Hab. in foliis vivis *Lauri indicæ*, ubi format maculas nigras circulares demum confluentes et totam faciem foliorum tegentes, in insula Madera.

LASIOBOTRYS Kunze. — Sacc. Syll. I, pag. 29.

1. **Lasiobotrys affinis** Harkness New Calif. Fungi pag. 22. — Hy- 1589
pophylla, nigra, circulariter aggregata, depressa, hyphis radiantibus, continuis cincta; acervulis 2-6 mm. diam.; peritheciis reticula-

tis, brunneis, globosis, 70-100 μ . diam.; ascis breviter stipitatis, subcylindræis, 60-70 \times 12-14; sporidiis fusoideis, flavo-brunneis, uniseptatis, septo in parte crassiori sito, 15-17 \times 6-7.

Hab. in foliis vivis *Loniceræ hispidulæ*, Tamalpais in California.

APIOSPORIUM Kunze. — Syll. I, p. 30.

1. **Apiosporium? erysiphoides** Sacc. et Ellis Mich. II, p. 566. — Pe- 1590
ritheciis gregariis, superficialibus, minutissimis, globulosis, astomis, 40-50 μ . diam.; setulis fuscis filiformibus, apice pallidioribus cinctis; contextu peritheci olivaceo-fuligineo, rimuloso-areolato (non vere celluloso); nucleo.....

Hab. in cortice *Magnoliæ glaucæ*, Newfield New Jersey (ELLIS). — Forma dubia.

2. **Apiosporium Brassicæ** (Lib.) Fuck. — Syll. I, p. 33. — *Perispo-* 1591
rium Brassicæ Lib. Crypt. III, n. 280 (1834). — Cellulis interioribus (sporidiis? ascis immaturis?), globoso-angulosis, crasse tunnicatis, 12-14 μ . diam., hyalinis.

Hab. ad caules *Brassicæ oleraceæ* in Arduennis.

3. **Apiosporium vaccinum** Passer Diagn. Fung. nuov. III, n. 1. — 1592
Peritheciis vix lente perspicuis, subgregariis vel sparsis, punctiformibus, atris, 100 μ . diam. bysso nullo insidentibus, membranaceis, ascis, numerosis, ellipticis, aparaphysatis, vix constricto-stipitatis, plejosporis, 35-45 \times 12,5-15, vel etiam globosis, 40 μ . diam.; sporidiis ovalibus, hyalinis, 5 \times 3; paraphysibus nullis.

Hab. in fimo vetusto, sociis *Sporormia minima* et *Ascoboli* sp., ad Vigheffio pr. Parma Ital bor.

MELIOLOPSIS Sacc. — Syll. I, p. 25 et 68 (ut subgen.).

1. **Meliolopsis insignis** (Cooke) Sacc. *Dimerosporium* Cooke Grev. 1593
XVI, p. 70. — Peritheciis gregariis, superficialibus, minutis, atris; subiculo conidiophoro in maculas orbiculares effuso; hypis simplicibus, furcatisve, erectis, gracilibus, atro-fuscis; conidiis, ellipticis, minutis, hyalinis 3 \times 2; ascis octosporis, lanceolatis, sessilibus; sporidiis arcte ellipticis, continuis, hyalinis, 12 \times 4.

Hab. in foliis *Euryæ japonicæ*, Ternate.

ASTERULA Sacc. — Syll. I, p. 25 et 47 (ut subgen.).

1. **Asterula ramularis** Ellis Torr. Bot. Cl. 1882, p. 20 (*Asterina*). — 1594
Peritheciis subcuticularibus, orbicularibus, 200-250 μ . diam., vel

subelongatis, sparsis vel subconfluentibus, mycelio subobsoleto, contextu marginis distincte radiato-celluloso; ascis oblongis, parte sporif. $50 \approx 25$, initio stipitatis, dein stipite evanescente; sporidiis octonis, inordinatis, ellipsoideis, crasse granulosis, $15 \approx 10$.

Hab. in ramis emortuis *Linderae Benzoin*, West Chester in America boreali.

2. ***Asterula myocoproides*** Sacc. et Berl. Rev. Myc. 1885, tab. LIV, 1595 f. 1 (*Asterina*). — Amphigena; peritheciis fibrillis repentibus, ramosis, atris, nodulosis, septatis insidentibus, scutiformibus, planis, fere $\frac{1}{2}$ mm. diam., ambitu circulari vel sæpe anguloso, radiato-contextis; ascis obovatis, crasse tunicatis, $50-60 \approx 20-22$, octosporis; sporidiis distichis, vel subtristichis, ovoideis, continuis, subhyalinis, $26-28 \approx 10-12$.

Hab. in foliis vivis..... Santos in Brasilia. — Perithecium vere dimidiatum, hinc potius ad *Microthyriaceas* referenda species.

3. ***Asterula Beijerinckii*** Vuill. Journ. Bot. 1888, p. 255, f. 1-2 (*Asco- 1596 spora*). — Mycelio amplo, crustaceo; peritheciis inæqualibus, globoso-depressis, $100-130 \mu$. diam., ostiolo minutissimo vel nullo, epapillatis, nigris, carbonaceis, erumpentibus; ascis numerosis, initio obovatis, dein in tubum elongatum a basi lata linea transversali distinctum productis, $43-110 \approx 20$; paraphysibus nullis; sporidiis ellipsoideo-fusoideis, utrinque obtusis, continuis, hyalinis, 5-6-guttulatis, $17,5 \approx 7$.

Hab. in foliis *Cerasi*, *Pruni* aliisque *Amygdaleis*, Gallia. — Adest status pycnidicus: *Phyllosticta Beijerinckii* Vuill. loc. cit.: peritheciis globosis, pertusis, hyphis septatis cinctis; sporulis e globoso ellipsoideis.

4. ***Asterula maculæformis*** (Berk.) Cooke in Grevillea XIII, pag. 66 1597 (*Asterina*), *Dothidea maculæformis* Berk. in herb. — Epiphylla, atra, opaca, orbicularis, maculæformis; stromate discoideo maculis piceis, orbicularibus, insidente, fibrillis radiantibus cincto; ascis ovoideis, $20 \approx 15$; sporidiis ellipticis, continuis (immaturis?), hyalinis, $5 \approx 3$.

Hab. in foliis *Drymidis*, Valparaiso in Chile. — Habitu *A. compactæ*, sed ceterum diversa.

5. ***Asterula quercigena*** (Berk.) Cooke in Grevillea XIII, p. 67 (*Aste- 1598 rina*), *Dothidea quercina* Berk. in herb. — Epiphylla vel amphigena; peritheciis orbicularibus, 1-2 mm. diam., convexis, rugosis, atris, opacis, margine radiante, fibroso; ascis clavatis; sporidiis ellipticis, continuis (immaturis?), hyalinis, $10 \approx 4$.

Hab. in foliis *Quercum*, Sikkim Indiæ or.

6. **Asterula punctiformis** Lév. — Syll. I, p. 50. — Adde, sec. Cooke: ascis clavatis; sporidiis continuis, minutis.
7. **Asterula concentrica** Cooke in Grevillea XIV, p. 13 (*Asterina*). 1599
— Maculis atro-fuscis, orbicularibus vel confluentibus; peritheciis minutis, applanatis, concentricè dispositis, margine radiante; ascis clavatis, octosporis; sporidiis ellipticis, continuis (?), hyalinis, $8 \approx 3$, (valde immaturis visis).

Hab. in culmis *Sacchari* in India.

8. **Asterula Azaræ** Lév — Syll. I, p. 51. — Adde, sec. Cooke: ascis ovatis; sporidiis ellipticis continuis, tandem probabiliter septatis, $18 \approx 8$.

Sect. 2. Phæosporæ.

CEPHALOTHECA Fuck. — Syll. I, p. 36.

1. **Cephalotheca palearum** Rich. Bul Soc. Myc. 1889, p. 103, t. XII. 1600
— Peritheciis fragilibus, sphaericis, $\frac{1}{3}$ mm., astomis, glabris, nitidis, pallide ochraceis, basi filamentis fuscis, paucis sed longe repentibus suffultis; ascis 10μ . diam., primo hypharum ramosarum apicibus ortis, demum liberis, 8-sporis; sporidiis 4μ . long. ovoideis, fuscis.

Hab. in culmis *Tritici* semiconsumptis, St.-Amand-sur-Fion Galliæ. — Adest status conidiophorus cæspitulis gregariis inter perithecia insidentibus, globosis, luteis, floccoso-villosis, hyphis nigris nunc sparsis, elongatis, apice uncinatis, nunc fastigiatis, conidiis inspersis; conidiis 3μ . diam., numerosissimis, ovoideis hyalinis, in glomerulum sulphureum collectis.

2. **Cephalotheca cellaris** Rich. Bull. Soc. Myc. 1889, p. 104, t. XIII. 1601
— Peritheciis plerumque gregariis, $\frac{1}{3}$ mm. astomis, sphaericis, nigris, nitidis, contextu fragili, glabris, apice tamen filamentis heterogeneis, crassis, clavatis, læte flavis, 4-5-septatis ornatis, basi mycelio parco, fusco, longe repente insidentibus; ascis globosis, 8-sporis, 10μ . diam.; sporidiis continuis, ovatis, fuscis, $2,8 \mu$. diam.; pycnidiis sphaericis, atris, $\frac{1}{3}$ mm. diam., pilis, nigris, rigidis, sæpe conidiis flavis adhuc inspersis, sporulis, numerosissimis, ovoideis, fuscis, 3μ . long. farctis.

Hab. in regulis quercinis ad usum cellarum, vino jam imbutis, St. Amand-sur-Fion Galliæ. — Adest status conidiophorus cæspitulis gregariis, luteo-virescentibus, globosis; hyphis nigris, nunc

sterilibus, longis, rectis, simplicibus furcatisve, nunc intricatis, ramosis, e centro divergentibus, conidiis inspersis; conidiis subglobosis, 3 μ . diam., hyalinis, in glomerulum flavum collectis.

3. **Cephalotheca hispida** Rich. Cat. Camp. Marn. n. 1078. — Peritheciis astomis, hispidis; ascis rotundis, 4-sporis; sporidiis ovoideis, hyalinis. 1602

Hab. ad corticem Piri Mali emortuæ in horto St. Amand, Marne Galliæ.

CHÆTOMIDIUM Zopf. — Syll. I. pag. 30.

2. **Chætomidium Pircuniæ** Bacc. et Avett. Contr. Stud. Mic. roman. pag. 5, t. XVI, f. 1. — Peritheciis membranaceis globulosis superficialibus, astomis, ochraceis, denique (ob sporidia atra inclusa) nigricantibus, undique pilis albis, longissimis, ramosis, vestitis, circulariter dehiscentibus, 330 μ . lat.; ascis cylindricis, 8-sporis, brevissime stipitatis, cito evanidis, aparaphysatis, 100 \approx 18; sporidiis atris, ovoideis vel ellipticis, continuis, uno tantum apice appendicula hyalina, lenticulari præditis, 1603

Hab. in trunco putrescente Pircuniæ dioicæ in Horto botanico, Panisperna, Roma Italiæ.

ORBICULA Cooke. — Syll. I, p. 38.

1. **Orbicula Variolaria** (Mass.) Sacc. *Sphæria Variolaria* Mass. Crypt. Veron. p. 241, t. III, f. 10-11 (in «Flora»). — Peritheciis sphaericis immersis, corneo-carbonaceis, non vel vix pertusis; ascis cylindraceo-oblongis, 8-sporis, paraphysibus capillaribus parcis obvallatis; sporidiis 1-stichis, tandem invicem conglutinatis, ovoideis vel globosis, continuis, fuligineis, nucleolo viridulo fœtis, 6-8 \approx 6. 1604

Hab. ad thallum Variolaria communis, Sorgnano Verona Italiæ borealis.

Sect. 4. Didymosporæ.

TESTUDINA Bizz. Fungi Ven. novi vel crit. p. 1 (Etym. a quadam similitudine cum testa *Testudinis*). — Perithecia sparsa v. sæpius dense gregaria, superficialia, carbonacea, astoma, globosa vel piriformia, dein in areolas subpentagonas regulariter rupta, basi subnuda. Asci globoso-clavati, stipite articulato, longo, subinde ramoso, inserti. Sporidia ellipsoidea, 1-septata, fuliginea asperula.

1. **Testudina terrestris** Bizz. Fung. Ven. nov. vel crit. pag. 1, t. II, 1605

fig. 1. — Peritheciis $\frac{1}{2}$ - $\frac{1}{2}$ mm. diam., dense gregariis, superficialibus, basi nudis vel hyphulis paucis, septatisve donatis, astomis, minute foveolatis et rugosis, dein vel levi pressione in fragmenta regulariter pentagona, prosenchymatica, atra diffractis; ascis cito diffluentibus rotundato-ovalibus, 11-13 \approx 10,5-11, pseudostipite hyphoideo, elongato, septato, subramoso insertis; sporidiis ellipsoideis, utrinque rotundatis, 7-8 \approx 4,4-5, fuligineis, asperulis.

Hab. ad terram cretaceo-sabulosam in Horto botanico Patavino.

RICHONIA Boud. in Rev. Myc. 1885. p. 224 (Etym. A. cl. RICHON cui genus dicatum). — Perithecia semper repleta, firma, sparsa, superficialia, carbonacea, astoma, supra rotunda, subtus depressa, intus grumosa. Asci clavati, crassi, 2-6-spori, mox resoluti. Sporidia majora, didyma, loculis rotundatis, obtusis, ad septum contracta, primo levia, hyalina, guttulata, dein filamentosa, marcescentia, olivascentia, denique maxima, aterrina, rugulosa et difformia. Paraphyses numerosæ, tenues, ramosissimæ et intricatæ, ascos sporidiaque circumdantes. — Genus *Perisporiacearum* hypogæum «?», rhizophylum a genere *Zopfia* sporidiis filamentosis, non appendiculatis et ascis clavatis omnino diversum.

1. **Richonia variospora** Boud. in Rev. Myc. 1885, p. 265, tab. LVI, 1606 fig. 1. — Peritheciis sparsis, magnitudine variis, 0,5-1 mm. diam., subnitidis, rugulosis; ascis clavatis, ad basim vix attenuatis, apice rotundatis, 2-6-sporis, primo hyalinis, dein sporidiis fuscescentibus et tum resolutis, 100-150 \approx 20-35; sporidiis majoribus, dein maximis, primo inclusis, hyalinis, levissimis, medio septatis et contractis, utrinque perfecte rotundatis intus nucleis duobus oleosis, maximis fere omnino repletis, cum granulis minutis, ad septum sparsim positis, dein, ascis detritis, liberis, marcescentibus, paraphyses agglutinantibus, denique difformibus, aterrimis, granulosis, et etiam hyalino-filamentosis, junioribus hyalinis, levibus, 35-45 \approx 20-22, statu medio olivascentibus et jam filamentosis, 45-50 \approx 25-35, statu extremo aterrimis, 60-70 \approx 45-50 paraphysibus ramosissimis, tenuibus, intricatis, non aut obscure septatis, intus vix granulosis.

Hab. frequens ad radices Asparagi officinalis ad latera viarum dejectas, Montmorency Galliæ

ASTERINA Lév. — Syll. I, p. 39 *).

*) Plures *Asterinæ* species, perithecio dimidiato præditæ, in posterum ad *Microthyriaceas* transferendæ videntur.

1. **Asterina microthyrioides** Winter in Hedw. 1885. — Subiculo nullo; peritheciis hypophyllis, sparsis vel laxe gregariis, rarius paucis densius aggregatis, confluentibusque, depresso orbicularibus vel scutellatis, minutissimis, atris, rugulosis, opacis, centro subpapillatis, membranaceis, sub microscopio margine radiato-fimbriatis fuscis, centro dilutioribus, fere ostiolatis, 300 μ . circ. latis; ascis ovatis vel elliptico-subclavatis, breve pedicellatis, 8-sporis, 40-50 \approx 18-21; sporidiis conglobatis, lanceolatis, utrinque anguste rotundatis, medio uniseptatis, non constrictis, hyalinis, tandem fuscidulis, 19 \approx 5.

Hab. ad folia subviva Eucalypti pilularis var. acmenoidis in Australia (MUELLER).

2. **Asterina silvatica** Speg. F. Puigg. n. 359. — Mycelio maculoso, arachnoideo-subpelliculoso, 2-4 mm. diam., ex hyphis alterne ramosis, 5-6 μ . cr., hyphopodiis hemisphæricis, alternis, 5 \approx 6, ornatis composito; peritheciis minutis, coriacellis fimbriatulis; ascis obovatis, aparaphysatis, 40-55 \approx 25-30; sporidiis ellipticis, 1-septatis, loculis æquilongis, fuligineis, 20-24 \approx 8-10.

Hab. ad folia viva Trichiliæ speciei cujusdam in silvis pr. Apiahy Brasilæ.

3. **Asterina Baileyi** Berk. et Br. IV List Fung. Brisb. Queesl. n. 269. — Mycelio fusco, nodoso-ramoso, maculas rufo-brunneas in foliis efformante; peritheciis minutis rugosis, fuscis, fibrillis paucis adherentibus; ascis clavatis, 8-sporis; sporidiis distichis, ovoideo-oblongis, uniseptatis, septo constrictis, brunneis, 37 μ . longis.

Hab. in foliis plantæ ignotæ, Brisbane Australiæ.

4. **Asterina Licania** Cooke in Grevillea vol. XII, pag. 85. — Epiphylla; maculis suborbicularibus, tenuibus, 1 cm. diam., atro-fuligineis; peritheciis applanatis, orbicularibus, margine hyphis fuscis, intertextis ornatis; ascis, amplis, saccatis; sporidiis ellipticis, obtusis, medio constrictis, uniseptatis, atro-fuscis, 40-45 \approx 22-26.

Hab. in foliis subviventibus Licania, S. Carlos Brasilæ (SPRUCE).

5. **Asterina (?) Barleria** Pat. in Rev. Myc. 1886, pag. 180. — Peritheciis superficialibus, 1 mm. diam., nigris, globulosis, astomis, mycelio nullo; ascis latis, rotundatis, breve stipitatis, 50 \approx 23, aparaphysatis; sporidiis octonis, primo hyalinis dein rufis, uniseptatis, 16 \approx 10.

Hab. ad nervos bractearum Barleria, Yunnan Sinarum (AB. DELAVAY).

6. **Asterina crustacea** Cooke in Grevillea XIV, p. 13. — Amphigena, 1612

crustacea, atra; peritheciis applanatis, in maculis orbicularibus confluentibus; margine radiato-fimbriato, arcte adnato; ascis obovato-piriformibus, octosporis; sporidiis ellipticis, uniseptatis, medio constrictis, fuscis, $32-35 \approx 16-18$.

Hab. in foliis emortuis *Rhododendri* prope Java (Dr. TH. ANDERSON).

7. **Asterina interrupta** Winter Exot. Pilze in Flora 1884, pag. 6. — 1613

Mycelio effuso, maculas rotundatas seu irregulares, $1\frac{1}{2}-7$ mm. diam., demum sæpe confluentes, fusco-cinereas vel brunneas formante, ex hyphis ramosis, anastomosantibus, fuscis, passim tumidulis contexto; hyphis mycelicis septis inter se binis, proximatis præditis; peritheciis primo in centro macularum dispositis, demum in tota macula sparsis, planis, rotundatis, ambitu irregulariter fimbriatis, centro dilapsis, fusco-atris, $120-160 \mu$. diam.; ascis oblongis, apice late rotundatis, basi in stipitem brevem attenuatis, 8-sporis, $45-52 \approx 17-24$; sporidiis conglobatis, ellipticis, fuscis, medio fascia hyalina, transversa præditis, $14-16 \approx 7-9$.

Hab. in foliis languescentibus *Leucospermi conocarpi* et *Leucadendri* sp. in Promontorio Bonæ Spei Africæ austr. (MAC-OWAN).

8. **Asterina (?) Maesæ** Pat. in Rev. Myc. 1886, pag. 180. — Pe- 1614

ritheciis punctiformibus, numerosis, superficialibus, globulosis vel depressis, subastomis, brunneis, hyphis radiantibus, ramosis, concoloribus superficie foliorum adhærentibus cinctis; ascis cylindraceis, subsessilibus paraphysibus filiformibus, parvis, cinctis, $50-65 \approx 10-15$; sporidiis cylindraceis, rectis, viridibus, $13-15 \approx 3-4$, uniseptatis.

Hab. in foliis *Ericacæ* (*Maesa*) Yunnan Sinarum (AB. DELEVAY).

9. **Asterina diplocarpa** Cooke in Grev. X, pag. 129. — Epiphylla, 1615

effusa; peritheciis applanato-convexis, orbicularibus, 130μ . diam., fuscis, sparsis vel segregatis; ascis obovatis; sporidiis fuscis, uniseptatis, valde constrictis, $16 \approx 8$, loculis subglobosis; peritheciis aliis minoribus, subglobosis, macrostylosporas ovatas, fuscas, continuas $18-20 \approx 10-12$ continentibus.

Hab. in foliis *Sidæ cordifoliæ*, Inanda, Natal (WOOD).

10. **Asterina similis** Cooke in Grev. X, pag. 130. — Epiphylla, atra, 1616

maculæformis; peritheciis hemisphæricis, $80-120 \mu$. diam., stellato-fissis, hyphis ramosis, radiantibus circumdatis; ascis clavatis; spo-

ridiis ellipticis, uniseptatis, fuscis, utrinque rotundatis, $15-17 \approx 6$; microstylosporibus minutis, ovatis, hyalinis.

Hab. in foliis *Sidæ rhombifoliæ*, Inanda, Natal (WOOD). — Affinis *A. myriadeæ*.

11. **Asterina Greviæ** Cooke in Grev. X, p. 130. — Peritheciis hemisphæricis, atris, opacis, gregariis, punctiformibus, $120-140 \mu$. diam., mycelio fusco obsoleto; ascis anguste clavatis; sporidiis cylindraceis, uniseptatis, fuscis, utrinque rotundatis, $18 \approx 5$; hinc illinc conidiis lanceolatis, brunneis, triseptatis, peritheciis immixtis. 1617

Hab. in foliis *Greviæ lasiocarpæ*, Inanda, Natal (WOOD).

12. **Asterina ampullulipeda** Speg. F. Guar. n. 127. — Mycelio effuso, tenuiusculo, submembranaceo, arcte matrici adnato, atro, ex hyphis 5μ . crass., densiuscule intricatis, sæpius opposito-ramosis, hyphopodiis alternis, divaricatis, e cylindræo subampulluliformibus, $20 \approx 5$, obtusis, ornatis, fuligineis composito; peritheciis dimidiato-scutatis, $100-120 \mu$. diam., membranaceis contextu medio opaco, indistincto, ambitu fibroso-radiato, subflexuoso, parcissime septulato, fuligineo donatis, centro stellatim laciniato-dehiscentibus, margine crenulatis; ascis e globoso ellipticis v. subrhomboideis, $40 \approx 30$, sursum subacutiuscule (an semper?) rotundatis vel crasse tunicatis, inferne crassissime umbonato-pedicellatis, aparaphysatis, octosporis; sporidiis conglobatis, didymis, $19-22 \approx 8-9$, ad septum constrictulis, loculo supero subbreuiore, $9-11 \approx 8-9$, infero subgraciliore $11-12 \approx 7-8$, primo hyalinis, dein fuligineis. 1618

Hab. ad folia viva *Nectandræ* speciei cujusdam in silvis uliginosis pr. Guarapi Brasiliæ.

13. **Asterina effusa** Cooke et Mass. Grev. XV, p. 101. — Mycelio effuso, atro, pelliculoso; peritheciis sparsis v. congestis, hemisphæricis minutis, nigris; ascis obovatis, octosporis; sporidiis subpiriformibus, uniseptatis, loculo superiori subgloboso, altero minori, fuscis, $10 \approx 5-6$. 1619

Hab. in foliis *Pittospori eugenioidis* in Nova Zelandia (KIRK).

14. **Asterina intensa** Cooke et Mass. Grev. XV, p. 101. — Amphigena; maculis atris, orbicularibus; peritheciis applanatis, minutis, densissime congestis, $\frac{1}{8}$ mm. diam., margine fimbriato; ascis ovatis, octosporis; sporidiis ellipticis, obtusis, uniseptatis, fuscis, $15 \approx 8$. 1620

Hab. in foliis *Pisoniæ* in Nova Zelandia (KIRK).

15. **Asterina platystoma** Cooke et Mass. Grev. XVIII, p. 6. — Mycelio tenui, plus minusve orbiculato, dendritico, nigro; peritheciis 1621

convexis, applanatis, arcte adnatis, atris, ostiolo fisso, amplo, elongato; ascis saccatis, octosporis; sporidiis ellipticis, uniseptatis, medio constrictis, fuscis, loculo supero latiori, 17-18 \approx 9.

Hab. in foliis vivis *Castanospermi*, Brisbane Australiæ (BAILEY).

16. **Asterina correicola** Cooke et Mass. Grev. XVI, pag. 5. — Epiphylla; maculis orbicularibus, nigris; peritheciis convexo-applanatis, 60 μ . diam., atris, in maculam congestis, margine fimbriato; ascis subglobosis, octosporis; sporidiis, ellipticis, uniseptatis, vix constrictis, utrinque rotundatis, fuscis, 25-28 \approx 10-12. 1622

Hab. in foliis vivis *Corræe Laurencianæ*, Upper Yarra Australiæ (J. G. LUEHMANN).

17. **Asterina sphærotheca** Karst. et Roum. Rev. Myc. 1890, p. 76. — Peritheciis epiphyllis, gregariis vel confertis, convexo-applanatis, astomis, dein vertice radiato-rumpentibus, margine subfimbriato, contextu prosenchymatico-radiante, atratis, basi hyphis stromaticis repentibus reticulatim junctis, remote articulatis, brevibus 4-5 μ . crassis, fuligineis, hyphopodiis destitutis cinctis, 80-100 μ . diam.; ascis sphæroideis, sessilibus, 40-50 μ . d., v. 60 \approx 40, 8-sporis; sporidiis conglobatis, ovoideo-ellipsoideo, paullo ultra medium uniseptatis, ad septum eximie constrictis, fuscis subimpellucidisque (sub lente), 25-32 \approx 13-16; paraphysibus non visis. 1623

Hab. ad folia viva v. languida *Viticis* in Dong-Dong Tonkin.

18. **Asterina tenella** Cooke in Grevillea XIII, p. 67. — Epiphylla, effusa, tenuis, atra; peritheciis, minutis, 220 μ , diam., applanatis, cum mycelio repente, brunneo immixtis; ascis saccatis, 4-8-sporis; sporidiis (in ascis octosporis) 28-30 \approx 12-14, (in ascis tetrasporis) 40 \approx 22, pallide fuscis. 1624

Hab. in foliis *Perseæ caroliniensis* in Carolina Americæ borealis (RAVENEL).

19. **Asterina delitescens** E. et Mart. in Amer. Nat. 1883, pag. 1381, — Mycelio tenui nigro, epiphylo, maculas orbiculares, minutas, 2-4 mm. diam., efformante, hyphis ramosis, copiosis, adpressis composito; peritheciis mycelio insidentibus, applanatis, stipatis, 75-100 μ . diam.; contextu radiatim celluloso; ascis 30-35 \approx 18-22, obovatis vel subglobosis; sporidiis pallide luteis bicellularibus, ovato-oblongis, 15-18 \approx 6-7. 1625

Hab. in foliis vivis *Perseæ palustris*, New Florida Amer. bor. — Habitu *A. pelliculosæ* proxima, a qua distinguitur sporidiis minus constrictis characteribusque mycelii.

20. **Asterina insignis** Karst. et Roum. Rev. Myc. 1890, pag. 77. — 1626

Mycelio plagulas epiphyllas, suborbiculares, majusculas, tenuissimas, atras formante, ex hyphis repentibus, adnatis, divaricato-ramosis, eleganter anastomotico-reticulatim junctis, atris, scabris, 5-6 μ . crassis, hyphopodiis ovalibus v. ovoideis scabris, 15-20 \approx 12-13, alternis, instructis, setulis destitutis constante; peritheciis sparsis subhemisphæricis, astomis, deinde ore lato apertis, atris, 160-200 μ . diam.; ascis non visis; sporidiis clavatis v. ovoideis, 1-septatis, ad septum leviter v. vix constrictis, dilute fuligineis, 13-14 \approx 5-6.

Hab. ad folia Laurineæ cujusdam in Tu Phap, Tonkin.

21. **Asterina rubicola** Ell. et Ev. Proc. Phil. 1890, p. 219. — Ma- 1627

culis e rubiginoso flavo-brunneis, indefinitis, infra pallidioribus, late extensis; peritheciis epiphyllis, solitariis v. 2-4 connatis, depresso hemisphæricis, pertusis, nigris, 75-80 μ . diam.; ascis oblongis, sessilibus, 35-45 \approx 12-15, obscure paraphysatis; sporidiis 2-stichis, ovato-ellipsoideis, flavo-brunneis, 12-15 \approx 6-8, utrinque rotundatis, 1-septatis constrictisque.

Hab. in foliis vivis Rubi occidentalis, London Canada (DEARNESS).

22. **Asterina pauper** Roum. et Karst. Revue Myc. 1890, p. 79. — 1628

Mycelio epiphylo, plagulas suborbiculares, pertenues, minutas, dispersas, fuliginosas efficiente, ex hyphis gracillimis, 5-6 μ . crass., dense intertextis, flexuosis, alterne ramosis, crebre articulatis, dilutissime fuligineis, (sub lente), hyphopodiis destitutis, composito; peritheciis 1-10 in quavis plagula, laxè aggregatis, lenticularibus, dimidiatis, astomis, dein irregulariter dehiscentibus, atris, opacis, subcarbonaceis, contextu indistincto, margine extimo pellucidis, reticulatisque, 100-120 μ . diam.; sporidiis oblongato- v. elongato-ovoideis, apicem versus fascia hyalina ornatis, fuligineis 15-23 \approx 6-8.

Hab. ad folia languida Aucubæ Spini? in Tonkin Asiæ orient.

23. **Asterina dispar** Speg. F. Guar. II, n. 125. — Mycelio plagulas 1629

epiphyllas, suborbiculares, 2-5 mm. diam. atras, tenui-subcrustaceo-membranaceas, matrici arctiuscule adnatas efficiente, ex hyphis 5-6 μ . cr., dense intricatis, sæpius opposito-ramulosis, hyphopodiis hemisphærico-subcylindræis, 10 \approx 5, subsessilibus, sparse alternis, levibus, integris, ornatis, composito; peritheciis scutato-dimidiatis, 180-200 μ . diam., membranaceo-coriacellis, contextu fibroso-ramiante, rectiusculo, dense septulato, fuligineo, plus minusve perspicuo efformatis, margine fimbriatulis, stellatim laciniato-dehiscentibus; ascis ovoideis v. subglobosis, superne crasse tunicatis, 45-

50 μ . diam., aparaphysatis, octosporis; sporidiis conglobatis, obovatis v. subclavulatis, 25-30 \approx 12-14, didymis, ad septum non vel lenissime constrictis, loculo supero subelliptico, 18 \approx 14, infero minute subgloboso v. subconoideo, 8-10 \approx 6-9, primo hyalinis, dein fuligineis.

Hab. ad folia viva *Styracis* speciei cujusdam in montanis pr. Peribeby Brasilæ.

24. **Asterina nodulosa** Speg. F. Puigg. n. 353. — Mycelio nubiloso-1630
maculoso, 2-5 mm. diam., ex hyphis gracilibus, 5-6 μ . cr., hyphopodiis destitutis, hinc inde noduloso-inflatis efformato; peritheciis scutatis, opacis, fimbriatis, 150-200 μ . diam.; ascis obovatis, aparaphysatis, 40-50 \approx 30-40; sporidiis elliptico-obovatis, 1-septatis, loculis subæqualibus, fuligineis, 32-34 \approx 16-18.

Hab. ad folia viva *Tabebuia* speciei cujusdam in silvis pr. Apiahy Brasilæ.

25. **Asterina Sapotacearum** Speg. F. Guar. II, n. 129. — Mycelio 1631
plagulas orbiculares, 3-5 mm. diam., epiphyllas, tenuissime pelliculosas, matrice arctiuscule adnatas, centro per ætatem frustulatum secedentes, efformante, ex hyphis dense intricatis, 8-9 μ . cr., alterne-ramosis, hyphopodiis sessilibus, obovatis, 10-12 μ . diam., sæpius grosse 1-guttulatis, alternis ornatis, fuligineis, composito; peritheciis in mycelio laxè gregariis, dimidiato-scutatis, 120-180 μ . diam., membranaceis, contextu fibroso-radiante, rectiusculo, fuligineo donatis, margine crenulatis, centro stellatim dehiscentibus; ascis globosis vel ovatis, 60-65 \approx 50-55, antice tunica incrassato-umbonata vestitis, aparaphysatis, octosporis; sporidiis ex elliptico obovatis, 30 \approx 15, didymis, ad septum non vel parce constrictulis, loculo supero, 16 \approx 15, infero 13-14 \approx 12-13, nonnihil majore, primo hyalinis, dein fuligineis.

Hab. ad folia viva *Sapotaceæ* cujusdam in dumetis prope Guarapí Brasilæ.

26. **Asterina acanthopoda** Speg. F. Guar. II, n. 128. — Mycelio epi-1632
phylo, maculari, effuso, irregulariter expanso, totum folium sæpe obtegente, arachnoideo, tenuissimo, parce manifesto, atro, ex hyphis 5-8 μ . cr., dense intricato-ramulosis, hyphopodiis subramuliformibus, e cylindræo conicis, 10-15 \approx 5-7, divaricatis, apice attenuato-obtusatis, alternis v. suboppositis, ornatis, fuligineis efformato; peritheciis in mycelio laxè gregariis, dimidiato-scutatis, 120-150 μ . diam., membranaceo-coriacellis, contextu centro opaco indistincto, ambitu fibroso-radiante, recto, septulato, atro donatis,

margine fimbriatulis, per ætatem parce stellatim dehiscentibus; ascis obovatis, 50 \approx 40, antice rotundatis, crassiuscule tunicatis, postice brevissime crasseque stipitatis, aparaphysatis, octosporis; sporidiis ellipticis, 22-25 \approx 10-11, didymis, medio constrictis; loculis æqualibus, supero 11-13 μ . long., infero 10-12 μ . long., obtusis, primo hyalinis, dein fuliginis.

Hab. ad folia viva Sapotaceæ cujusdam indeterminatæ in silvis pr. Guarapî Brasiliæ.

27. **Asterina leptotheca** Speg. F. Puigg. n. 351. — Mycelio parcissimo evanescente, subimperspicuo, ex hyphis laxissimis, 6-7 μ . cr., hyphopodiis cylindræo-ampulluliformibus, 18-20 \approx 6, alternis, ornatis, composito; peritheciis majusculis, ostiolatis, fimbriatis, 250-300 μ . diam.; ascis cylindræis, aparaphysatis, 80 \approx 10-12; sporidiis clavulatis, utrinque acutiusculis, 1-septatis, loculo supero subgloboso, infero acutissimo, fuliginis, 15-16 \approx 7-8. 1633

Hab. ad folia viva Hireæ speciei cujusdam in nemorosis pr. Apiahy Brasiliæ. — Species inter *Asterinam* et *Seynesiam*, ob subiculi evanescentiam, vere intermedia.

28. **Asterina colliculosa** Speg. F. Puigg. n. 347. — Mycelio arachnoideo-effuso vix perspicuo glabro, hyphis alterne ramosis, hyphopodiis subcylindræis 10 \approx 7, alterne ornatis; peritheciis hemisphærico-conoideis, 200-250 μ . diam., dimidiatis, sparsis, atris, postice stellatim rimosis; ascis obovatis, dense paraphysatis, 67-70 \approx 30-40; sporidiis ellipticis, 1-septato-constrictis, loculis subæqualibus, fuliginis, 28-30 \approx 14-15. 1634

Hab. ad folia viva Eugeniæ speciei cujusdam in silvis prope Apiahy Brasiliæ.

29. **Asterina cylindrotheca** Speg. F. Puigg. n. 349. — Mycelio maculoso vel arachnoideo-effuso, subimperspicuo, 1-5 mm. diam., hyphopodiis destituto; peritheciis sparsis v. laxè aggregatis, minutis, 120-180 μ . diam.; ascis cylindræis, pseudo-paraphysatis, 50-80 \approx 18-20; sporidiis obovatis, 1-septatis, loculo supero leniter breviorè, diu hyalinis, dein olivascentibus. 1635

Hab. ad folia viva Eugeniæ speciei cujusdam in dumetis pr. Apiahy Brasiliæ.

30. **Asterina ilicis** Ellis Amer. Nat. 1883, p. 319. — Peritheciis superficialibus, applanatis, punctiformibus, minutis, mycelio fere obsoleto; ascis globoso-ovoideis, 22 \approx 15; sporidiis oblongis, 1-septatis, flavidis, 11 \approx 4. 1636

Hab. in foliis vivis Ilicis glabræ, Newfield N. J. Amer. bor.

31. **Asterina consociata** Wint. in Speg. F. Guar. II, n. 131. — Myc. 1637
 celio laxissimo, arachnoideo-effuso, per totum epiphyllum expanso, parcissime perspicuo, atro, ex hyphis irregulariter ramulosis, gracilibus, 5 μ . cr.. hyphopodiis obovatis, subuncinato-curvulis, leniter pedicellatis, 10-12 \simeq 5, donatis, fuligineis, composito; peritheciis in mycelio sparsis v. hinc inde laxe gregariis, scutato-dimidiatis, 80-100 μ . diam., membranaceis, contextu fuligineo, fibroso-radiante, rectiusculo, densiuscule septulato, donatis, centro stellatim dehiscens, margine crenulatis, non vel parce breveque fimbriatis; ascis obovatis, antice crasse tunicatis, postice brevissime crasseque pedicellatis, 35-40 \simeq 25-30, octosporis, aparaphysatis; sporidiis ellipticis, 18 \simeq 9, medio 1-septato-constrictis, loculo supero subgloboso, 9 μ . diam., infero obovato, 9 \simeq 8, diu hyalinis, dein opace fuligineis.

Hab. ad folia viva *Macluræ moræ* in silvis prope Guarapi Brasiliæ. — Status stylosporicus peritheciis ascophoris simillimus, stylosporis obovatis, 16-18 \simeq 10-12, continuis, fuligineis donatus, intermixtus adest.

32. **Asterina Pinastri** Sacc. et Ellis Mich. II, p. 567. — Peritheciis 1638
 gregariis superficialibus, globoso-depressis, nigris, astomis, 110-120 μ . diam., hyphis filiformibus, ramosis, fuligineis, repentibus cinctis; ascis oblongis, utrinque obtusiusculis, sessilibus, 40-50 \simeq 20-24, aparaphysatis octosporis; sporidiis 2-3-stichis, oblongo-clavulatis, 18-20 \simeq 6-7, constricto-1-septatis, initio hyalinis, dein melleis.

Hab. in foliis *Pini rigidæ*, Newfield N. J. Am. bor. (ELLIS).

33. **Asterina Leveillei** Pat. Journ. Bot. 1888, p. 148. — Epiphylla; 1639
 maculis crustaceis, adhærentibus, nigris, orbicularibus, sparsis vel confluentibus; peritheciis minutis, 80-120 μ . diam., nigris, globulosis, astomis, sparsis v. gregariis, basi setulis decumbentibus, rigidis, brunneis, gracilibus, acutis, 70-120 \simeq 5-6; paraphysibus nullis; sporidiis brunneis, 15-17 \simeq 4-5, loculis 2 æqualibus, constrictis; pycnidiis peritheciis conformibus sed paullo majoribus; stylosporibus cylindræis, guttulatis, linearibus, rectis v. curvulis, 18-20 \simeq 2,5-3.

Hab. in foliis *Graminacearum*, Chili, Amer. austr.

34. **Asterina splendens** Pat. Journ. Bot. 1888, p. 148, f. 3. — Ma- 1640
 culis nigris, crustaceis, orbicularibus, 1,5-2 cm. sparsis vel confluentibus et tunc indumentum fragile, tomentosum, margine radiosum efformantibus; setulis erectis, numerosis, nigris, opacis, rectis vel flexuosis; peritheciis numerosis, globosis, nigris, astomis; ascis in quoque perithecio 4-6, ovoideis, subsessilibus, 90 \simeq 50; sporidiis

octonis, 48-55 \approx 18-20, brunneis, loculis 2 inæqualibus; spermogoniis globosis, ostiolo pertusis; spermatis minutis, ovoideis, hyalinis.

Hab. in foliis Monocotyledonearum, Chili Amer. austr.

35. **Asterina inquinans** E. et E. Journ. of Myc. 1887, p. 41. — Pe. 1641
 peritheciis amphigenis, scutelliformibus, nigris, umbonatis, radiato-parenchymaticis, cellulis marginalibus subelongatis utrinque subincrassatis; ascis ovoideis v. obovatis, basi in stipitem brevem contractis, 35-40 \approx 18-22; sporidiis irregulariter confertis, ovoideo-ellipsoideis, flavidis, vix 1-septatis (?).

Hab. in foliis emortuis Sabal Palmetto, Louisiana Amer. bor. (Rev. A. B. LANGLOIS). — Perithecia acervulos conidiorum ejectorum *Melanconii* fere imitantur.

36. **Asterina obtusispora** Speg. F. Puigg. n. 354. — Mycelio arachnoideo-nubilo, subimperspicuo, ex hyphis alterne ramosis, 8 μ . cr., hyphopodiis alternis, vix hemisphæricis instructis composito; peritheciis minutis, coriacellis, 100-120 μ . diam.; ascis globoso-piriformibus, aparaphysatis 45 \approx 40; sporidiis obovatis, utrinque obtusissimis, 1-septatis, loculo supero, crassiore brevioraque, fuliginis, 22-24 \approx 14.

Hab. ad folia viva coriacea plantæ cujusdam ignotæ in dumetis pr. Apiahy Brasilæ.

37. **Asterina monothea** Pat. Bull. Soc. Myc. 1888, p. 103, t. XIX, 1643
 fig. 2. — Maculis epiphyllis, brunneo-nigricantibus, orbicularibus, folio adhærentibus, ambitu fibrillosis, 3-5 mm. diam., numerosis, sparsis v. plus minus confluentibus; mycelio brunneo, ramoso, septato; setulis nullis; peritheciis minutissimis, 60-100 μ . diam., globosis, numerosis, in macularum centro confertis, astomis, contextu angulato-celluloso; ascis globosis, 45-50 μ . diam., in quoque perithecio 1 v. rarius 2; sporidis octonis, 40 \approx 12, ovoideo-elongatis, 1-septatis, septo constrictis, hyalinis, dein fuliginis.

Hab. ad folia coriacea, Puerto-Zamuro Venezuelæ.

38. **Asterina circularis** Winter in Hedwigia 1886, p. 94. — Mycelio 1641
 plagas minutas, $\frac{1}{2}$ -1 mm. latas, epiphyllas, sparsas, atras, efficiente, ex hyphis repentibus, flexuosis, simpliciter ramosis, fuscis, formato; hyphopodiis plerumque alternantibus, profunde lobulato-crenatis, stipitatis, fuscis; peritheciis aggregatis, in orbem unicum vel in orbis duos concentricos dispositis, applanatis, rotundatis, e centro marginem versus radiatim dehiscentibus, fusco-atris; ascis late ovatis vel piriformibus, sessilibus, octosporis, 36-44 \approx 23-30; sporidiis oblongo-clavatis, medio uniseptatis constrictisque, utrin-

que rotundatis, cellula inferiori parum angustiori, fuscidulis, 15-16 \approx 8-9.

Hab. in foliis vivis plantæ herbacæe adhuc indeterminatæ in insula S. Thomè Afr. occ.

39. **Asterina toruligena** Cooke in Grev. X, p. 129. — Atra, velu- 1645
tina, orbicularis; peritheciis applanatis, subdiscoideis, convexis 1 mm. diam., opacis, rugulosis; hyphis fuscis radiantibus, circumdati-
tis; ascis clavatis; sporidiis arcte ellipticis, uniseptatis, fuscis, leniter constrictis 12 \approx 5; stromate toruloideo; hyphis erectis, simplicibus, subramosis, fuscis; articulis ellipticis, 8-10 \approx 4, dissilientibus.

Hab. in foliis vivis Inanda, Natal (WOOD).

40. **Asterina myriadea** Cooke in Grev. X, pag. 130. — Amphigena, 1646
sparsa; peritheciis numerosissimis, fuscis, punctiformibus, subglo-
bosis, ad basim applanatis vel hemisphæricis 70-100 μ . diam. sub-
lente olivaceis, membranaceis, aliis microstylosporas ovales, hya-
linas 6 \approx 3, aliis ascosporas gerentibus; ascis arcte clavatis; spo-
ridiis sublanceolatis, utrinque obtusis, uniseptatis, 10 \approx 3, luteo-
fuscis.

Hab. in foliis vivis, Inanda Natal (WOOD).

41. **Asterina tenuis** Winter in Hedwigia 1886, p. 94, et F. S. Thom. 1647
t. II. — Mycelio effuso, tenuissimo, ex hyphis repentibus, valde
ramosis, anastomosantibus, flexuosis torulosisque, fuscis formato,
hyphopodiis numerosis, sessilibus v. brevissime stipitatis, fere pal-
matis, lobulis distinctis, plerumque 6 præditis, fuscis; peritheciis
gregariis, sæpe ambitu angulatis, a centro marginem versus ra-
diatim dehiscentibus, fusco-atris, margine fimbriatis, 85-130 μ .
diam.; ascis fere globosis, sessilibus, 8-sporis, 70-35 \approx 26-32; spo-
ridiis oblongis, medio uniseptatis, constrictis, utrinque rotundatis,
cellula inferiori parum angustiori, non raro subinæquilateralibus,
fuscis, 16-18 \approx 8-9.

Hab. in foliis vivis arboris ignotæ in insula S. Thomè Afr.

42. **Asterina minor** E. et Ev. in Journ. of Myc. 1886, pag. 42. — 1648
Peritheciis applanatis, superficialibus, orbicularibus, $\frac{1}{4}$ mm. diam.,
atris; mycelio obsoleto; ascis obovatis, 25-30 \approx 12-15; sporidiis
stipatis, oblongo-ovatis, 1-septatis, luteolis, 10-13 \approx 3-3 $\frac{1}{2}$ (demum
brunneis?).

Hab. in ramulis emortuis, Huston, Texas Amer. bor. (H. W. RAVENEL). — Differt ab *A. ramulari* peritheciis et sporidiis minoribus.

43. **Asterina vagans** Speg. F. Guar. II, n. 127. — Mycelio plagulas 1649
 minutas, 0,5-1 mm., irregulares tenuissime arachnoideo-effusas hinc
 inde efficiente, ex hyphis alterne ramulosis, intricatulis, 5 μ . cr.,
 fuligineis, hyphopodiis longiuscule pedicellatis, capitato-lobatis, 15
 \simeq 10, alternis ornatis, efformato; peritheciis laxè pauci-aggrega-
 tis, scutato-dimidiatis, 80-120 μ . diam., membranaceis, contextu fi-
 broso-radiante, flexuosulo, septulato, fuligineo, margine crenulatis;
 ascis e globoso obovatis, 40 \simeq 30, superne crassiuscule tunicatis, in-
 ferne papillato-substipitatis, octosporis, aparaphysatis; sporidiis con-
 globatis, didymis, ad septum non v. vix subconstrictulis, clavulatis
 v. obovatis, 20-22 \simeq 8-9, loculo supero subgloboso, 10 \simeq 8-9, infero
 subcylindræo 10 \simeq 7, diu hyalinis, dein pallide fuligineis.

Hab. ad folia viva Solani boerhaviæfolii in dumetis pr.
 Guarapî Brasilæ.

44. **Asterina coriabella** Speg. F. Puigg. n. 348. — Mycelio epiphylo 1650
 crustaceo-maculoso, hyphis alterne ramosis, hyphopodiis lobato-
 cristatis alternis donatis composito; peritheciis coriacellularis, margine
 non fimbriatis, minutis, 100-180 μ . diam., scutato-dimidiatis; ascis
 globosis, aparaphysatis, 40 \simeq 35-38; sporidiis elliptico-obovatis, 1-
 septatis-constrictis, loculis subæqualibus, fuligineis, 20-24 \simeq 8-10.

Hab. ad folia viva Cestri speciei cujusdam in nemorosis pr.
 Apiahy Brasilæ.

45. **Asterina Balanseana** Karst. et Roum. Rev. Myc. 1890, p. 76. — 1651
 Mycelio hypo- rarius epiphylo plagulas parvulas suborbiculares,
 admodum tenues, atras efficiente, ex hyphis intricato-ramosis, ana-
 stomico reticulatim junctis, fuligineis, 6-7 μ . crassis, hyphopodia
 alterna, verruciformia integra vel lobata, brunnea 9 \simeq 6, gerenti-
 bus composito; peritheciis in plagulis gregariis, convexo-applana-
 tis, atris, demum stellato-rimoso-dehiscentibus, ambitu fimbriatis,
 contextu prosenchymatico-radiante, 60-80 μ . diam.; ascis non visis;
 sporidiis ovoideis vel subcuneatis, medio fascia hyalina ornatis, ad
 fasciam vel septum leviter vel vix constrictis, olivaceo-fuligineis
 (sub lente), 13-18 \simeq 7-9.

Hab. in foliis languescentibus Solanaceæ cujusdam ad Hanoi
 Tonkin. — *Asterinæ interruptæ* Wint. affinis sed mox dignoscenda.

46. **Asterina subreticulata** Speg. F. Guar. II, n. 138. — Mycelio ma- 1652
 culas pusillas, 1 mm. diam., sparsas v. confluendo fere totum epi-
 phyllum obtegentes, tenuissimas, arachnoideo-fibrillosas, vix perspi-
 cuas, atras, arcte matrice adnatas, efficiente, ex hyphis densiuscule
 alterni-ramosis gracilibus, 3-4 μ . cr. fuligineis, hyphopodiis desti-

tutis, efformato; peritheciis scutato-dimidiatis, 100-150 μ ., submembranaceis, contextu fuligineo, fibroso-radiante, subflexuosulo, septulato donatis, centro stellatim dehiscentibus, ambitu crenulato-fimbriatis; ascis ovoideis antice crassissime tunicatis, postice umbonato-pedicellatis, 30-40 \simeq 20-30, aparaphysatis, octosporis; sporidiis conglobatis, elliptico-obovatis, 18-20 \simeq 10, medio 1-septato-constrictis, loculo supero globoso, 10 \simeq 10, infero obovato, 10 \simeq 8-9, primo hyalinis, dein fuligineis.

Hab. ad folia viva Solani et Cestri speciei cujusdam in dumetis pr. Guarapi Brasiliæ. — Species eadem ex Cuba socio *Dimerosporio solanicolo* (Berk. et C.) Speg. adest. Cl. Winter speciem hanc eandem esse ac *Ast. reticulatam* Kalchb. et Cooke, opinatus erat, sed specimina utriusque speciei diligenter inspecta contrarium docent, præcipue ob defectum vittæ hyalinæ stylosporiarum (quæ ut sporidia in diagnosi sumptæ fuerunt!), et ob nonnullos characteres peritheciolorum myceliique. Status stylosporicus, peritheciis ascophoris simillimus, stylosporis obovatis, 18-20 \simeq 10-11, continuis fuligineis donatus, adest.

47. **Asterina pseudopelliculosa** Speg. F. Puigg. n. 356. — Mycelio 1653
tenuissime pelliculoso, latissime effuso, ex hyphis alterne ramosis, 4-5 μ . cr., hyphopodiis hemisphærico-cristatis, subsessilibus, alternis, ornatis, efformato; peritheciis pusillis, membranaceo-pellucidis, 80-120 μ . diam.; ascis piriformibus, aparaphysatis, 40-55 \simeq 30-35; sporidiis elliptico-obovatis, fuligineis 1-septatis, subconstrictis, 18 \simeq 8.

Hab. ad folia viva Ipomeæ speciei cujusdam in dumetis pr. Apiahy Brasiliæ. — Species *Ast. pelliculosæ* Berk. affinis, sed mox dignoscenda.

48. **Asterina stellata** Speg. F. Puigg. n. 358. — Mycelio 1654
arachnoideo-subpelliculoso, atro, maculoso vel late effuso, ex hyphis alterne vel opposite ramulosis, 5-6 μ . cr., hyphopodiis ovoideis, sessilibus, alternis, 10 \simeq 6, ornatis, composito; peritheciis pusillis, membranaceis, margine stellato-lobatis, 100-120 μ . diam.; ascis e globoso obovatis, aparaphysatis, 50-60 \simeq 25-30; sporidiis ellipticis v. obovatis, utrinque obtusis, 1-septatis, loculo supero conspicue minore, fuligineis, 29-30 \simeq 15.

Hab. ad folia viva Compositæ herbaceæ cujusdam in dumetis pr. Apiahy Brasiliæ.

49. **Asterina cristata** Speg. F. Guar. II, n. 126. — Mycelio tenuis- 1655
simo, arachnoideo-effuso, sæpe per totum folium expanso, atro, pa-

rum perspicuo, matrici arctiuscule adnato, ex hyphis alternatim dense ramuloso-intricatis, 3-5 μ . cr., fuligineis, hyphopodiis sessilibus, orbiculari-dimidiatis, lobulato-cristatis, 10 \simeq 5, præditis, efformato; peritheciis dimidiato-scutatis, 120-180 μ . diam., membranaceis, contextu fibroso-radiante, rectiusculo, densiuscule septulato-fuligineo, donatis, margine fimbriatis, centro stellatim laciniato-dehiscentibus; ascis obovatis vel globosis, 30-40 \simeq 25-30, aparaphysatis, octosporis; sporidiis conglobatis, didymis, 18-20 \simeq 8, ad septum leniter constrictulis, loculis subæqualibus, supero obtusiore ac crassiore, 9-10 \simeq 8, infero subgraciliore, 8 \simeq 7, primo hyalinis, dein fuligineis.

Hab. ad folia viva *Asclepiadearum* in dumetis pr. Paraguari Brasiliæ. — Status stylosporicus peritheciis ascophoris similis, stylosporibus obovatis, 20 \simeq 12-14, continuis, fuligineis, donatus, immixtus adest.

50. **Asterina peraffinis** Speg. F. Puigg. n. 355. — Mycelio maculoso-effuso, subcrustaceo, epiphylo v. rarius amphigeno, ex hyphis alterne ramosis, 4-5 μ . cr., hyphopodiis subsessilibus, alternis 2-4-lobato-cristatis efformato; peritheciis pusillis, vix fimbriatis, 80-100 μ . diam.; ascis obovatis, aparaphysatis, 30 \simeq 25; sporidiis ellipticis vel subcylindræo-obovatis, 1-septatis, loculo supero longiore, fuligineis, 18-20 \simeq 9-10. 1656

Hab. ad folia viva *Asclepiadæ* cujusdam in silvis pr. Apiahy Brasiliæ. — Species *A. pseudopelliculosæ* peraffinis.

51. **Asterina filamentosa** Pat. Bull. Soc. Myc. 1888, p. 103. — Maculis amphigenis nigris, plus minus irregularibus, 2-5 mm. long., sparsis v. confluentibus, ambitu fibrilloso; mycelio brunneo, septato, hyphopodiis alternis, ovoideis, pedicellatis; peritheciis in centro macularum insidentibus, numerosis, minutissimis, globosis, nigrescentibus, contextu celluloso; ascis clavatis, subsessilibus, 4-6-8-sporis; paraphysibus nullis; sporidiis brunneis, ovoideis, 7 \simeq 3, obtusis, 1-septatis, leniter constrictis; pycnidiis peritheciis commixtis, globosis, brunneis, cellulosis, in collum breve, pertusum productis; stylosporibus ovoideis, 5 \simeq 1, brunneis, non septatis. 1657

Hab. in foliis *Labiatae* cujusdam, Caracas Venezuelæ.

52. **Asterina fuliginosa** Pat. Bull. Soc. Myc. 1888, p. 103. — Maculis atro-brunneis, ambitu fibrillosis; mycelii filamentis gracilibus, brunneolis, ramulis saturatius coloratis, septatis, ramulis instructis, hyphopodiis alternis, raris; setulis erectis, septatis, brunneis, apice subtoruloso, obtuso, fulvo præditis; peritheciis numerosis, globosis, 1658

astomis, parenchymaticis, minutissimis, 25-40 μ . diam.; ascis ovoideis, sessilibus, 20 \approx 10; sporidiis octonis, hyalinis, cylindraceutis, re-
ctis, 1-septatis; conidiis brunneis, pluriseptatis, utrinque attenuatis; pycnidiis brunneis, ovoideis, in collum pertusum productis; sty-
losporibus ovoideis, hyalinis, non septatis, 6-7 \approx 3.

Hab. ad folia viventia, Maipures Venezuelæ.

53. **Asterina? stylospora** Cooke in Grev. X, pag. 129. — Gregaria, 1659
atra, hypophylla; peritheciis hemisphæricis, opacis, inter hyphas
parcas nidulantibus; macrostylosporibus ellipticis 26-30 \approx 10-12 supra
rotundatis, infra in mucronem hyalinum, stipitiformem productis,
plasmate fusco, medio fascia hyalina bipartito.

Hab. in foliis Sponiæ guineensis, Inanda, Natal (Wood).
— Dubia, quia asci ignoti.

54. **Asterina Darwinii** Berk. Fl. Antarc. II, p. 454, t. 164, f. 2. — 1660
Epiphylla, maculis parvis orbicularibus e fibrillis radiantibus ar-
ticulatis inarticulatisque; peritheciis irregularibus demum depres-
sis, centralibus, margine lacerato; ascis globosis; sporidiis oblon-
gis, biloculatis.

Hab. in Azara lanceolata, Cape Ires Montes. — Ab *A.*
Azaræ Lév. diversa.

55. **Asterina stictica** Berk. Fl. Antarc. II, p. 453, t. 164, f. 4. — Mi- 1661
nutissima, omnino punctiformis, mycelio obscuro; peritheciis de-
pressis, atro-fuscis, margine membranaceo pellucido.

Hab. in foliis Violæ tridentatæ, Hermite Island, Cape Horn.

ASTERELLA Sacc. — Syll. I, p. 25 et p. 42 (ut subgen.).

1. **Asterella Bignoniæ** Ell. et Ev. in Proc. Phill. 1890, p. 220 (*Asterina*). 1662
— Hypophylla; peritheciis gregariis v. sparsis, depresso globosis,
115-125 μ . diam., rugulosis, nigris, ostiolo papillato; mycelio par-
cissimo vel obsoleto; ascis obovatis, 20 \approx 15, dein oblongo-pirifor-
mibus, 30 \approx 15; sporidiis confertis, oblongis, obtusis, 1-septatis, 12
 \approx 4, leniter constrictis, hyalinis (demum brunneis?).

Hab. in foliis vivis Bignoniæ capreolatæ, St. Martinsville
La. Amer. bor. (LANGLOIS). — Ob perithecia subglobosa nunquam
radiato-contexta, an potius *Dimerosporii* species?

2. **Asterella carnea** Ell. et Mart. in Amer. Nat. Bot. 1883, p. 1285. 1663
(*Asterina*). — Hypophylla; mycelio tenui, brunneo-nigro, suberu-
staceo, hyphis subanastomosantibus, brunneis, adpressis, sæpissime
marginem foliorum occupantibus et maculas orbiculares, circiter $\frac{1}{2}$
cm. diam. efformantibus; peritheciis minutis, 55-75 μ . diam., my-

celio insidentibus, stipatis, globosis, astomis sub lente carneis atque majore amplificatione luteolis; ascis 4-8, obovatis, sessilibus, 30-40 \approx 22-25, octosporis; sporidiis ovatis, bicellularibus, 16-17 \approx 7-8, mucro obvolutis.

Hab. in foliis vivis *Perseæ palustris*, New Florida Americæ borealis.

3. **Asterella infuscans** Wint. in Hedw. 1885 (*Asterina*). — Mycelio 1664
ex hyphis ramosissimis, torulosis flexuosisque, septatis, fuscis, densissime intertextis constante, foliorum paginam inferiorem longe lateque obducente et infuscante; peritheciis gregariis sparsisque, minutissimis, depresse hemisphæricis, centro diffractis et demum evanescentibus, fusco-atris, ambitu fibrillosis, 95-130 μ . latis; ascis oblongis seu e basi parum ventricosus, sursum ellipticis, fere sessilibus vel in stipitem brevem attenuatis, 8-sporis, 30-35 \approx 9-11; sporidiis conglobatis, clavatis, 2-cellularibus, medio non constrictis, hyalinis, 8-9,5 \approx 2,5-3.

Hab. ad folia subviva *Eucleæ undulatæ* ad latera montis Boschberg pr. Somerset-East, Promont. Bonæ Spei (MAC-OWAN).

4. **Asterella Gaultheriæ** Curtis herb. Martin in Journ. of Myc. 1885, 1665
p. 134 (*Asterina*). — Peritheciis brunneo-nigris, applanatis, centro leniter elevatis, hypophyllis, sparsis, 170-250 μ . diam., mycelio parco, brunneo, ramoso cinctis; ascis ovatis, 22-25 \approx 13-16; sporidiis hyalinis, obovatis, uniseptatis, cellula superiore latiore, 9 \approx 3.

Hab. in foliis vivis *Gaultheriæ procumbentis*, Newton Americæ borealis.

5. **Asterella patelloides** E. et M. in Journ. of Myc. 1885, pag. 136, 1666
Asterella erysiphoides E. et M. — Ell. N. Amer. Fungi n. 1359 (*Asterina*). — Peritheciis brunneis, orbicularibus, applanatis, centro depressis, hypophyllis, 275-300 μ . diam., mycelio radiante, albo, parco cinctis; ascis ovato-oblongis, 8-sporis, 36 \approx 15; sporidiis obovatis, 1-septatis, binucleatis, hyalinis, 15 \approx 6.

Hab. in foliis vivis *Quercus laurifoliæ*, Florida Americæ borealis.

6. **Asterella stomatophora** Ell. et Mart. in Journ. of Myc. 1885, p. 98 1667
(*Asterina*). — Peritheciis lenticularibus, sparsis, minutis, 170-185 μ . diam., mycelio reticulato insidentibus, centro pertusis, parenchymatice contextis; ascis oblongis v. oblongo-ovoideis, 30-35 \approx 6-8, stipitatis, basi abrupte contractis, aparaphysatis; sporidiis distichis, uniseptatis, subconstrictis, basi acutis, 7-12 \approx 2,5-3, hyalinis.

Hab. in foliis vivis *Quercus laurifoliæ* in Amer. bor.

7. **Asterella pustulata** Ellis New North Am. Fungi in Amer. Nat. 1668
1884, p. 1148 (*Asterina*). — Peritheciis imperfecte evolutis, e nucleo centrali, celluloso, compacto formatis; cellulis subglobosis, brunneis, in hyphas ramosas, brunneas, fimbriatas desinentibus et membranam circularem, $\frac{1}{2}$ - $\frac{3}{4}$ mm. diam., in foliorum superficie formantibus; ascis subglobosis, 8-sporis, 55 μ . diam.; sporidiis obovatis, hyalinis, uniseptatis, 30-40 \approx 10-12.

Hab. in foliis *Quercus laurifoliæ*, Cove Springs Amer. bor.

8. **Asterella intricata** Ell. et Mart. Amer. Nat. Bot. 1884, pag. 69 1669
(*Asterina*). — Peritheciis sparsis, $\frac{1}{2}$ - $\frac{3}{4}$ mm. diam., suborbicularibus, applanatis, nigris, contextu parenchymatico, atro; ascis copiosis, obovatis, sessilibus, 15 \approx 10; sporidiis subtilibus, clavato-oblongis, hyalinis, muco obvolutis, circiter 9 \approx 3, endochromate bipartito.

Hab. in pagina inferiore foliorum viventium *Quercus arenariæ*, New Florida Amer. bor. — Peritheciis latis, applanatis, sparsis, mycelio nullo mox dignoscenda.

9. **Asterella discoidea** Ell. New North Am. Fung. in Am. Nat. 1884, 1670
p. 1148 (*Asterina*). — Peritheciis hypophyllis, orbicularibus, leniter centro depressis, olivaceis, tenuibus, $\frac{1}{2}$ - $\frac{3}{4}$ mm. diam., margine indistincte reticulato; ascis obovatis v. globosis, 30-40 \approx 30-35; sporidiis conglomeratis, clavato-oblongis v. piriformibus, uniseptatis, 12-16 \approx 4-5.

Hab. in foliis vivis *Quercus laurifoliæ*, Cove Springs in America boreali.

10. **Asterella subcyanea** Ellis New Spec. North Am. Fungi in Amer. 1671
Nat. 1884, p. 1147 (*Asterina*). — Peritheciis hypophyllis, superficialibus, depressis convexisque, 250-350 μ . diam., parenchymaticis; cellulis subsphæroideis, 5-7 μ . diam., cyaneo-viridibus, extimis moniliformibus, circum circa basim perithecii in membranam tenuem septatam, superficiei foliorum adpressam contextis; ostiolis papillæformibus, collapsis, siccis poro pertusis; ascis utrinque leniter acutis, sessilibus, 75 \approx 15; sporidiis distichis, oblongo-clavatis, uniseptatis, 20 \approx 5-7, hyalinis.

Hab. in foliis vivis *Quercus laurifoliæ*, Cove Springs in America boreali.

11. **Asterella Pearsoni** E. et E. Journ. of Myc. 1885 (*Asterina*). — 1672
Peritheciis minutis, 200 μ . crass., superficialibus, sursum inconspicue perforatis, parenchymaticis, mycelio subradiato, parco præditis; ascis sessilibus oblongis obtusis, aparaphysatis, 40 \approx 15; spo-

ridiis distichis, clavato-oblongis, granulosis, 1-septatis, medio constrictis, 15-20 \times 3,5-4,5, basi acutis, sursum obtusis, hyalinis.

Hab. in sarmentis putridis Rubi culti, Vineland Amer. bor. (PEARSON).

12. **Asterella phæostroma** Cooke in Grev. X, p. 130 (*Asterina*). — 1673

Atra, velutina, orbicularis, demum confluens vel late effusa; peritheciis hemisphæricis 60-100 μ . diam., brunneis inter hyphas nidulantibus; ascis amplis, subpiriformibus; sporidiis ellipticis, arcte constrictis, utrinque obtusis, pallidis uniseptatis, 22 \times 10; mycelio ramosissimo, læte fusco, aculeis rigidis erectis opacis 100 μ . longis, dense ornatis.

Hab. in foliis Pavettæ natalensis (et Kraussia?), Inanda Natal (WOOD). — Affinis *A. velutinæ*.

13. **Asterella oleina** Cooke Grev. XI, p. 38 (*Asterina*). — Sparsa, 1674

punctiformis; peritheciis applanato-discoideis minutis, margine mycelio radiato brunneo cinctis; ascis clavatis; sporidiis hyalinis, minutis, 1-septatis (immaturis?); spermogoniis similibus sed minoribus; sporulis exiguis ovalibus, hyalinis, 8 μ . longis.

Hab. in foliis Oleæ americanæ, Georgia Amer. bor.

14. **Asterella pseudocuticulosa** Winter in Hedwigia 1886, p. 35 (*Aste-* 1675

rina). — Peritheciis sparsis, epiphyllis, orbiculari-scutellatis, atris, contextu parenchymatico, fusco, sed non radioso, sine ostiolo et non dehiscentibus, irregulariter dilabentibus, 380-410 μ . diam., mycelio parco, hyalino, ex hyphis tenuissimis, repentibus, ramosis formato; ascis subglobosis vel subovatis, sessilibus, 8-sporis, 44-50 \times 32-38; sporidiis conglobatis, oblongo-fusoideis, inæquilateralibus et parum curvatis, utrinque attenuatis, hyalinis, medio uniseptatis et constrictis, 28-30 \times 10,5.

Hab. in foliis vivis Coffeæ arabicæ in insula S. Thomè Afr. occ.

15. **Asterella paupercula** E. et E. Journ. Myc. 1888, p. 121 (*Aste-* 1676

rina). — Epiphylla; peritheciis scutellatis, brunneolo-nigris, 90-120 μ . diam., mycelio tenuiter ramoso-reticulato insidentibus et cinctis; ascis subellipsoideis, 8-sporis, 22-25 \times 12-15, basi breviter stipitiformibus; sporidiis confertis, fusoideis, hyalinis, 1-septatis, 12-15 \times 2.

Hab. ad folia viva Jacquiniæ armillaris in Florida Americæ borealis.

16. **Asterella setulosa** Pat. Journ. Bot. 1890, p. 62 (*Asterina*). — 1677

Amphigena; maculis orbicularibus, nigris, tenuibus, sparsis v. con-

fluentibus, dendroideo-limitatis; mycelio brunneo, ramoso, pinna-tifido, hyphopodiis alternis, subglobulosis, stipitatis; setulis nume-rosis, erectis, nigris, opacis, longissimis; peritheciis globulosis, asto-mis, parvis, $120 \approx 80$, nigris, opacis, cellulosis; ascis cylindraceutis, apice obtusis, subsessilibus, 8-sporis, $40 \approx 10$; paraphysibus linea-ribus, guttulatis; sporidiis rectis, loculis 2 inæqualibus, brevioribus obtuso, altero attenuato, pallide viridulis, $10 \approx 3$; pycnidiiis asto-mis, peritheciorum forma et magnitudine sed brunneis et pelluci-dis; sporulis ovoideis, hyalinis, numerosis, $5 \approx 3$.

Hab. ad folia viventia *Eugeniæ* sp. in silva prope Fu-Phap, Tonkin Asiæ orient. — Species ab *A. Eugeniæ* sporidiis 2-septa-tis et setularum præsentia distincta.

17. **Asterella? confluens** Pat. Journ. Bot. 1888, p. 149 (*Asterina*). — 1678

Mycelio nullo; peritheciis amphigenis, solitariis, orbicularibus, $\frac{1}{2}$ mm. diam. v. confluentibus, crustas fragiles, nigras, 2-3 mm. lat., papillis astomis adpersas, efformantibus, applanatis, tenuibus a fo-lio facile secedentibus, contextu parietis radioso; ascis clavatis, pa-chypleuris, 8-sporis, $60-66 \approx 18-20$; paraphysibus nullis; sporidiis hyalinis, 1-septatis, $12-15 \approx 4$, non constrictis.

Hab. in foliis *Salvadoræ persicæ*, Yemen Arabiæ.

18. **Asterella subcuticulosa** Cooke Grev. XVII, p. 81 (*Asterina*). — 1679

Epiphylla; peritheciis pelliculosis, applanatis, irregularibus v. con-fluentibus, absque mycelio, atris, sub lente fuscis; ascis piriformi-bus; sporidiis elliptico-clavatis, uniseptatis, hyalinis, cellula supe-riori latiori, circiter $10-12 \approx 4$.

Hab. in foliis languidis vel emortuis *Oleariæ argophyllæ* Gippsland Australiæ (LUEHMANN).

19. **Asterella clavuligera** Cooke. — Syll. I, n. 48, Martin in Journ. 1680

of Myc. 1885, p. 145 (*Asterina*). — Ascis ovatis, $30 \approx 18$; sporidiis hyalinis, ovalibus vel obovatis, 1-septatis, $21 \approx 6$.

Hab. in foliis *Vaccinii* et *Andromedæ*, Florida Americæ borealis.

20. **Asterella nuda** Peck in 38 Rep. St. Mus. p. 102, t, 2, f. 11-15 1681

(*Asterina*). — Peritheciis numerosis, gregariis v. stipatis, superfi-cialibus et nudis v. basi filamentis brevibus, minutis parce prædi-tis, globosis v. subdepressis, $80-100 \mu$. diam. atris; ascis oblongis v. subcylindraceutis, $40 \approx 12$; sporidiis stipatis aut distichis, oblongis, uniseptatis, $10-12 \approx 5-6$.

Hab. in foliis emortuis *Abietis balsameæ* in montibus Adi-rondack Amer. bor.

21. **Asterella dichænoides** Cooke Trans. Roy. Soc. Edln. 1887, p. 393 1682
(Asterina). — Maculæformis, 1 cm. diam.; peritheciis applanatis membranaceis, atro-fuscis, orbicularibus, 150 μ . diam., mox confluentibus, hyphis repentibus moniliformibus consociatis; ascis subglobosis, ad basim apiculatis, octosporis; sporidiis arcte ellipticis, uniseptatis, hyalinis, 10 \approx 3.
Hab. in cortice viventi, Socotra Africæ orient.
22. **Asterella Himantia** (Pers.) Sacc., *Sphæria Himantia* Pers. Syn. 1683
 p. 89, *Asteroma Himantia* (Pers.) Fr. Summa Veg. p. 325, *Ascospora Himantia* (Pers.) Rehm Ascom. n. 131. — Macula nigra ambiente e fibrillis centrifugis orta; peritheciis prominulis seriatis centro confertioribus; ascis initio ovoideis, sessilibus, dein clavatis 30 \approx 12, aparaphysatis, octosporis; sporidiis ellipticis, obtusis, continuis, 2-guttulatis, 8-10 \approx 3,5, hyalinis.
Hab. in caulibus emortuis Umbelliferarum, e. g. Peucedani in Suecia, Gallia, Germania.
23. **Asterella Plantaginis** Ellis Torr. Bot. Cl. 1882, p. 74 (*Asterina*). 1684
 — Peritheciis innatis, hemisphæricis 75 μ . diam. congestis, maculis brunneis marginatis amphigenis sed sæpius epiphyllis insidentibus; ascis ovato-ellipticis, 25-35 \approx 12,5; sporidiis inordinatis oblongis, obtusis, hyalinis, 2-nucleatis, leniter medio constrictis 8-10 \approx 2; mycelio fere obsoleto ex hyphulis fuligineis e perithecio radiantibus dein evanescentibus.
Hab. in foliis Plantaginis majoris, Philadelphia (G. A. REY).
24. **Asterella capnoides** Ellis Amer. Nat. 1883, p. 318 (*Asterina*). — 1685
 Epiphylla; peritheciis minutis, $\frac{1}{20}$ - $\frac{1}{15}$ mm., mycelio toruloideo, folium fœdante ad instar *Capnodii*; ascis oblongis, sessilibus, 30-40 \approx 11-13, aparaphysatis; sporidiis biseriatis, oblongo-ellipsoideis, 1-septatis, medio constrictis, obtusis, hinc latioribus, hyalinis, 2-guttulatis, 15-17 \approx 6-7.
Hab. in foliis viventibus Asclepiadis Cornuti, Charles City Iowa Amer. bor. (J. C. ARTHUR). — Mycelium in conidia diploidiæformia facile abit: cum eo adsunt quoque conidia macrosporoidea, 3-septato-muralia, pedicellata, 35 \approx 15.
25. **Asterella Hellebori** Rehm in Voss Mater. Pilz. Krains V, p. 213, 1686
 fig. 3 (*Asterina*). — Peritheciis minutissimis, punctiformibus, gregariis, in maculis cinereis, rotundatis, 1-4 mm. diam., epiphyllis insidentibus, globosis, aterrimis, parenchymatice fusce contextis, ad basim hyphis septatis, rectangulariter ramosis, fuscis, circ. 6 μ . cr.

præditis; ascis clavatis, 8-sporis, 36-40 \approx 6; sporidiis clavatis, 2-cellularibus, cellulis 2-nucleatis, supera latiore, rectis, hyalinis, distichis, 9 \approx 3; paraphysibus nullis.

Hab. in foliis aridis Hellebori altifolii Hayne in monte St. Petrum supra Vigaun, Podnart et Janerburg in Carnioliâ super.

26. **Asterella Chamænerii** Rostr. Fungi Groenl. p. 545 (*Asterina*). — 1687

Maculis atris, amphigenis vel cauliculis, 3-4 mm. lat.; mycelio sub-superficiali, pseudoparenchymatico, ambitu radioso; peritheciis globoso-depressis, subastomis, centro mycelii insidentibus; ascis ovato-cylindricis, 50-60 \approx 12-14; sporidiis oblongo-clavulatis, hyalinis, inæqualiter 1-septatis, loculo supero 3-plo majore, guttulis, 16-20 \approx 6-7.

Hab. in caulibus et foliis subvivi Epilobii (*Chamænerii*) latifolii in Dania.

27. **Asterella Dodonæi** Pass. in Erb. Critt. Ital. Ser. II, n. 1460 (*Aste-* 1688

rina). — Acervulis orbicularibus, sparsis fumosis; peritheciis membranaceis, pluribus, fuscis ex hyphis intricatis, fuliginis vel (junioribus?) hyalinis, crebre articulatis, tandem quandoque exaridis («?») formatis; ascis plurimis, parvulis, oblongis, 8-sporis; sporidiis distichis, ovato-oblongis, medio septatis et constrictis, loculo altero angustiore, 12,5 \approx 5, hyalinis.

Hab. in caulibus languidis Epilobii Dodonæi prope Parma Italiæ borealis.

28. **Asterella Karstenii** Starb. Skand. Pyr. p. 15, t. I, f. 3 (*Asterina*). 1689

— Peritheciis punctiformibus, hemisphæricis, 200 μ . diam., ostiolo manifesto, orbiculato præditis, mycelio sub microscopio reticulato, e centro radialiter diffuso, denique caulem ambiente epidermidemque nigrificante passim insidentibus; ascis aparaphysatis, 50-55 \approx 8-10, cylindræis, inferiore parte situ sporidiorum extensis; sporidiis ovoideis, primo continuis, guttulis 2 apicalibus ornatis deinde prope basin uniseptatis, minore parte sporidii 2-3 μ . diam., hyalinis vel demum leniter chlorino-lutescentibus, in superiore parte asci monostichis, semper autem quattuor in inferiore parte distichis, 12-15 \approx 3,5-5.

Hab. ad caules aridos Comari palustris in parœcia Simonstorp Ostrogothiæ (HAGLUND) et in Smolandia (C. J. JOHANSSON).

29. **Asterella Alsophilæ** C. et Mass. Grev. XVIII, p. 81 (*Asterina*). 1690

— Peritheciis membranaceis discoideis, suborbiculatis, plerumque confluentibus in maculas oblongas vel inæqualibus, piceis, cellulis radiantibus, margine sæpius dentatis; ascis piriformibus vel breve

clavatis, 8-sporis; sporidiis ellipsoideis, 1-septatis loculo infero duplo longiore attenuatoque, 9-10 \approx 4-5, hyalinis.

Hab. in foliis *Alsophilæ Rebeccæ*, N. E. Queensland Australiæ (MUELLER).

30. **Asterella peribebuyensis** Speg. Fungi Guar. Pug. I, n. 173 (*Asterina*). — 1691
Epiphylla; mycelio late diffuso, folium totum sæpe obtegente, atro, tenui, mucedineo-crustaceo, e cellulis ellipsoideis vel e mutua pressione irregularibus, mediocribus (articulis hypharum), crasse 2-guttulatis, 5-7 \approx 3-4, olivaceis composito, arcte foliorum epidermidi adnato; peritheciis dense sparsis vel hinc inde plus minusve aggregatis, globosis, minutis, 80-100, astomis, atris, glabris, tenui-membranaceis, contextu parenchymatico, parum distincto, olivaceo; ascis paucis, ovatis vel obclavatis, antice truncato-rotundatis atque crassissime tunicatis, tunica 6-8 μ . crassa, postice abrupte attenuato-coarctatis, minute noduloseque stipitatis, 26-28 \approx 10-12, octosporis, aparaphysatis; sporidiis polystichis, elongato-ellipsoideis, 12-14 \approx 3, rectis vel inæquilateralibus, medio uniseptatis, vix constrictis, loculis centro 1-septatis, non constrictis, supero crassiore brevioraque, hyalinis.

Hab. ad folia viva arborum in silva montana, Naranjo Cordillera de Peribebuy Brasil. — Species, ut videtur, vulgatissima sæpius in consortio *Meliolarum* vel *Dimerosporiorum* et facillime in iis parasitica.

31. **Asterella furcata** Pat. Journ. Bot. 1888, p. 148, f. 4 (*Asterina*). — 1692
 — Maculis expansis, tenuibus, nigrescentibus; mycelio repente, brunneo, septato, ramoso, hyphopodiis alternis, capitatis, stipitatis; setulis erectis, rigidis, apice bi-trichotomis, divisionibus, 2-3-dentatis; peritheciis numerosis, globosis, astomis, brunneis, 90-120 μ . diam.; ascis clavatis, 33 \approx 10-12; paraphysibus nullis; sporidiis octonis, hyalinis, 8-10 \approx 2-3, loculis 2 inæqualibus.

Hab. ad folia viventia, Cuba Amer. centr. (WRIGHT).

32. **Asterella Lindigii** Pat. Journ. Bot. 1888, p. 149 (*Asterina*). — 1693
 Mycelio repente, amplo, septato, ramoso, sæpe hyphis gracilibus cincto; hyphopodiis alternis, rotundatis, stipitatis; maculis parvis, 2-4 mm. nigris, radiantibus, adpressis; peritheciis gregariis, numerosis, micantibus, globosis, 180-200 μ ., astomis; ascis clavatis, substipitatis, 40 \approx 13, 8-sporis; paraphysibus filiformibus, ramosis; sporidiis hyalinis, 1-septatis, 10 \approx 3.

Hab. ad folia viventia, Nova-Granada Amer. austr. (LINDIG). — Desunt setulæ erectæ.